2020
Alabama Department of Labor
Labor Market Information
Career Resource
INTRODUCTION

Welcome to Alabama’s Career Exploration Guide 2020 Edition produced by the Alabama Department of Labor, Labor Market Information Division. This product is designed as a guide to anyone seeking a job or considering a new career direction. Included in the publication is an array of information on 270 occupations. Topics listed for each occupation include education requirements, on the job training (OJT), job tasks, licensing information, and a job outlook for the occupation in the State of Alabama. Users are also provided an employment outlook for the state for each occupation. This gives readers an idea of how many people are employed in an occupation, what employment should look like in the next decade, how many openings are estimated in Alabama each year, and the average wages one can expect to receive for a particular occupation. Another feature is a list of many of the postsecondary institutions in Alabama which offer training programs for specific occupations, as well as, related occupations. We hope this feature will accelerate the process of finding training programs in the user’s area. Choosing or changing careers requires a lot of planning and thought. This book should provide people with a great place to start.

Data Source
Information in the publication was compiled from several different sources. To allow our users to benefit from the wide range of information these resources offer, an explanation is provided below.

Occupational Information
Each occupation begins with a brief definition or description of the occupation. This information originates in the O*NET database. This database includes information on skills, abilities, work activities, and much more for over 950 occupations. O*NET uses an interactive skills-based database and everyday language to describe employee skills. O*NET offers its database online to allow everyone easy access to its valuable information. To access the website, navigate to http://www.onetonline.org.

Job Zone
O*NET uses a Job Zone classification to categorize occupations into 5 different levels of job zones based on information from employees and occupational experts that are surveyed. This data is based on education level, experience, and training needed for workers to be successful in their jobs. Each level of job zone is attached with a preparation level: 1—Little or no preparation needed; 2—Some preparation needed; 3—Medium preparation needed; 4—Considerable preparation needed; and 5—Extensive preparation needed. Each of these job zones are given a narrative description for On-the-Job-Training (OJT) and for Education required. As a result, what you will read in these descriptions are based strictly on the job zones assigned in O*NET. If you would like more information on this method, visit http://www.onetcenter.org/dl_files/JobZoneProcedure.pdf.

Tasks
This section details a list of the most common tasks performed in in each occupation and is excerpted from the O*NET database.

Licensing Information
The licensing information is taken from the Licensed Occupations Guide, which is another publication distributed by the Alabama Department of Labor, Labor Market Information Division. Information regarding occupational descriptions, minimum qualifications, application procedures, fees, and agency contact information, was compiled from 69 agencies, boards, or commissions. This publication will be updated biennially and is available in hard copy by contacting the agency.
Job Outlook
Job outlook is set up into six categories that are based on average annual growth which is taken from Alabama’s projected employment. This is described in more detail in the employment outlook section.

**Excellent** - above 3%
**Very Good** - between 2% and 3%
**Good** - between 1% and 2%
**Satisfactory** - less than 1%
**No change**
**Poor** - less than 0

Employment Outlook
All statewide data appearing in the Employment Outlook section is gathered and published by the Labor Market Information Division of the Alabama Department of Labor. Alabama’s wage data is compiled through a biannual survey, which measures occupational employment and wage rates for wage and salary workers. The resulting data is published in the Alabama Wage Survey each year.

Alabama’s projected employment data is estimated every two years for a 10-year period. The results are published in the Statewide Occupational Projections publication. The national occupational data is estimated by the U.S. Department of Labor, Bureau of Labor Statistics. To receive more detailed information about trends for the nation you can access their website at [www.bls.gov](http://www.bls.gov).

Postsecondary Institutions
Many of the occupations found in this publication require some degree of training after high school graduation. For occupations that call for additional training, this publication will provide a list of training sites in the State of Alabama. The list provided is obtained from the O*NET database and is as current as the data in that particular database. Due to space constraints, this list is a partial excerpt from the O*NET database. For additional information on training programs, please refer to the Alabama Commission on Higher Education at [http://www.ache.edu](http://www.ache.edu).

Related Occupations
This list will give people a glance at some additional occupations which possess similar duties, skills, education, and training. These occupations are taken from the O*NET database and are excerpts from the complete list found online.

Labor Market Information
The Labor Market Information Division of the Alabama Department of Labor can provide a plethora of information to employers, job seekers, displaced workers, career planners, etc. The Labor Market Information division’s website, at [www.labor.alabama.gov/lmi](http://www.labor.alabama.gov/lmi) provides links to many of the resources listed above and offers many of its publications online. We encourage people to take some time to peruse our site, so they can take advantage of all the information we have to offer. Furthermore, all of our valuable publications are offered free of charge, so if you would like to receive one just contact the office at (334) 956-7465.

Missing Data
In some instances, you will observe asterisks in place of numerical data. This is an indication that the data for the respective occupation cannot be reported due to standards provided by the Bureau of Labor Statistics. Blanks in the data fields represent data not found for that particular occupation.

Data in this publication is current as of January 1, 2021.

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## Table of Contents

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountants and Auditors</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural Equipment Operators</td>
<td>2</td>
</tr>
<tr>
<td>Aircraft Mechanics and Service Technicians</td>
<td>3</td>
</tr>
<tr>
<td>Aircraft Structure, Surfaces, Rigging, and Systems Assemblers</td>
<td>4</td>
</tr>
<tr>
<td>Amusement and Recreation Attendants</td>
<td>5</td>
</tr>
<tr>
<td>Animal Caretakers</td>
<td>6</td>
</tr>
<tr>
<td>Appraisers and Assessors of Real Estate</td>
<td>7</td>
</tr>
<tr>
<td>Architects, Except Landscape and Naval</td>
<td>8</td>
</tr>
<tr>
<td>Architectural and Civil Drafters</td>
<td>9</td>
</tr>
<tr>
<td>Architectural and Engineering Managers</td>
<td>10</td>
</tr>
<tr>
<td>Audio and Video Equipment Technicians</td>
<td>11</td>
</tr>
<tr>
<td>Automotive and Watercraft Service Attendants</td>
<td>12</td>
</tr>
<tr>
<td>Automotive Body and Related Repairers</td>
<td>13</td>
</tr>
<tr>
<td>Automotive Service Technicians and Mechanics</td>
<td>14</td>
</tr>
<tr>
<td>Bakers</td>
<td>15</td>
</tr>
<tr>
<td>Barbers</td>
<td>16</td>
</tr>
<tr>
<td>Bartenders</td>
<td>17</td>
</tr>
<tr>
<td>Billing and Posting Clerks</td>
<td>18</td>
</tr>
<tr>
<td>Brickmasons and Blockmasons</td>
<td>19</td>
</tr>
<tr>
<td>Bus and Truck Mechanics and Diesel Engine Specialists</td>
<td>20</td>
</tr>
<tr>
<td>Bus Drivers, School</td>
<td>21</td>
</tr>
<tr>
<td>Bus Drivers, Transit and Intercity</td>
<td>22</td>
</tr>
<tr>
<td>Butchers and Meat Cutters</td>
<td>23</td>
</tr>
<tr>
<td>Cabinetmakers and Bench Carpenters</td>
<td>24</td>
</tr>
<tr>
<td>Cargo and Freight Agents</td>
<td>25</td>
</tr>
<tr>
<td>Carpenters</td>
<td>26</td>
</tr>
<tr>
<td>Cement Masons and Concrete Finishers</td>
<td>27</td>
</tr>
<tr>
<td>Chefs and Head Cooks</td>
<td>28</td>
</tr>
<tr>
<td>Chemical Equipment Operators and Tenders</td>
<td>29</td>
</tr>
<tr>
<td>Chemical Technicians</td>
<td>30</td>
</tr>
<tr>
<td>Child, Family, and School Social Workers</td>
<td>31</td>
</tr>
<tr>
<td>Childcare Workers</td>
<td>32</td>
</tr>
<tr>
<td>Civil Engineering Technicians</td>
<td>33</td>
</tr>
<tr>
<td>Cleaners of Vehicles and Equipment</td>
<td>34</td>
</tr>
<tr>
<td>Clergy</td>
<td>35</td>
</tr>
<tr>
<td>Clinical Laboratory Technologists and Technicians</td>
<td>36</td>
</tr>
<tr>
<td>Clinical, Counseling, and School Psychologists</td>
<td>37</td>
</tr>
<tr>
<td>Coaches and Scouts</td>
<td>38</td>
</tr>
<tr>
<td>Coating, Painting, and Spraying Machine Setters, Operators, and Tenders</td>
<td>39</td>
</tr>
<tr>
<td>Commercial Pilots</td>
<td>40</td>
</tr>
<tr>
<td>Community Health Workers</td>
<td>41</td>
</tr>
<tr>
<td>Compliance Officers</td>
<td>42</td>
</tr>
<tr>
<td>Computer and Information Systems Managers</td>
<td>43</td>
</tr>
<tr>
<td>Computer Network Support Specialists</td>
<td>44</td>
</tr>
</tbody>
</table>
# Table of Contents

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Numerically Controlled Tool Operators</td>
<td>45</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>46</td>
</tr>
<tr>
<td>Computer User Support Specialists</td>
<td>47</td>
</tr>
<tr>
<td>Computer, Automated Teller, and Office Machine Repairers</td>
<td>48</td>
</tr>
<tr>
<td>Construction and Building Inspectors</td>
<td>49</td>
</tr>
<tr>
<td>Construction Laborers</td>
<td>50</td>
</tr>
<tr>
<td>Construction Managers</td>
<td>51</td>
</tr>
<tr>
<td>Control and Valve Installers and Repairers, Except Mechanical Door</td>
<td>52</td>
</tr>
<tr>
<td>Cooks, Restaurant</td>
<td>53</td>
</tr>
<tr>
<td>Cost Estimators</td>
<td>54</td>
</tr>
<tr>
<td>Counter and Rental Clerks</td>
<td>55</td>
</tr>
<tr>
<td>Court, Municipal, and License Clerks</td>
<td>56</td>
</tr>
<tr>
<td>Crane and Tower Operators</td>
<td>57</td>
</tr>
<tr>
<td>Customer Service Representatives</td>
<td>58</td>
</tr>
<tr>
<td>Cutting and Slicing Machine Setters, Operators, and Tenders</td>
<td>59</td>
</tr>
<tr>
<td>Cutting, Punching, and Press Machine Setters, Operators, and Tenders</td>
<td>60</td>
</tr>
<tr>
<td>Database Administrators</td>
<td>61</td>
</tr>
<tr>
<td>Demonstrators and Product Promoters</td>
<td>62</td>
</tr>
<tr>
<td>Dental Assistants</td>
<td>63</td>
</tr>
<tr>
<td>Dental Hygienists</td>
<td>64</td>
</tr>
<tr>
<td>Dental Laboratory Technicians</td>
<td>65</td>
</tr>
<tr>
<td>Detectives and Criminal Investigators</td>
<td>66</td>
</tr>
<tr>
<td>Diagnostic Medical Sonographers</td>
<td>67</td>
</tr>
<tr>
<td>Dining Room and Cafeteria Attendants and Bartender Helpers</td>
<td>68</td>
</tr>
<tr>
<td>Directors, Religious Activities and Education</td>
<td>69</td>
</tr>
<tr>
<td>Dispatchers, Except Police, Fire, and Ambulance</td>
<td>70</td>
</tr>
<tr>
<td>Driver/Sales Workers</td>
<td>71</td>
</tr>
<tr>
<td>Drywall and Ceiling Tile Installers</td>
<td>72</td>
</tr>
<tr>
<td>Education Administrators, Postsecondary</td>
<td>73</td>
</tr>
<tr>
<td>Education Administrators, Kindergarten through Secondary</td>
<td>74</td>
</tr>
<tr>
<td>Educational, Guidance, School, and Vocational Counselors</td>
<td>75</td>
</tr>
<tr>
<td>Electrical and Electronics Engineering Technicians</td>
<td>76</td>
</tr>
<tr>
<td>Electrical and Electronics Repairers, Commercial and Industrial Equipment</td>
<td>77</td>
</tr>
<tr>
<td>Electrical Power-Line Installers and Repairers</td>
<td>78</td>
</tr>
<tr>
<td>Electrical, Electronic, and Electromechanical Assemblers</td>
<td>79</td>
</tr>
<tr>
<td>Electricians</td>
<td>80</td>
</tr>
<tr>
<td>Eligibility Interviewers, Government Programs</td>
<td>81</td>
</tr>
<tr>
<td>Emergency Medical Technicians</td>
<td>82</td>
</tr>
<tr>
<td>Engine and Other Machine Assemblers</td>
<td>83</td>
</tr>
<tr>
<td>Engineers, Aerospace</td>
<td>84</td>
</tr>
<tr>
<td>Engineers, Civil</td>
<td>85</td>
</tr>
<tr>
<td>Engineers, Electrical</td>
<td>86</td>
</tr>
<tr>
<td>Engineers, Electronics Except Computer</td>
<td>87</td>
</tr>
<tr>
<td>Engineers, Industrial</td>
<td>88</td>
</tr>
<tr>
<td>Occupation</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Engineers, Mechanical</td>
<td>89</td>
</tr>
<tr>
<td>Environmental Engineers</td>
<td>90</td>
</tr>
<tr>
<td>Environmental Scientists and Specialists, Including Health</td>
<td>91</td>
</tr>
<tr>
<td>Excavating and Loading Machine and Dragline Operators</td>
<td>92</td>
</tr>
<tr>
<td>Exercise Trainers and Group Fitness Instructors</td>
<td>93</td>
</tr>
<tr>
<td>Extruding and Drawing Machine Setters, Operators, and Tenders</td>
<td>94</td>
</tr>
<tr>
<td>Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders</td>
<td>95</td>
</tr>
<tr>
<td>Farm Equipment Mechanics and Service Technicians</td>
<td>96</td>
</tr>
<tr>
<td>Fast Food and Counter Workers</td>
<td>97</td>
</tr>
<tr>
<td>Financial and Investment Analysts</td>
<td>98</td>
</tr>
<tr>
<td>Financial Examiners</td>
<td>99</td>
</tr>
<tr>
<td>Financial Managers</td>
<td>100</td>
</tr>
<tr>
<td>Firefighters</td>
<td>101</td>
</tr>
<tr>
<td>Food Batchmakers</td>
<td>102</td>
</tr>
<tr>
<td>Food Cooking Machine Operators and Tenders</td>
<td>103</td>
</tr>
<tr>
<td>Food Preparation Workers</td>
<td>104</td>
</tr>
<tr>
<td>Food Servers, Nonrestaurant</td>
<td>105</td>
</tr>
<tr>
<td>Food Service Managers</td>
<td>106</td>
</tr>
<tr>
<td>Fundraisers</td>
<td>107</td>
</tr>
<tr>
<td>General and Operations Managers</td>
<td>108</td>
</tr>
<tr>
<td>Graphic Designers</td>
<td>109</td>
</tr>
<tr>
<td>Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders</td>
<td>110</td>
</tr>
<tr>
<td>Hairdressers, Hairstylists, and Cosmetologists</td>
<td>111</td>
</tr>
<tr>
<td>Hazardous Materials Removal Workers</td>
<td>112</td>
</tr>
<tr>
<td>Healthcare Social Workers</td>
<td>113</td>
</tr>
<tr>
<td>Heating, Air Conditioning, and Refrigeration Mechanics and Installers</td>
<td>114</td>
</tr>
<tr>
<td>Heavy and Tractor-Trailer Truck Drivers</td>
<td>115</td>
</tr>
<tr>
<td>Helpers--Electricians</td>
<td>116</td>
</tr>
<tr>
<td>Helpers--Installation, Maintenance, and Repair Workers</td>
<td>117</td>
</tr>
<tr>
<td>Helpers--Pipeayers, Plumbers, Pipefitters, and Steamfitters</td>
<td>118</td>
</tr>
<tr>
<td>Helpers--Production Workers</td>
<td>119</td>
</tr>
<tr>
<td>Highway Maintenance Workers</td>
<td>120</td>
</tr>
<tr>
<td>Home Health Aides</td>
<td>121</td>
</tr>
<tr>
<td>Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop</td>
<td>122</td>
</tr>
<tr>
<td>Hotel, Motel, and Resort Desk Clerks</td>
<td>123</td>
</tr>
<tr>
<td>Human Resources Managers</td>
<td>124</td>
</tr>
<tr>
<td>Human Resources Specialists</td>
<td>125</td>
</tr>
<tr>
<td>Industrial Engineering Technicians</td>
<td>126</td>
</tr>
<tr>
<td>Industrial Machinery Mechanics</td>
<td>127</td>
</tr>
<tr>
<td>Industrial Production Managers</td>
<td>128</td>
</tr>
<tr>
<td>Industrial Truck and Tractor Operators</td>
<td>129</td>
</tr>
<tr>
<td>Information Security Analysts</td>
<td>130</td>
</tr>
<tr>
<td>Instructional Coordinators</td>
<td>131</td>
</tr>
<tr>
<td>Insurance Claims and Policy Processing Clerks</td>
<td>132</td>
</tr>
<tr>
<td>Occupation</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Insurance Sales Agents</td>
<td>133</td>
</tr>
<tr>
<td>Interviewers, Except Eligibility and Loan</td>
<td>134</td>
</tr>
<tr>
<td>Janitors and Cleaners, Except Maids and Housekeeping Cleaners</td>
<td>135</td>
</tr>
<tr>
<td>Laborers and Freight, Stock, and Material Movers, Hand</td>
<td>136</td>
</tr>
<tr>
<td>Landscaping and Groundskeeping Workers</td>
<td>137</td>
</tr>
<tr>
<td>Laundry and Dry-Cleaning Workers</td>
<td>138</td>
</tr>
<tr>
<td>Lawyers</td>
<td>139</td>
</tr>
<tr>
<td>Librarians and Media Collections Specialists</td>
<td>140</td>
</tr>
<tr>
<td>Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers</td>
<td>141</td>
</tr>
<tr>
<td>Light Truck or Delivery Services Drivers</td>
<td>142</td>
</tr>
<tr>
<td>Loan Interviewers and Clerks</td>
<td>143</td>
</tr>
<tr>
<td>Loan Officers</td>
<td>144</td>
</tr>
<tr>
<td>Lodging Managers</td>
<td>145</td>
</tr>
<tr>
<td>Logisticians</td>
<td>146</td>
</tr>
<tr>
<td>Machine Feeders and Offbearers</td>
<td>147</td>
</tr>
<tr>
<td>Machinists</td>
<td>148</td>
</tr>
<tr>
<td>Maids and Housekeeping Cleaners</td>
<td>149</td>
</tr>
<tr>
<td>Maintenance and Repair Workers, General</td>
<td>150</td>
</tr>
<tr>
<td>Maintenance Workers, Machinery</td>
<td>151</td>
</tr>
<tr>
<td>Management Analysts</td>
<td>152</td>
</tr>
<tr>
<td>Manicurists and Pedicurists</td>
<td>153</td>
</tr>
<tr>
<td>Market Research Analysts and Marketing Specialists</td>
<td>154</td>
</tr>
<tr>
<td>Marketing Managers</td>
<td>155</td>
</tr>
<tr>
<td>Massage Therapists</td>
<td>156</td>
</tr>
<tr>
<td>Meat, Poultry, and Fish Cutters and Trimmers</td>
<td>157</td>
</tr>
<tr>
<td>Medical and Health Services Managers</td>
<td>158</td>
</tr>
<tr>
<td>Medical Assistants</td>
<td>159</td>
</tr>
<tr>
<td>Medical Equipment Preparers</td>
<td>160</td>
</tr>
<tr>
<td>Medical Equipment Repairers</td>
<td>161</td>
</tr>
<tr>
<td>Medical Records Specialists</td>
<td>162</td>
</tr>
<tr>
<td>Medical Secretaries</td>
<td>163</td>
</tr>
<tr>
<td>Meeting, Convention, and Event Planners</td>
<td>164</td>
</tr>
<tr>
<td>Mental Health and Substance Abuse Social Workers</td>
<td>165</td>
</tr>
<tr>
<td>Merchandise Displayers and Window Trimmers</td>
<td>166</td>
</tr>
<tr>
<td>Metal-Refining Furnace Operators and Tenders</td>
<td>167</td>
</tr>
<tr>
<td>Millwrights</td>
<td>168</td>
</tr>
<tr>
<td>Mixing and Blending Machine Setters, Operators, and Tenders</td>
<td>169</td>
</tr>
<tr>
<td>Mobile Heavy Equipment Mechanics, Except Engines</td>
<td>170</td>
</tr>
<tr>
<td>Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders</td>
<td>171</td>
</tr>
<tr>
<td>Multiple Machine Tool Setters, Operators, and Tenders</td>
<td>172</td>
</tr>
<tr>
<td>Music Directors and Composers</td>
<td>173</td>
</tr>
<tr>
<td>Musicians and Singers</td>
<td>174</td>
</tr>
<tr>
<td>Network and Computer Systems Administrators</td>
<td>175</td>
</tr>
<tr>
<td>Nurse Assistants</td>
<td>176</td>
</tr>
<tr>
<td>Occupation</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Nurse, Anesthetists</td>
<td>177</td>
</tr>
<tr>
<td>Nurse, Licensed Practical and Licensed Vocational</td>
<td>178</td>
</tr>
<tr>
<td>Nurse, Practitioners</td>
<td>179</td>
</tr>
<tr>
<td>Nurse, Registered</td>
<td>180</td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td>181</td>
</tr>
<tr>
<td>Occupational Therapy Assistants</td>
<td>182</td>
</tr>
<tr>
<td>Operating Engineers and Other Construction Equipment Operators</td>
<td>183</td>
</tr>
<tr>
<td>Opticians, Dispensing</td>
<td>184</td>
</tr>
<tr>
<td>Order Clerks</td>
<td>185</td>
</tr>
<tr>
<td>Outdoor Power Equipment and Other Small Engine Mechanics</td>
<td>186</td>
</tr>
<tr>
<td>Packaging and Filling Machine Operators and Tenders</td>
<td>187</td>
</tr>
<tr>
<td>Painters, Construction and Maintenance</td>
<td>188</td>
</tr>
<tr>
<td>Paralegals and Legal Assistants</td>
<td>189</td>
</tr>
<tr>
<td>Paramedics</td>
<td>190</td>
</tr>
<tr>
<td>Parts Salespersons</td>
<td>191</td>
</tr>
<tr>
<td>Paving, Surfacing, and Tamping Equipment Operators</td>
<td>192</td>
</tr>
<tr>
<td>Personal Care Aides</td>
<td>193</td>
</tr>
<tr>
<td>Personal Financial Advisors</td>
<td>194</td>
</tr>
<tr>
<td>Pest Control Workers</td>
<td>195</td>
</tr>
<tr>
<td>Pesticide Handlers, Sprayers, and Applicators, Vegetation</td>
<td>196</td>
</tr>
<tr>
<td>Pharmacy Technicians</td>
<td>197</td>
</tr>
<tr>
<td>Phlebotomists</td>
<td>198</td>
</tr>
<tr>
<td>Physical Therapist Aides</td>
<td>199</td>
</tr>
<tr>
<td>Physical Therapist Assistants</td>
<td>200</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>201</td>
</tr>
<tr>
<td>Pipelayers</td>
<td>202</td>
</tr>
<tr>
<td>Plumbers, Pipefitters, and Steamfitters</td>
<td>203</td>
</tr>
<tr>
<td>Police and Sheriff's Patrol Officers</td>
<td>204</td>
</tr>
<tr>
<td>Probation Officers and Correctional Treatment Specialists</td>
<td>205</td>
</tr>
<tr>
<td>Producers and Directors</td>
<td>206</td>
</tr>
<tr>
<td>Production, Planning, and Expediting Clerks</td>
<td>207</td>
</tr>
<tr>
<td>Property, Real Estate, and Community Association Managers</td>
<td>208</td>
</tr>
<tr>
<td>Psychiatric Aides</td>
<td>209</td>
</tr>
<tr>
<td>Public Relations Specialists</td>
<td>210</td>
</tr>
<tr>
<td>Public Safety Telecommunicators</td>
<td>211</td>
</tr>
<tr>
<td>Radiologic Technologists</td>
<td>212</td>
</tr>
<tr>
<td>Real Estate Brokers</td>
<td>213</td>
</tr>
<tr>
<td>Real Estate Sales Agents</td>
<td>214</td>
</tr>
<tr>
<td>Receptionists and Information Clerks</td>
<td>215</td>
</tr>
<tr>
<td>Recreation Workers</td>
<td>216</td>
</tr>
<tr>
<td>Refuse and Recyclable Material Collectors</td>
<td>217</td>
</tr>
<tr>
<td>Rehabilitation Counselors</td>
<td>218</td>
</tr>
<tr>
<td>Residential Advisors</td>
<td>219</td>
</tr>
<tr>
<td>Respiratory Therapists</td>
<td>220</td>
</tr>
<tr>
<td>Occupation</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Retail Salespersons</td>
<td>221</td>
</tr>
<tr>
<td>Rolling Machine Setters, Operators, and Tenders</td>
<td>222</td>
</tr>
<tr>
<td>Roofers</td>
<td>223</td>
</tr>
<tr>
<td>Sales Managers</td>
<td>224</td>
</tr>
<tr>
<td>Sales Reps, Wholesale and Manufacturing, Except Technical and Scientific Products</td>
<td>225</td>
</tr>
<tr>
<td>Sales Reps, Wholesale and Manufacturing, Technical and Scientific Products</td>
<td>226</td>
</tr>
<tr>
<td>Sawing Machine Setters, Operators, and Tenders</td>
<td>227</td>
</tr>
<tr>
<td>Securities, Commodities, and Financial Services Sales Agents</td>
<td>228</td>
</tr>
<tr>
<td>Security and Fire Alarm Systems Installers</td>
<td>229</td>
</tr>
<tr>
<td>Security Guards</td>
<td>230</td>
</tr>
<tr>
<td>Sheet Metal Workers</td>
<td>231</td>
</tr>
<tr>
<td>Shipping, Receiving, and Traffic Clerks</td>
<td>232</td>
</tr>
<tr>
<td>Shuttle Drivers and Chauffeurs</td>
<td>233</td>
</tr>
<tr>
<td>Skincare Specialists</td>
<td>234</td>
</tr>
<tr>
<td>Slaughterers and Meat Packers</td>
<td>235</td>
</tr>
<tr>
<td>Social and Community Service Managers</td>
<td>236</td>
</tr>
<tr>
<td>Social and Human Service Assistants</td>
<td>237</td>
</tr>
<tr>
<td>Software Developers</td>
<td>238</td>
</tr>
<tr>
<td>Speech-Language Pathologists</td>
<td>239</td>
</tr>
<tr>
<td>Stockers and Order Fillers</td>
<td>240</td>
</tr>
<tr>
<td>Structural Iron and Steel Workers</td>
<td>241</td>
</tr>
<tr>
<td>Substance Abuse, Behavioral Disorder, and Mental Health Counselors</td>
<td>242</td>
</tr>
<tr>
<td>Surgical Technologists</td>
<td>243</td>
</tr>
<tr>
<td>Surveying and Mapping Technicians</td>
<td>244</td>
</tr>
<tr>
<td>Tank Car, Truck, and Ship Loaders</td>
<td>245</td>
</tr>
<tr>
<td>Tax Examiners and Collectors, and Revenue Agents</td>
<td>246</td>
</tr>
<tr>
<td>Tax Preparers</td>
<td>247</td>
</tr>
<tr>
<td>Taxi Drivers</td>
<td>248</td>
</tr>
<tr>
<td>Teacher Assistants</td>
<td>249</td>
</tr>
<tr>
<td>Teachers, Elementary School</td>
<td>250</td>
</tr>
<tr>
<td>Teachers, Kindergarten</td>
<td>251</td>
</tr>
<tr>
<td>Teachers, Middle School</td>
<td>252</td>
</tr>
<tr>
<td>Teachers, Postsecondary</td>
<td>253</td>
</tr>
<tr>
<td>Teachers, Preschool</td>
<td>254</td>
</tr>
<tr>
<td>Teachers, Secondary School</td>
<td>255</td>
</tr>
<tr>
<td>Teachers, Self-Enrichment Education</td>
<td>256</td>
</tr>
<tr>
<td>Team Assemblers</td>
<td>257</td>
</tr>
<tr>
<td>Tool and Die Makers</td>
<td>258</td>
</tr>
<tr>
<td>Training and Development Specialists</td>
<td>259</td>
</tr>
<tr>
<td>Transportation, Storage, and Distribution Managers</td>
<td>260</td>
</tr>
<tr>
<td>Ushers, Lobby Attendants, and Ticket Takers</td>
<td>261</td>
</tr>
<tr>
<td>Veterinarians</td>
<td>262</td>
</tr>
<tr>
<td>Veterinary Assistants and Laboratory Animal Caretakers</td>
<td>263</td>
</tr>
<tr>
<td>Veterinary Technologists and Technicians</td>
<td>264</td>
</tr>
</tbody>
</table>
## Table of Contents

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiters and Waitresses</td>
<td>265</td>
</tr>
<tr>
<td>Web Developers</td>
<td>266</td>
</tr>
<tr>
<td>Weighers, Measurers, Checkers, and Samplers, Recordkeeping</td>
<td>267</td>
</tr>
<tr>
<td>Welders, Cutters, Solderers, and Brazers</td>
<td>268</td>
</tr>
<tr>
<td>Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders</td>
<td>269</td>
</tr>
<tr>
<td>Woodworking Machine Setters, Operators, and Tenders</td>
<td>270</td>
</tr>
</tbody>
</table>
Examine, analyze, and interpret accounting records to prepare financial statements, give advice, or audit and evaluate statements prepared by others. Install or advise on systems of recording costs or other financial and budgetary data.

**Education:** Most of these occupations require a four-year bachelor's degree, but some do not.

**OJT:** Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

**Tasks:** Prepare detailed reports on audit findings. Report to management about asset utilization and audit results, and recommend changes in operations and financial activities. Collect and analyze data to detect deficient controls, duplicated effort, extravagance, fraud, or non-compliance with laws, regulations, and management policies. Inspect account books and accounting systems for efficiency, effectiveness, and use of accepted accounting procedures to record transactions. Supervise auditing of establishments, and determine scope of investigation required. Confer with company officials about financial and regulatory matters. Examine and evaluate financial and information systems, recommending controls to ensure system reliability and data integrity. Inspect cash on hand, notes receivable and payable, negotiable securities, and canceled checks to confirm records are accurate. Examine records and interview workers to ensure recording of transactions and compliance with laws and regulations. Prepare, examine, or analyze accounting records, financial statements, or other financial reports to assess accuracy, completeness, and conformance to reporting and procedural standards. Prepare adjusting journal entries. Review accounts for discrepancies and reconcile differences. Establish tables of accounts and assign entries to proper accounts. Examine inventory to verify journal and ledger entries. Analyze business operations, trends, costs, revenues, financial commitments, and obligations to project future revenues and expenses or to provide advice.

**License:** Annual Active Registration Fee October 01-December 31: $100.00; Annual Inactive Registration Fee October 01-December 31: $50.00; Delinquent Filing Fee January 01-February 28: $100.00; Delinquent Filing Fee March 01-March 31: $500.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$20.38</td>
</tr>
<tr>
<td>Median</td>
<td>$30.67</td>
</tr>
<tr>
<td>Experienced</td>
<td>$53.01</td>
</tr>
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</table>

2018 Estimated Employment: 17,930
2028 Projected Employment: 19,200
Average Total Openings: 1,855
Annual Growth Rate: 0.69%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Budget Analysts
- Credit Analysts
- Compensation & Benefits Managers
- Market Research Analysts & Marketing Specialists
- Compensation, Benefits, & Job Analysis Specialists
- Financial Examiners
- Insurance Underwriters
- Personal Financial Advisors
- Cost Estimators
- Bookkeeping, Accounting, & Auditing Clerks

### Post-Secondary Institutions with Programs
- Alabama A & M University
- Alabama State University
- Athens State University
- Auburn University
- Auburn University at Montgomery
- Birmingham-Southern College
- Faulkner University
- Huntingdon College
- Jacksonville State University
- Samford University
- The University of Alabama
- Troy University
- Tuskegee University
- University of Alabama at Birmingham
- University of Mobile
- University of North Alabama
- University of South Alabama
- University of West Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Agricultural Equipment Operators

Drive and control equipment to support agricultural activities such as tilling soil; planting, cultivating, and harvesting crops; feeding and herding livestock; or removing animal waste. May perform tasks such as crop baling or hay bucking. May operate stationary equipment to perform post-harvest tasks such as husking, shelling, threshing, and ginning.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:**
- Load and unload crops or containers of materials, manually or using conveyors, handtrucks, forklifts, or transfer augers. Mix specified materials or chemicals, and dump solutions, powders, or seeds into planter or sprayer machinery. Spray fertilizer or pesticide solutions to control insects, fungus and weed growth, and diseases, using hand sprayers. Observe and listen to machinery operation to detect equipment malfunctions. Manipulate controls to set, activate, and adjust mechanisms on machinery. Operate or tend equipment used in agricultural production, such as tractors, combines, and irrigation equipment. Adjust, repair, and service farm machinery and notify supervisors when machinery malfunctions. Attach farm implements such as plows, discs, sprayers, or harvesters to tractors, using bolts and hand tools.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$8.94</td>
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<tr>
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<td>Median</td>
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<tr>
<td>$11.66</td>
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<tr>
<td>Experienced</td>
<td>Experienced</td>
</tr>
<tr>
<td>$17.42</td>
<td>$36,236.00</td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Excavating & Loading Machine & Dragline Operators,
- Surface Mining
- Pile Driver Operators
- Wellhead Pumpers
- Dredge Operators
- Riggers
- Pipelayers
- Loading & Moving Machine Operators, Underground Mining
- Sawing Machine Setters, Operators, & Tenders, Wood
- Helpers--Carpenters
- Refuse & Recyclable Material Collectors

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Aircraft Mechanics and Service Technicians

Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Examine and inspect aircraft components, including landing gear, hydraulic systems, and deicers to locate cracks, breaks, leaks, or other problems. Conduct routine and special inspections as required by regulations. Inspect completed work to certify that maintenance meets standards and that aircraft are ready for operation. Read and interpret maintenance manuals, service bulletins, and other specifications to determine the feasibility and method of repairing or replacing malfunctioning or damaged components. Maintain repair logs, documenting all preventive and corrective aircraft maintenance. Modify aircraft structures, space vehicles, systems, or components, following drawings, schematics, charts, engineering orders, and technical publications. Inspect airframes for wear or other defects. Measure parts for wear, using precision instruments. Obtain fuel and oil samples and check them for contamination. Maintain, repair, and rebuild aircraft structures, functional components, and parts, such as wings and fuselage, rigging, hydraulic units, oxygen systems, fuel systems, electrical systems, gaskets, or seals. Replace or repair worn, defective, or damaged components, using hand tools, gauges, and testing equipment. Read and interpret pilots' descriptions of problems to diagnose causes. Test operation of engines and other systems, using test equipment, such as ignition analyzers, compression checkers, distributor timers, or ammeters. Measure the tension of control cables. Spread plastic film over areas to be repaired to prevent damage to surrounding areas. Remove or install aircraft engines, using hoists or forklift trucks. Assemble and install electrical, plumbing, mechanical, hydraulic, and structural components and accessories, using hand or power tools. Locate and mark dimensions and reference lines on defective or replacement parts, using templates, scribes, compasses, and steel rules. Fabricate defective sections or parts, using metal fabricating machines, saws, brakes, shears, and grinders. Reassemble engines following repair or inspection and reinstall engines in aircraft. Service and maintain aircraft and related apparatus by performing activities such as flushing crankcases, cleaning screens, and or moving parts.

**License:** This applicant should contact their local Federal Aviation Flight Standards office in Alabama for fees and other necessary costs.

**Outlook:** Very Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
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<tr>
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</tr>
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<tr>
<td><strong>Entry</strong></td>
<td><strong>Median</strong></td>
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<td>$44,850.00</td>
</tr>
<tr>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Ship Engineers
- Industrial Engineering Technologists & Technicians
- Mechanical Engineering Technologists & Technicians
- Medical Equipment Repairers
- Robotics Technicians
- Electrical & Electronics Repairers, Commercial & Industrial Equipment
- Automotive Service Technicians & Mechanics
- Industrial Machinery Mechanics
- Maintenance & Repair Workers, General
- Avionics Technicians

### Post-Secondary Institutions with Programs
- Coastal Alabama Community College
- Enterprise State Community College
- Snead State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers

Assemble, fit, fasten, and install parts of airplanes, space vehicles, or missiles, such as tails, wings, fuselage, bulkheads, stabilizers, landing gear, rigging and control equipment, or heating and ventilating systems.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Assemble parts, fittings, or subassemblies on aircraft, using layout tools, hand tools, power tools, or fasteners, such as bolts, screws, rivets, or clamps. Read blueprints, illustrations, or specifications to determine layouts, sequences of operations, or identities or relationships of parts. Attach brackets, hinges, or clips to secure or support components or subassemblies, using bolts, screws, rivets, chemical bonding, or welding. Inspect or test installed units, parts, systems, or assemblies for fit, alignment, performance, defects, or compliance with standards, using measuring instruments or test equipment. Adjust, repair, rework, or replace parts or assemblies to ensure proper operation. Cut, trim, file, bend, or smooth parts to ensure proper fit and clearance. Fabricate parts needed for assembly or installation, using shop machinery or equipment. Layout and mark reference points and locations for installation of parts or components, using jigs, templates, or measuring and marking instruments. Clean, oil, or coat system components, as necessary, before assembly or attachment. Assemble prefabricated parts to form subassemblies.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hourly Wage</td>
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<tr>
<td>Entry</td>
<td>$16.24</td>
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<tr>
<td>Median</td>
<td>$23.97</td>
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<tr>
<td>Experienced</td>
<td>$38.42</td>
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</table>

2018 Estimated Employment: 1,230
2028 Projected Employment: 1,260
Average Total Openings: 110
Annual Growth Rate: 0.26%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders
Rail Car Repairers
Rolling Machine Setters, Operators, & Tenders
Engine & Other Machine Assemblers

Post-Secondary Institutions with Programs
Enterprise State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Amusement and Recreation Attendants

Perform a variety of attending duties at amusement or recreation facility. May schedule use of recreation facilities, maintain and provide equipment to participants of sporting events or recreational pursuits, or operate amusement concessions and rides.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need none or short demonstration

**Tasks:** Sell tickets and collect fees from customers. Provide information about facilities, entertainment options, and rules and regulations. Keep informed of shut-down and emergency evacuation procedures. Direct patrons to rides, seats, or attractions. Monitor activities to ensure adherence to rules and safety procedures, or arrange for the removal of unruly patrons. Maintain inventories of equipment, storing and retrieving items and assembling and disassembling equipment as necessary.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
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<tbody>
<tr>
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<td><strong>Annual Wage</strong></td>
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<td>$7.89</td>
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<tr>
<td><strong>Entry</strong></td>
<td>$16,409.00</td>
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<tr>
<td><strong>Median</strong></td>
<td>$9.24</td>
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<tr>
<td><strong>Median</strong></td>
<td>$19,220.00</td>
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<tr>
<td><strong>Experienced</strong></td>
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<tr>
<td><strong>Experienced</strong></td>
<td>$26,374.00</td>
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</table>

**2018 Estimated Employment:** 2,360

**2028 Projected Employment:** 2,530

**Average Total Openings:** 580

**Annual Growth Rate:** 0.70%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Fast Food & Counter Workers
- Cashiers
- Counter & Rental Clerks
- Waiters & Waitresses
- Cooks, Fast Food
- Stockers & Order Fillers
- Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
- Animal Caretakers
- Dining Room & Cafeteria Attendants & Bartender Helpers
- Food Servers, Nonrestaurant

**Post-Secondary Institutions with Programs**

- For an explanation on omitted data, see the Missing Data section in the introduction.
Animal Caretakers

Feed, water, groom, bathe, exercise, or otherwise provide care to promote and maintain the well-being of pets and other animals that are not raised for consumption, such as dogs, cats, race horses, ornamental fish or birds, zoo animals, and mice. Work in settings such as kennels, animal shelters, zoos, circuses, and aquariums. May keep records of feedings, treatments, and animals received or discharged. May clean, disinfect, and repair cages, pens, or fish tanks.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months.

**Tasks:** Feed and water animals according to schedules and feeding instructions. Provide treatment to sick or injured animals, or contact veterinarians to secure treatment. Examine and observe animals to detect signs of illness, disease, or injury. Mix food, liquid formulas, medications, or food supplements according to instructions, prescriptions, and knowledge of animal species. Do facility laundry and clean, organize, maintain, and disinfect animal quarters, such as pens and stables, and equipment, such as saddles and bridles. Exercise animals to maintain their physical and mental health. Collect and record animal information, such as weight, size, physical condition, treatments received, medications given, and food intake. Respond to questions from patrons, and provide information about animals, such as behavior, habitat, breeding habits, or facility activities. Answer telephones and schedule appointments. Advise pet owners on how to care for their pets' health. Perform animal grooming duties, such as washing, brushing, clipping, and trimming coats, cutting nails, and cleaning ears.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

**Alabama Wage Data**

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<thead>
<tr>
<th>Entry</th>
<th>Median</th>
<th>Experienced</th>
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<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
<td>Hourly Wage</td>
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<tr>
<td>$8.07</td>
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<td>$9.57</td>
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</table>

**Alabama Projections**

- 2018 Estimated Employment: 4,040
- 2028 Projected Employment: 4,660
- Average Total Openings: 765
- Annual Growth Rate: 1.43%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Food Servers, Nonrestaurant
- Stockers & Order Fillers
- Fast Food & Counter Workers
- Cooks, Fast Food
- Farmworkers & Laborers, Crop, Nursery, & Greenhouse
- Food Preparation Workers
- Janitors & Cleaners, Except Maids & Housekeeping
- Cleaners
- Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop

### Post-Secondary Institutions with Programs

- 6

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Tasks: Compute final estimation of property values, taking into account such factors as depreciation, replacement costs, value comparisons of similar properties, and income potential. Prepare written reports that estimate property values, outline methods by which the estimations were made, and meet appraisal standards. Inspect new construction and major improvements to existing structures to determine values. Collect and analyze relevant data to identify real estate market trends. Prepare and maintain current data on each parcel assessed, including maps of boundaries, inventories of land and structures, property characteristics, and any applicable exemptions. Explain assessed values to property owners and defend appealed assessments at public hearings. Identify the ownership of each piece of taxable property. Inspect properties, considering factors such as market value, location, and building or replacement costs to determine appraisal value. Complete and maintain assessment rolls that show the assessed values and status of all property in a municipality. Review information about transfers of property to ensure its accuracy, checking basic information on buyers, sellers, and sales prices and making corrections as necessary. Explain real and personal property taxes to property owners. Conduct regular reviews of property within jurisdictions to determine changes in property due to construction or demolition. Establish uniform and equitable systems for assessing all classes and kinds of property. Examine income records and operating costs of income properties. Evaluate land and neighborhoods where properties are situated, considering locations and trends or impending changes that could influence future values. Maintain familiarity with aspects of local real estate markets. Search public records for transactions such as sales, leases, and assessments. Check building codes and zoning bylaws to determine any effects on the properties being appraised. Verify legal descriptions of properties by comparing them to county records.

License: Trainee - Application Fee: $150.00 / Annual License Fee: $335.00; State Registered - Application Fee: $275.00 / Annual License Fee: $335.00; Certified General - Application Fee: $275.00 / Annual License Fee: $335.00 / Washington Registry Fee: $40.00; Licensed - Application Fee: $275.00 / Annual License Fee: $335.00 / Washington Registry Fee: $40.00; Certified Residential - Application Fee: $275.00 / Annual License Fee: $335.00 / Washington Registry Fee: $40.00

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$9.37</td>
</tr>
<tr>
<td>Median</td>
<td>$25.09</td>
</tr>
<tr>
<td>Experienced</td>
<td>$47.57</td>
</tr>
</tbody>
</table>

*For an explanation on omitted data, see the Missing Data section in the introduction.*

Related Occupations
- Claims Adjusters, Examiners, & Investigators
- Urban & Regional Planners
- Real Estate Brokers
- Tax Examiners & Collectors, & Revenue Agents
- Real Estate Sales Agents
- Civil Engineering Technologists & Technicians
- Transportation Inspectors
- Purchasing Agents, Except Wholesale, Retail, & Farm Products
- Administrative Services Managers
- Buyers & Purchasing Agents, Farm Products

Post-Secondary Institutions with Programs
- James H Faulkner State Community College
- Jefferson Davis Community College
- Lawson State Community College-Birmingham Campus

2020 Career Exploration Guide
Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Prepare scale drawings or architectural designs, using computer-aided design or other tools. Plan or design structures such as residences, office buildings, theatres, factories, or other structural properties in accordance with environmental, safety, or other regulations. Direct activities of technicians engaged in preparing drawings or specification documents. Prepare contract documents for building contractors. Prepare information regarding design, structure specifications, materials, color, equipment, estimated costs, or construction time. Meet with clients to review or discuss architectural drawings. Integrate engineering elements into unified architectural designs. Administer construction contracts. Consult with clients to determine functional or spatial requirements of structures. Develop marketing materials, proposals, or presentation to generate new work opportunities. Develop final construction plans that include aesthetic representations of the structure or details for its construction. Conduct periodic on-site observations of construction work to monitor compliance with plans. Monitor the work of specialists, such as electrical engineers, mechanical engineers, interior designers, or sound specialists to ensure optimal form or function of designs or final structures. Plan layouts of structural architectural projects. Design or plan construction of green building projects to minimize adverse environmental impact or conserve energy. Represent clients in obtaining bids or awarding construction contracts. Design structures that incorporate environmentally friendly building practices or concepts, such as Leadership in Energy and Environmental Design (LEED) standards. Perform predesign services, such as feasibility or environmental impact studies. Inspect proposed building sites to determine suitability for construction. Create three-dimensional or interactive representations of designs, using computer-assisted design software. Design environmentally sound structural upgrades to existing buildings, such as natural lighting systems, green roofs, or rainwater collection systems. Gather information related to projects' environmental sustainability or operational efficiency. Prepare operating and maintenance manuals, studies, or reports. Calculate potential energy savings by comparing estimated energy consumption of proposed design to baseline standards.

License: License Application Fee: $150.00

Outlook: Satisfactory

<table>
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<tr>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry $23.24</td>
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<td><strong>2018 Estimated Employment:</strong> 1,600</td>
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<td><strong>2028 Projected Employment:</strong> 1,740</td>
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<td><strong>Average Total Openings:</strong> 140</td>
<td></td>
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<tr>
<td><strong>Annual Growth Rate:</strong> 0.84%</td>
<td></td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Architectural & Engineering Managers
Civil Engineers
Interior Designers
Architecture Teachers, Postsecondary
Construction Managers
Urban & Regional Planners
Sales Engineers
Purchasing Agents, Except Wholesale, Retail, & Farm Products
Transportation, Storage, & Distribution Managers
Conservation Scientists

Post-Secondary Institutions with Programs
Samford University
Auburn University
Tuskegee University

2020 Career Exploration Guide
Architectural and Civil Drafters

Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Use knowledge of building materials, engineering practices, and mathematics to complete drawings.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks: Produce drawings, using computer-assisted drafting systems (CAD) or drafting machines, or by hand, using compasses, dividers, protractors, triangles, and other drafting devices. Draft plans and detailed drawings for structures, installations, and construction projects, such as highways, sewage disposal systems, and dikes, working from sketches or notes. Coordinate structural, electrical, and mechanical designs and determine a method of presentation to graphically represent building plans. Analyze building codes, by-laws, space and site requirements, and other technical documents and reports to determine their effect on architectural designs. Draw maps, diagrams, and profiles, using cross-sections and surveys, to represent elevations, topographical contours, subsurface formations, and structures. Lay out and plan interior room arrangements for commercial buildings, using computer-assisted drafting (CAD) equipment and software. Supervise and train other technologists, technicians, and drafters. Determine the order of work and method of presentation, such as orthographic or isometric drawing. Finish and duplicate drawings and documentation packages according to required mediums and specifications for reproduction, using blueprinting, photography, or other duplicating methods. Draw rough and detailed scale plans for foundations, buildings, and structures, based on preliminary concepts, sketches, engineering calculations, specification sheets, and other data. Correlate, interpret, and modify data obtained from topographical surveys, well logs, and geophysical prospecting reports. Check dimensions of materials to be used and assign numbers to lists of materials. Determine procedures and instructions to be followed, according to design specifications and quantity of required materials. Supervise or conduct field surveys, inspections, or technical investigations to obtain data required to revise construction drawings.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<td>Hourly Wage</td>
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<tr>
<td>Experienced</td>
<td>$37.74</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Civil Engineering Technologists & Technicians
Electrical & Electronics Drafters
Commercial & Industrial Designers
Cartographers & Photogrammetrists
Surveying & Mapping Technicians
Geographic Information Systems Technologists & Technicians
Mechanical Drafters
Marine Engineers & Naval Architects
Fabric & Apparel Patternmakers
Interior Designers

Post-Secondary Institutions with Programs
Bevill State Community College
Bishop State Community College
Brown Mackie College-Birmingham
Central Alabama Community College
Gadsden State Community College
George C Wallace Community College-Dothan
George C Wallace State Community College-Selma
H Councill Trenholm State Community College
J. F. Drake State Community and Technical College
J F Ingram State Technical College
Jefferson Davis Community College
John C Calhoun State Community College
Lawson State Community College-Birmingham Campus
Northwest-Shoals Community College
Remington College-Mobile Campus
Shelton State Community College
Southern Union State Community College

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Architectural and Engineering Managers

Plan, direct, or coordinate activities in such fields as architecture and engineering or research and development in these fields.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Manage the coordination and overall integration of technical activities in architecture or engineering projects. Direct, review, or approve project design changes. Consult or negotiate with clients to prepare project specifications. Prepare budgets, bids, or contracts. Present and explain proposals, reports, or findings to clients. Confer with management, production, or marketing staff to discuss project specifications or procedures. Assess project feasibility by analyzing technology, resource needs, or market demand. Review, recommend, or approve contracts or cost estimates. Develop or implement policies, standards, or procedures for engineering and technical work. Establish scientific or technical goals within broad outlines provided by top management. Direct recruitment, placement, and evaluation of architecture or engineering project staff. Perform administrative functions, such as reviewing or writing reports, approving expenditures, enforcing rules, or purchasing of materials or services. Develop or implement programs to improve sustainability or reduce the environmental impacts of engineering or architecture activities or operations. Evaluate the environmental impacts of engineering, architecture, or research and development activities.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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2018 Estimated Employment: 2,320
2028 Projected Employment: 2,510
Average Total Openings: 195
Annual Growth Rate: 0.80%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Architects, Except Landscape & Naval
Energy Engineers, Except Wind & Solar
Transportation Engineers
Fire-Prevention & Protection Engineers
Civil Engineers
Engineering Teachers, Postsecondary
Logistics Engineers
Marine Engineers & Naval Architects
Construction Managers
Industrial Engineers

Post-Secondary Institutions with Programs
Alabama A & M University
Alabama State University
Auburn University
Samford University
The University of Alabama
Tuskegee University
University of Alabama at Birmingham
University of Alabama in Huntsville
University of South Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Audio and Video Equipment Technicians

Set up, maintain, and dismantle audio and video equipment, such as microphones, sound speakers, connecting wires and cables, sound and mixing boards, video cameras, video monitors and servers, and related electronic equipment for live or recorded events, such as concerts, meetings, conventions, presentations, podcasts, news conferences, and sporting events.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Notify supervisors when major equipment repairs are needed. Diagnose and resolve media system problems. Direct and coordinate activities of assistants and other personnel during production. Compress, digitize, duplicate, and store audio and video data. Install, adjust, and operate electronic equipment to record, edit, and transmit radio and television programs, motion pictures, video conferencing, or multimedia presentations. Control the lights and sound of events, such as live concerts, before and after performances, and during intermissions. Switch sources of video input from one camera or studio to another, from film to live programming, or from network to local programming. Record and edit audio material, such as movie soundtracks, using audio recording and editing equipment. Perform minor repairs and routine cleaning of audio and video equipment. Design layouts of audio and video equipment and perform upgrades and maintenance. Conduct training sessions on selection, use, and design of audio-visual materials and on operation of presentation equipment.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

<table>
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<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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</thead>
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<tr>
<td>Entry</td>
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<td>Median</td>
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<th>Alabama Projections</th>
</tr>
</thead>
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<tr>
<td>2018 Estimated Employment: 1,150</td>
</tr>
<tr>
<td>2028 Projected Employment: 1,270</td>
</tr>
<tr>
<td>Average Total Openings: 140</td>
</tr>
<tr>
<td>Annual Growth Rate: 1.07%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Broadcast Technicians
Computer User Support Specialists
Sound Engineering Technicians
Librarians & Media Collections Specialists
Desktop Publishers
Film & Video Editors
Audiovisual Equipment Installers & Repairers
Media Technical Directors/Managers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Automotive and Watercraft Service Attendants

Service automobiles, buses, trucks, boats, and other automotive or marine vehicles with fuel, lubricants, and accessories. Collect payment for services and supplies. May lubricate vehicle, change motor oil, refill antifreeze, or replace lights or other accessories, such as windshield wiper blades or fan belts. May repair or replace tires.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Collect cash payments from customers and make change or charge purchases to customers' credit cards and provide customers with receipts. Check tire pressure and levels of fuel, motor oil, transmission, radiator, battery, or other fluids, adding air or fluids as required. Perform minor repairs, such as adjusting brakes, replacing spark plugs, or changing engine oil or filters. Clean parking areas, offices, restrooms, or equipment and remove trash. Order stock and price and shelve incoming goods. Sell and install accessories, such as batteries, windshield wiper blades, fan belts, bulbs, or headlamps. Grease and lubricate vehicles or specified units, such as springs, universal joints, or steering knuckles, using grease guns or spray lubricants. Rotate, test, and repair or replace tires.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2018 Estimated Employment: 1,620</td>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>Entry $9.02 $18,758.00</td>
</tr>
<tr>
<td>Median</td>
<td>Median $11.33 $23,561.00</td>
</tr>
<tr>
<td>Experienced</td>
<td>Experienced $15.63 $32,512.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Tire Repairers & Changers
- Farmworkers & Laborers, Crop, Nursery, & Greenhouse
- Landscaping & Groundskeeping Workers
- Bridge & Lock Tenders
- Farmworkers, Farm, Ranch, & Aquacultural Animals
- Janitors & Cleaners, Except Maids & Housekeeping
- Cleaners
- Animal Caretakers
- Parking Attendants
- Automotive Body & Related Repairers
- Driver/Sales Workers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Automotive Body and Related Repairers

Repair and refinish automotive vehicle bodies and straighten vehicle frames.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

**Tasks:** File, grind, sand, and smooth filled or repaired surfaces, using power tools and hand tools. Inspect repaired vehicles for proper functioning, completion of work, dimensional accuracy, and overall appearance of paint job, and test-drive vehicles to ensure proper alignment and handling. Fit and weld replacement parts into place, using wrenches and welding equipment, and grind down welds to smooth them, using power grinders and other tools. Prime and paint repaired surfaces, using paint sprayguns and motorized sanders. Follow supervisors' instructions as to which parts to restore or replace and how much time the job should take. Sand body areas to be painted and cover bumpers, windows, and trim with masking tape or paper to protect them from the paint. Chain or clamp frames and sections to alignment machines that use hydraulic pressure to align damaged components. Position dolly blocks against surfaces of dented areas and beat opposite surfaces to remove dents, using hammers. Cut and tape plastic separating film to outside repair areas to avoid damaging surrounding surfaces during repair procedure and remove tape and wash surfaces after repairs are complete. Review damage reports, prepare or review repair cost estimates, and plan work to be performed. Fill small dents that cannot be worked out with plastic or solder. Remove damaged sections of vehicles using metal-cutting guns, air grinders and wrenches, and install replacement parts using wrenches or welding equipment. Remove small pits and dimples in body metal, using pick hammers and punches. Remove upholstery, accessories, electrical window-and-seat-operating equipment, and trim to gain access to vehicle bodies and fenders. Mix polyester resins and hardeners to be used in restoring damaged areas. Fit and secure windows, vinyl roofs, and metal trim to vehicle bodies, using caulking guns, adhesive brushes, and mallets. Adjust or align headlights, wheels, and brake systems. Replace damaged glass on vehicles. Remove damaged panels, and identify the family and properties of the plastic used on a vehicle. Apply heat to plastic panels, using hot-air welding guns or immersion in hot water, and press the softened panels back into shape by hand. Clean work areas, using air hoses, to remove damaged material and discarded fiberglass strips used in repair procedures. Soak fiberglass matting in resin mixtures and apply layers of matting over repair areas to specified thicknesses.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>2018 Estimated Employment:</strong> 2,260</td>
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<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$11.45</td>
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<td><strong>Median</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>$20.20</td>
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<tr>
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<tr>
<td>$29.46</td>
<td>$61,277.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Engine & Other Machine Assemblers
- Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
- Molders, Shapers, & Casters, Except Metal & Plastic
- Sawing Machine Setters, Operators, & Tenders, Wood
- Heat Treating Equipment Setters, Operators, & Tenders
- Helpers--Installation, Maintenance, & Repair Workers
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Terrazzo Workers & Finishers
- Rail Car Repairers

### Post-Secondary Institutions with Programs

13

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Automotive Service Technicians and Mechanics

Diagnose, adjust, repair, or overhaul automotive vehicles.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

**Tasks:** Test drive vehicles and test components and systems, using equipment such as infrared engine analyzers, compression gauges, and computerized diagnostic devices. Inspect vehicles for damage and record findings so that necessary repairs can be made. Test and adjust repaired systems to meet manufacturers' performance specifications. Repair, reline, replace, and adjust brakes. Estimate costs of vehicle repair. Review work orders and discuss work with supervisors. Troubleshoot fuel, ignition, and emissions control systems, using electronic testing equipment. Confer with customers to obtain descriptions of vehicle problems and to discuss work to be performed and future repair requirements. Align vehicles' front ends. Test electronic computer components in automobiles to ensure proper operation. Tear down, repair, and rebuild faulty assemblies, such as power systems, steering systems, and linkages. Perform routine and scheduled maintenance services, such as oil changes, lubrications, and tune-ups. Follow checklists to ensure all important parts are examined, including belts, hoses, steering systems, spark plugs, brake and fuel systems, wheel bearings, and other potentially troublesome areas. Plan work procedures, using charts, technical manuals, and experience. Maintain cleanliness of work area. Align wheels, axles, frames, torsion bars, and steering mechanisms of automobiles, using special alignment equipment and wheel-balancing machines. Tune automobile engines to ensure proper and efficient functioning. Repair, replace, or adjust defective fuel injectors, carburetor parts, and gasoline filters. Repair and service air conditioning, heating, engine cooling, and electrical systems. Disassemble units and inspect parts for wear, using micrometers, calipers, and gauges. Change spark plugs, fuel filters, air filters, and batteries in hybrid electric vehicles. Overhaul or replace carburetors, blowers, generators, distributors, starters, and pumps. Repair or replace parts such as pistons, rods, gears, valves, and bearings. Rewire ignition systems, lights, and instrument panels. Install, adjust, or repair hydraulic or electromagnetic automatic lift mechanisms used to raise and lower automobile windows, seats, and tops.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

**Alabama Wage Data**

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<tr>
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<td>Median</td>
<td>$19.57</td>
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<td>Experienced</td>
<td>$30.55</td>
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</table>

**Alabama Projections**

- **2018 Estimated Employment:** 9,540
- **2028 Projected Employment:** 9,570
- **Average Total Openings:** 930
- **Annual Growth Rate:** 0.02%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Mobile Heavy Equipment Mechanics, Except Engines
- Motorboat Mechanics & Service Technicians
- Electric Motor, Power Tool, & Related Repairers
- Electronic Equipment Installers & Repairers, Motor Vehicles
- Transportation Vehicle, Equipment & Systems Inspectors, Except Aviation
- Farm Equipment Mechanics & Service Technicians
- Bus & Truck Mechanics & Diesel Engine Specialists
- Motorcycle Mechanics
- Industrial Machinery Mechanics
- Control & Valve Installers & Repairers, Except Mechanical Door
- **Motorcycle Mechanics**
- **Bus & Truck Mechanics & Diesel Engine Specialists**
- **Motorcycle Mechanics**
- **Industrial Machinery Mechanics**
- **Control & Valve Installers & Repairers, Except Mechanical Door**

### Post-Secondary Institutions with Programs

- Bevill State Community College
- Coastal Alabama Community College
- George C Wallace Community College-Dothan
- George C Wallace State Community College-Hanceville
- H Councill Trenholm State Community College
- J. F. Drake State Community and Technical College
- James H Faulkner State Community College
- Lawson State Community College-Birmingham Campus

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Bakers

Mix and bake ingredients to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Check products for quality and identify damaged or expired goods. Set oven temperatures and place items into hot ovens for baking. Combine measured ingredients in bowls of mixing, blending, or cooking machinery. Place dough in pans, molds, or on sheets and bake in production ovens or on grills. Set time and speed controls for mixing machines, blending machines, or steam kettles so that ingredients will be mixed or cooked according to instructions. Measure or weigh flour or other ingredients to prepare batters, doughs, fillings, or icings, using scales or graduated containers. Observe color of products being baked and adjust oven temperatures, humidity, or conveyor speeds accordingly. Check the quality of raw materials to ensure that standards and specifications are met. Check equipment to ensure that it meets health and safety regulations and perform maintenance or cleaning, as necessary. Adapt the quantity of ingredients to match the amount of items to be baked. Apply glazes, icings, or other toppings to baked goods, using spatulas or brushes. Decorate baked goods, such as cakes or pastries. Roll, knead, cut, or shape dough to form sweet rolls, pie crusts, tarts, cookies, or other products. Direct or coordinate bakery deliveries. Order or receive supplies or equipment. Prepare or maintain inventory or production records.

**License:** No License Required.

**Outlook:** Satisfactory

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**Alabama Employment Outlook**

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$8.35</td>
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<td>Median</td>
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<tr>
<td>$12.04</td>
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<tr>
<td>Experienced</td>
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</tr>
<tr>
<td>$17.62</td>
<td>$36,642.00</td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Cooks, Restaurant
- Cooks, Institution & Cafeteria
- Butchers & Meat Cutters
- Cooks, Fast Food
- Inspectors, Testers, Sorters, Samplers, & Weighers
- Packers & Packagers, Hand
- Fast Food & Counter Workers
- Food Batchmakers
- Bartenders
- First-Line Supervisors of Food Preparation & Serving Workers

**Post-Secondary Institutions with Programs**
- 15

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Barbers

Provide barbering services, such as cutting, trimming, shampooing, and styling hair; trimming beards; or giving shaves.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need none or short demonstration

**Tasks:** Clean and sterilize scissors, combs, clippers, and other instruments. Drape and pin protective cloths around customers' shoulders. Cut and trim hair according to clients' instructions or current hairstyles, using clippers, combs, hand-held blow dryers, and scissors. Question patrons regarding desired services and haircut styles. Clean work stations and sweep floors. Apply lather and shave beards or neck and temple hair contours, using razors. Record services provided on cashiers' tickets or receive payment from customers. Shape and trim beards and moustaches, using scissors. Perform clerical and administrative duties such as keeping records, paying bills, and hiring and supervising personnel. Stay informed of the latest styles and hair care techniques. Suggest treatments to alleviate hair problems. Order supplies. Shampoo hair. Recommend and sell lotions, tonics, or other cosmetic supplies.

**License:** Original License Fee: $50.00; Personal Renewal Fee: $100.00; Apprentice Fee: $75; Written Examination: $75; Practical Examination: $130

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Manicurists & Pedicurists  
Tailors, Dressmakers, & Custom Sewers  
Skincare Specialists  
Hairdressers, Hairstylists, & Cosmetologists  
Massage Therapists  
Shampooers  
Locker Room, Coatroom, & Dressing Room Attendants  
Shoe & Leather Workers & Repairers  
Tour Guides & Escorts  
Costume Attendants

### Post-Secondary Institutions with Programs

Alabama State College of Barber Styling  
Bevill State Community College  
Bishop State Community College  
Blue Cliff Career College  
Brown Beauty Barber School  
Coastal Alabama Community College  
Gadsden State Community College  
George C Wallace State Community College-Hanceville  
J F Ingram State Technical College  
J. F. Drake State Community and Technical College  
Jefferson Davis Community College  
John C Calhoun State Community College  
Lawson State Community College  
Lawson State Community College-Birmingham Campus  
Midfield Institute of Cosmetology  
New Beginning College of Cosmetology  
Northeast Alabama Community College  
Northwest-Shoals Community College  
Paul Mitchell the School-Birmingham  
Shelton State Community College  
University Academy of Hair Design  
Winonah's International School of Cosmetology

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Bartenders

Mix and serve drinks to patrons, directly or through waitstaff.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Clean glasses, utensils, and bar equipment. Collect money for drinks served. Balance cash receipts. Check identification of customers to verify age requirements for purchase of alcohol. Clean bars, work areas, and tables. Attempt to limit problems and liability related to customers' excessive drinking by taking steps such as persuading customers to stop drinking, or ordering taxis or other transportation for intoxicated patrons. Take beverage orders from serving staff or directly from patrons. Serve wine, and bottled or draft beer. Plan, organize, and control the operations of a cocktail lounge or bar. Stock bar with beer, wine, liquor, and related supplies such as ice, glassware, napkins, or straws. Serve snacks or food items to customers seated at the bar. Mix ingredients, such as liquor, soda, water, sugar, and bitters, to prepare cocktails and other drinks. Slice and pit fruit for garnishing drinks. Ask customers who become loud and obnoxious to leave, or physically remove them. Arrange bottles and glasses to make attractive displays. Create drink recipes.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Gambling Change Persons & Booth Cashiers
- Retail Salespersons
- Gambling Dealers
- Gambling & Sports Book Writers & Runners
- Gambling Cage Workers
- Fast Food & Counter Workers
- Butchers & Meat Cutters
- First-Line Supervisors of Retail Sales Workers
- Hotel, Motel, & Resort Desk Clerks
- Bakers

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Billing and Posting Clerks

Compile, compute, and record billing, accounting, statistical, and other numerical data for billing purposes. Prepare billing invoices for services rendered or for delivery or shipment of goods.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

Tasks:
- Post stop-payment notices to prevent payment of protested checks. Verify accuracy of billing data and revise any errors. Verify signatures and required information on checks. Prepare itemized statements, bills, or invoices and record amounts due for items purchased or services rendered. Perform bookkeeping work, including posting data or keeping other records concerning costs of goods or services or the shipment of goods. Operate typing, adding, calculating, or billing machines. Resolve discrepancies in accounting records. Contact customers to obtain or relay account information. Review documents, such as purchase orders, sales tickets, charge slips, or hospital records, to compute fees or charges due. Keep records of invoices and support documents. Route statements for mailing or over-the-counter delivery to customers. Monitor equipment to ensure proper operation. Fix minor problems, such as equipment jams, and notify repair personnel of major equipment problems.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
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<td></td>
<td>Annual Growth Rate: 0.84%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Bookkeeping, Accounting, & Auditing Clerks
- Payroll & Timekeeping Clerks
- Legal Secretaries & Administrative Assistants
- Insurance Claims & Policy Processing Clerks
- Word Processors & Typists
- File Clerks
- Office Clerks, General
- Paralegals & Legal Assistants
- Switchboard Operators, Including Answering Service
- Brokerage Clerks

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Brickmasons and Blockmasons**

Lay and bind building materials, such as brick, structural tile, concrete block, cinder block, glass block, and terra-cotta block, with mortar and other substances, to construct or repair walls, partitions, arches, sewers, and other structures.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 2 years, up to and including 4 years

**Tasks:** Measure distance from reference points and mark guidelines to lay out work, using plumb bobs and levels. Construct corners by fastening in plumb position a corner pole or building a corner pyramid of bricks, and filling in between the corners using a line from corner to corner to guide each course, or layer, of brick. Apply and smooth mortar or other mixture over work surface. Calculate angles and courses and determine vertical and horizontal alignment of courses. Break or cut bricks, tiles, or blocks to size, using trowel edge, hammer, or power saw. Interpret blueprints and drawings to determine specifications and to calculate the materials required. Remove excess mortar with trowels and hand tools, and finish mortar joints with jointing tools, for a sealed, uniform appearance. Fasten or fuse brick or other building material to structure with wire clamps, anchor holes, torch, or cement. Clean working surface to remove scale, dust, soot, or chips of brick and mortar, using broom, wire brush, or scraper. Examine brickwork or structure to determine need for repair. Mix specified amounts of sand, clay, dirt, or mortar powder with water to form refractory mixtures. Remove burned or damaged brick or mortar, using sledgehammer, crowbar, chipping gun, or chisel.

**License:** No License Required.

**Outlook:** Satisfactory

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**Alabama Employment Outlook**

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>$56,259.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Carpenters
- Structural Iron & Steel Workers
- Cement Masons & Concrete Finishers
- Reinforcing Iron & Rebar Workers
- Drywall & Ceiling Tile Installers
- Sheet Metal Workers
- Insulation Workers, Mechanical
- Helpers--Pipelayers, Plumbers, Pipefitters, & Steamfitters
- Layout Workers
- Block Layer
- Block Mason
- Blockmason
- Brick & Block Mason
- Brick Mason
- Bricklayer
- Concrete Finisher
- Mason
- Masonry Installer
- Tender

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Bus and Truck Mechanics and Diesel Engine Specialists

Diagnose, adjust, repair, or overhaul buses and trucks, or maintain and repair any type of diesel engines. Includes mechanics working primarily with automobile or marine diesel engines.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 4 years, up to and including 10 years

Tasks: Inspect brake systems, steering mechanisms, wheel bearings, and other important parts to ensure that they are in proper operating condition. Use handtools, such as screwdrivers, pliers, wrenches, pressure gauges, or precision instruments, as well as power tools, such as pneumatic wrenches, lathes, welding equipment, or jacks and hoists. Adjust and reline brakes, align wheels, tighten bolts and screws, and reassemble equipment. Examine and adjust protective guards, loose bolts, and specified safety devices. Perform routine maintenance such as changing oil, checking batteries, and lubricating equipment and machinery. Test drive trucks and buses to diagnose malfunctions or to ensure that they are working properly. Raise trucks, buses, and heavy parts or equipment using hydraulic jacks or hoists. Attach test instruments to equipment, and read dials and gauges to diagnose malfunctions. Rebuild gas or diesel engines. Inspect and verify dimensions and clearances of parts to ensure conformance to factory specifications. Inspect, test, and listen to defective equipment to diagnose malfunctions, using test instruments such as handheld computers, motor analyzers, chassis charts, or pressure gauges. Recondition and replace parts, pistons, bearings, gears, and valves. Rewire ignition systems, lights, and instrument panels. Specialize in repairing and maintaining parts of the engine, such as fuel injection systems. Align front ends and suspension systems. Inspect, repair, and maintain automotive and mechanical equipment and machinery, such as pumps and compressors. Install or repair accessories. Disassemble and overhaul internal combustion engines, pumps, generators, transmissions, clutches, and differential units. Diagnose and repair vehicle heating and cooling systems. Repair or adjust seats, doors, or windows.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
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<td><strong>Median</strong> $43,592.00</td>
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<tr>
<td><strong>Experienced</strong> $30.36</td>
<td><strong>Experienced</strong> $63,150.00</td>
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2018 Estimated Employment: 5,550
2028 Projected Employment: 5,850
Average Total Openings: 560
Annual Growth Rate: 0.52%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Motorboat Mechanics & Service Technicians
Transportation Vehicle, Equipment & Systems Inspectors, Except Aviation
Control & Valve Installers & Repairers, Except Mechanical Door
Mobile Heavy Equipment Mechanics, Except Engines
Farm Equipment Mechanics & Service Technicians
Automotive Service Technicians & Mechanics
Signal & Track Switch Repairers
Maintenance & Repair Workers, General
Stationary Engineers & Boiler Operators
Recreational Vehicle Service Technicians

Post-Secondary Institutions with Programs
Bevill State Community College
Bishop State Community College
Gadsden State Community College
George C Wallace State Community College-Hanceville
H Councill Trenholm State Community College
J F Ingram State Technical College
Lawson State Community College-Birmingham Campus
Lurleen B Wallace Community College
Shelton State Community College

2020 Career Exploration Guide
Bus Drivers, School

Drive a school bus to transport students. Ensure adherence to safety rules. May assist students in boarding or exiting.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

Tasks: Keep bus interiors clean for passengers. Check the condition of a vehicle's tires, brakes, windshield wipers, lights, oil, fuel, water, and safety equipment to ensure that everything is in working order. Prepare and submit reports that may include the number of passengers or trips, hours worked, mileage, fuel consumption, or fares received. Drive gasoline, diesel, or electrically powered multi-passenger vehicles to transport students between neighborhoods, schools, and school activities. Regulate heating, lighting, and ventilation systems for passenger comfort. Report any bus malfunctions or needed repairs. Pick up and drop off students at regularly scheduled neighborhood locations, following strict time schedules. Follow safety rules as students board and exit buses or cross streets near bus stops. Comply with traffic regulations to operate vehicles in a safe and courteous manner. Maintain order among pupils during trips to ensure safety. Maintain knowledge of first-aid procedures. Read maps and follow written and verbal geographic directions. Make minor repairs to vehicles. Report delays, accidents, or other traffic and transportation situations, using telephones or mobile two-way radios. Escort small children across roads and highways.

License: This applicant should contact the Alabama State Department of Education for fees and exams. For Commercial Driver's License Fee, please contact the Alabama Department of Public Safety.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
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<td>Average Total Openings: 1,215</td>
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<tr>
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<td>Annual Growth Rate: 0.19%</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Bus Driver
Bus Monitor
Campus Driver
School Bus Driver
School Bus Operator
Shuttle Bus Driver
Special Education Bus Driver
Special Education Driver

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
21

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Bus Drivers, Transit and Intercity

Drive bus or motor coach, including regular route operations, charters, and private carriage. May assist passengers with baggage. May collect fares or tickets.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Drive vehicles over specified routes or to specified destinations according to time schedules, complying with traffic regulations to ensure that passengers have a smooth and safe ride. Park vehicles at loading areas so that passengers can board. Inspect vehicles and check gas, oil, and water levels prior to departure. Announce stops to passengers. Assist passengers, such as elderly or disabled individuals, on and off bus, ensure they are seated properly, help carry baggage, and answer questions about bus schedules or routes. Collect tickets or cash fares from passengers. Handle passenger emergencies or disruptions. Report delays or accidents. Advise passengers to be seated and orderly while on vehicles. Regulate heating, lighting, and ventilating systems for passenger comfort. Record information, such as cash receipts and ticket fares, and maintain log book. Maintain cleanliness of bus or motor coach.

License: Testing Fee: $25.00; Commercial Learner License: $36.25; Skills Test Fee: $20.00; Class "A" License: $66.25; Class "B" License: $56.25; Class "C" License: $36.25

Outlook: Satisfactory

Alabama Employment Outlook

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<td>$24.96</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Ambulance Drivers & Attendants, Except Emergency
Medical Technicians
Subway & Streetcar Operators
Passenger Attendants
Couriers & Messengers
Heavy & Tractor-Trailer Truck Drivers
Parking Enforcement Workers
Railroad Brake, Signal, & Switch Operators & Locomotive
Firers
Meter Readers, Utilities
Bus Driver
Bus Operator
Charter Bus Driver
Coach Operator
Motor Coach Driver
Motor Coach Operator
Transit Bus Driver
Transit Coach Operator
Transit Driver
Transit Operator

Post-Secondary Institutions with Programs
Bevill State Community College
Bishop State Community College
Reid State Technical College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Butchers and Meat Cutters

Cut, trim, or prepare consumer-sized portions of meat for use or sale in retail establishments.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Prepare and place meat cuts and products in display counter to appear attractive and catch the shopper's eye. Wrap, weigh, label, and price cuts of meat. Cut, trim, bone, tie, and grind meats, such as beef, pork, poultry, and fish, to prepare in cooking form. Prepare special cuts of meat ordered by customers. Receive, inspect, and store meat upon delivery to ensure meat quality. Estimate requirements and order or requisition meat supplies to maintain inventories. Shape, lace, and tie roasts, using boning knife, skewer, and twine.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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**2018 Estimated Employment:** 1,670

**2028 Projected Employment:** 1,760

**Average Total Openings:** 220

**Annual Growth Rate:** 0.55%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Cooks, Institution & Cafeteria
Cooks, Restaurant
Bakers
Bartenders
Fast Food & Counter Workers
Shipping, Receiving, & Inventory Clerks
Food Cooking Machine Operators & Tenders
Cooks, Fast Food
First-Line Supervisors of Food Preparation & Serving
Workers
Meat, Poultry, & Fish Cutters & Trimmers

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Cabinetmakers and Bench Carpenters

Cut, shape, and assemble wooden articles or set up and operate a variety of woodworking machines, such as power saws, jointers, and mortisers to surface, cut, or shape lumber or to fabricate parts for wood products.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Verify dimensions or check the quality or fit of pieces to ensure adherence to specifications. Produce or assemble components of articles, such as store fixtures, office equipment, cabinets, or high-grade furniture. Measure and mark dimensions of parts on paper or lumber stock prior to cutting, following blueprints, to ensure a tight fit and quality product. Set up or operate machines, including power saws, jointers, mortisers, tenoners, molders, or shapers, to cut, mold, or shape woodstock or wood substitutes. Establish the specifications of articles to be constructed or repaired or plan the methods or operations for shaping or assembling parts, based on blueprints, drawings, diagrams, or oral or written instructions. Attach parts or subassemblies together to form completed units, using glue, dowels, nails, screws, or clamps. Reinforce joints with nails or other fasteners to prepare articles for finishing. Install hardware, such as hinges, handles, catches, or drawer pulls, using hand tools. Trim, sand, or scrape surfaces or joints to prepare articles for finishing. Match materials for color, grain, or texture, giving attention to knots or other features of the wood. Cut timber to the right size and shape and trim parts of joints to ensure a snug fit, using hand tools, such as planes, chisels, or wood files. Perform final touch-ups with sandpaper or steel wool. Bore holes for insertion of screws or dowels, by hand or using boring machines. Repair or alter wooden furniture, cabinetry, fixtures, paneling, or other pieces.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<td><strong>Alabama Wage Data</strong></td>
<td><strong>Alabama Projections</strong></td>
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<td>315</td>
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<tr>
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<td>0.17%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Patternmakers, Wood
Machinists
Drilling & Boring Machine Tool Setters, Operators, & Tenders
Sawing Machine Setters, Operators, & Tenders, Wood
Model Makers
Woodworking Machine Setters, Operators, & Tenders, Except Sawing
Printing Press Operators
Milling & Planing Machine Setters, Operators, & Tenders
Glass Blowers, Molders, Benders, & Finishers
Patternmakers

Post-Secondary Institutions with Programs
Coastal Alabama Community College
George C Wallace Community College-Dothan
J F Ingram State Technical College
Jefferson Davis Community College
Northwest-Shoals Community College
Southern Union State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Cargo and Freight Agents

Expedite and route movement of incoming and outgoing cargo and freight shipments in airline, train, and trucking terminals and shipping docks. Take orders from customers and arrange pickup of freight and cargo for delivery to loading platform. Prepare and examine bills of lading to determine shipping charges and tariffs.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Advise clients on transportation and payment methods. Track delivery progress of shipments. Notify consignees, passengers, or customers of freight or baggage arrival and arrange for delivery. Determine method of shipment and prepare bills of lading, invoices, and other shipping documents.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Customer Service Representatives
Bill & Account Collectors
Dispatchers, Except Police, Fire, & Ambulance
Receptionists & Information Clerks
Insurance Claims & Policy Processing Clerks
Hotel, Motel, & Resort Desk Clerks
Interviewers, Except Eligibility & Loan
Secretaries & Administrative Assistants, Except Legal, Medical, & Executive
Credit Authorizers, Checkers, & Clerks
Cargo Agent
Documentation Clerk
Drop Shipment Clerk
Freight Broker
Intermodal Dispatcher
International Coordinator
Load Planner
Logistics Coordinator
Logistics Service Representative

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Carpenters

Construct, erect, install, or repair structures and fixtures made of wood and comparable materials, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; and wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall, and batt or roll insulation. Includes brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

Tasks: Follow established safety rules and regulations and maintain a safe and clean environment. Study specifications in blueprints, sketches, or building plans to prepare project layout and determine dimensions and materials required. Measure and mark cutting lines on materials, using a ruler, pencil, chalk, and marking gauge. Shape or cut materials to specified measurements, using hand tools, machines, or power saws. Install structures or fixtures, such as windows, frames, floorings, trim, or hardware, using carpenters' hand or power tools. Verify trueness of structure, using plumb bob and level. Select and order lumber or other required materials. Arrange for subcontractors to deal with special areas, such as heating or electrical wiring work. Maintain records, document actions, and present written progress reports. Build or repair cabinets, doors, frameworks, floors, or other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, or power tools. Erect scaffolding or ladders for assembling structures above ground level. Anchor and brace forms and other structures in place, using nails, bolts, anchor rods, steel cables, planks, wedges, and timbers. Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures. Assemble and fasten materials to make frameworks or props, using hand tools and wood screws, nails, dowel pins, or glue. Bore boltholes in timber, masonry or concrete walls, using power drill. Maintain job records and schedule work crew. Remove damaged or defective parts or sections of structures and repair or replace, using hand tools. Install rough door and window frames, subflooring, fixtures, or temporary supports in structures undergoing construction or repair. Finish surfaces of woodwork or wallboard in houses or buildings, using paint, hand tools, or paneling. Examine structural timbers and supports to detect decay, and replace timbers as required, using hand tools, nuts, and bolts. Apply shock-absorbing, sound-deadening, or decorative paneling to ceilings or walls. Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, or wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base. Fill cracks or other defects in plaster or plasterboard and sand patch, using patching plaster, trowel, and sanding tool. Perform minor plumbing, welding, or concrete mixing work.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Sheet Metal Workers
- Terrazzo Workers & Finishers
- Drywall & Ceiling Tile Installers
- Brickmasons & Blockmasons
- Structural Iron & Steel Workers
- Cement Masons & Concrete Finishers
- Helpers--Carpenters
- Layout Workers
- Plumbers, Pipefitters, & Steamfitters
- Tile & Stone Setters

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Cement Masons and Concrete Finishers

Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, roads, or curbs using a variety of hand and power tools. Align forms for sidewalks, curbs, or gutters; patch voids; and use saws to cut expansion joints.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Check the forms that hold the concrete to see that they are properly constructed. Set the forms that hold concrete to the desired pitch and depth, and align them. Spread, level, and smooth concrete, using rake, shovel, hand or power trowel, hand or power screed, and float. Monitor how the wind, heat, or cold affect the curing of the concrete throughout the entire process. Mold expansion joints and edges, using edging tools, jointers, and straightedge. Signal truck driver to position truck to facilitate pouring concrete, and move chute to direct concrete on forms. Direct the casting of the concrete and supervise laborers who use shovels or special tools to spread it. Produce rough concrete surface, using broom. Apply hardening and sealing compounds to cure surface of concrete, and waterproof or restore surface. Operate power vibrator to compact concrete. Install anchor bolts, steel plates, door sills and other fixtures in freshly poured concrete or pattern or stamp the surface to provide a decorative finish. Wet surface to prepare for bonding, fill holes and cracks with grout or slurry, and smooth, using trowel. Waterproof or restore concrete surfaces, using appropriate compounds. Mix cement, sand, and water to produce concrete, grout, or slurry, using hoe, trowel, tamper, scraper, or concrete-mixing machine. Chip, scrape, and grind high spots, ridges, and rough projections to finish concrete, using pneumatic chisels, power grinders, or hand tools. Cut out damaged areas, drill holes for reinforcing rods, and position reinforcing rods to repair concrete, using power saw and drill. Wet concrete surface, and rub with stone to smooth surface and obtain specified finish. Clean chipped area, using wire brush, and feel and observe surface to determine if it is rough or uneven. Build wooden molds, and clamp molds around area to be repaired, using hand tools.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>Experienced</td>
<td>$24.64</td>
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</table>

| 2018 Estimated Employment: | 1,840 |
| 2028 Projected Employment: | 2,010 |

Average Total Openings: 220

Annual Growth Rate: 0.88%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Terrazzo Workers & Finishers
- Carpenters
- Brickmasons & Blockmasons
- Roofers
- Insulation Workers, Mechanical
- Carpet Installers
- Paving, Surfacing, & Tamping Equipment Operators
- Reinforcing Iron & Rebar Workers
- Sheet Metal Workers

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Chefs and Head Cooks

Direct and may participate in the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Monitor sanitation practices to ensure that employees follow standards and regulations. Check the quality of raw or cooked food products to ensure that standards are met. Estimate amounts and costs of required supplies, such as food and ingredients. Instruct cooks or other workers in the preparation, cooking, garnishing, or presentation of food. Supervise or coordinate activities of cooks or workers engaged in food preparation. Inspect supplies, equipment, or work areas to ensure conformance to established standards. Order or requisition food or other supplies needed to ensure efficient operation. Determine production schedules and staff requirements necessary to ensure timely delivery of services. Check the quantity and quality of received products. Determine how food should be presented and create decorative food displays. Plan, direct, or supervise food preparation or cooking activities of multiple kitchens or restaurants in an establishment such as a restaurant chain, hospital, or hotel. Coordinate planning, budgeting, or purchasing for all the food operations within establishments such as clubs, hotels, or restaurant chains. Analyze recipes to assign prices to menu items, based on food, labor, and overhead costs. Prepare and cook foods of all types, either on a regular basis or for special guests or functions. Meet with sales representatives to negotiate prices or order supplies. Recruit and hire staff, such as cooks and other kitchen workers. Collaborate with other personnel to plan and develop recipes or menus, taking into account such factors as seasonal availability of ingredients or the likely number of customers. Demonstrate new cooking techniques or equipment to staff. Arrange for equipment purchases or repairs. Meet with customers to discuss menus for special occasions, such as weddings, parties, or banquets. Record production or operational data on specified forms.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>Median</td>
<td>Median</td>
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<tr>
<td>Experienced</td>
<td>Experienced</td>
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<tr>
<td>$12.68</td>
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<tr>
<td>$36.53</td>
<td>$75,976.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Food Service Managers
First-Line Supervisors of Helpers, Laborers, & Material Movers, Hand
First-Line Supervisors of Food Preparation & Serving Workers
First-Line Supervisors of Housekeeping & Janitorial Workers
Industrial Production Managers
First-Line Supervisors of Retail Sales Workers
First-Line Supervisors of Personal Service Workers
Cooks, Institution & Cafeteria
Bakers
First-Line Supervisors of Production & Operating Workers

Post-Secondary Institutions with Programs
Bishop State Community College
George C Wallace State Community College-Hanceville
H Councill Trenholm State Community College
J. F. Drake State Community and Technical College
Lawson State Community College
Lurleen B Wallace Community College
Shelton State Community College

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Chemical Equipment Operators and Tenders

Operate or tend equipment to control chemical changes or reactions in the processing of industrial or consumer products. Equipment used includes devulcanizers, steam-jacketed kettles, and reactor vessels.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Observe safety precautions to prevent fires or explosions. Record operational data, such as temperatures, pressures, ingredients used, processing times, or test results. Control or operate equipment in which chemical changes or reactions take place during the processing of industrial or consumer products. Patrol work areas to detect leaks or equipment malfunctions or to monitor operating conditions. Draw samples of products at specified stages so that analyses can be performed. Adjust controls to regulate temperature, pressure, feed, or flow of liquids or gases and times of prescribed reactions, according to knowledge of equipment and processes. Monitor gauges, recording instruments, flowmeters, or products to ensure that specified conditions are maintained. Test product samples for specific gravity, chemical characteristics, pH levels, concentrations, or viscosities, or send them to laboratories for testing. Inspect equipment or units to detect leaks or malfunctions, shutting equipment down, if necessary. Open valves or start pumps, agitators, reactors, blowers, or automatic feed of materials. Read plant specifications to determine products, ingredients, or prescribed modifications of plant procedures. Implement appropriate industrial emergency response procedures. Measure, weigh, and mix chemical ingredients, according to specifications. Dump or scoop prescribed solid, granular, or powdered materials into equipment. Notify maintenance engineers of equipment malfunctions. Estimate materials required for production and manufacturing of products. Add treating or neutralizing agents to products, and pump products through filters or centrifuges to remove impurities or to precipitate products. Observe and compare colors and consistencies of products to instrument readings and to laboratory and standard test results. Direct activities of workers assisting in control or verification of processes or in unloading of materials. Drain equipment, and pump water or other solutions through to flush and clean tanks or equipment. Flush or clean equipment, using steam hoses or mechanical reamers. Make minor repairs, lubricate, and maintain equipment, using hand tools. Inventory supplies received and consumed.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>Median</td>
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Annual Growth Rate: 0.36%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Separating, Filtering, Clarifying, Precipitating, & Still
Machine Setters, Operators, & Tenders
Petroleum Pump System Operators, Refinery Operators, & Gaugers
Chemical Plant & System Operators
Pump Operators, Except Wellhead Pumpers
Rolling Machine Setters, Operators, & Tenders
Gas Compressor & Gas Pumping Station Operators
Mixing & Blending Machine Setters, Operators, & Tenders
Cutting & Slicing Machine Setters, Operators, & Tenders
Hazardous Materials Removal Workers
Non-Destructive Testing Specialists

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
29

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Chemical Technicians

Conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Conduct chemical or physical laboratory tests to assist scientists in making qualitative or quantitative analyses of solids, liquids, or gaseous materials. Maintain, clean, or sterilize laboratory instruments or equipment. Set up and conduct chemical experiments, tests, and analyses, using techniques such as chromatography, spectroscopy, physical or chemical separation techniques, or microscopy. Monitor product quality to ensure compliance with standards and specifications. Prepare chemical solutions for products or processes, following standardized formulas, or create experimental formulas. Provide and maintain a safe work environment by participating in safety programs, committees, or teams and by conducting laboratory or plant safety audits. Provide technical support or assistance to chemists or engineers. Train new employees on topics such as the proper operation of laboratory equipment. Order and inventory materials to maintain supplies.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td></td>
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<td>$38.16</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Chemists
Geological Technicians, Except Hydrologic Technicians
Medical & Clinical Laboratory Technicians
Industrial Engineering Technologists & Technicians
Agricultural Technicians
Biological Technicians
Food Science Technicians
Nuclear Monitoring Technicians
Environmental Engineering Technologists & Technicians
Nuclear Technicians

Post-Secondary Institutions with Programs
Northwest-Shoals Community College

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Child, Family, and School Social Workers

Provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. May assist parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy. May also advise teachers.

Education: Most of these occupations typically require a four-year bachelor’s degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Maintain case history records and prepare reports. Interview clients individually, in families, or in groups, assessing their situations, capabilities, and problems to determine what services are required to meet their needs. Serve as liaisons between students, homes, schools, family services, child guidance clinics, courts, protective services, doctors, and other contacts to help children who face problems, such as disabilities, abuse, or poverty. Develop and review service plans in consultation with clients and perform follow-ups assessing the quantity and quality of services provided. Address legal issues, such as child abuse and discipline, assisting with hearings and providing testimony to inform custody arrangements. Counsel parents with child rearing problems, interviewing the child and family to determine whether further action is required. Consult with parents, teachers, and other school personnel to determine causes of problems, such as truancy and misbehavior, and to implement solutions. Arrange for medical, psychiatric, and other tests that may disclose causes of difficulties and indicate remedial measures. Refer clients to community resources for services, such as job placement, debt counseling, legal aid, housing, medical treatment, or financial assistance, and provide concrete information, such as where to go and how to apply. Counsel individuals, groups, families, or communities regarding issues including mental health, poverty, unemployment, substance abuse, physical abuse, rehabilitation, social adjustment, child care, or medical care. Provide, find, or arrange for support services, such as child care, homemaker service, prenatal care, substance abuse treatment, job training, counseling, or parenting classes to prevent more serious problems from developing. Collect supplementary information needed to assist client, such as employment records, medical records, or school reports.

License: License Fee: $75.00; Examination Fee: $230.00; Bachelors/Masters or Clinical: $260.00; Renewal Fee: $100.00

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
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<td></td>
<td>2018 Estimated Employment: 3,960</td>
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<tr>
<td></td>
<td>2028 Projected Employment: 4,060</td>
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<tr>
<td></td>
<td>Average Total Openings: 400</td>
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<tr>
<td></td>
<td>Annual Growth Rate: 0.24%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Substance Abuse & Behavioral Disorder Counselors
Probation Officers & Correctional Treatment Specialists
Mental Health Counselors
Mental Health & Substance Abuse Social Workers
Social & Human Service Assistants
Recreational Therapists
Arbitrators, Mediators, & Conciliators
Clinical & Counseling Psychologists
Directors, Religious Activities & Education
Social & Community Service Managers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Childcare Workers

Attend to children at schools, businesses, private households, and childcare institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Maintain a safe play environment. Observe and monitor children's play activities. Communicate with children's parents or guardians about daily activities, behaviors, and related issues. Support children's emotional and social development, encouraging understanding of others and positive self-concepts. Care for children in institutional setting, such as group homes, nursery schools, private businesses, or schools for the handicapped. Sanitize toys and play equipment. Dress children and change diapers. Keep records on individual children, including daily observations and information about activities, meals served, and medications administered. Identify signs of emotional or developmental problems in children and bring them to parents' or guardians' attention. Instruct children in health and personal habits, such as eating, resting, and toilet habits. Organize and store toys and materials to ensure order in activity areas. Perform general administrative tasks, such as taking attendance, editing internal paperwork, and making phone calls. Create developmentally appropriate lesson plans. Perform housekeeping duties, such as laundry, cleaning, dish washing, and changing of linens. Read to children and teach them simple painting, drawing, handicrafts, and songs. Assist in preparing food and serving meals and refreshments to children. Discipline children and recommend or initiate other measures to control behavior, such as caring for own clothing and picking up toys and books. Regulate children's rest periods. Organize and participate in recreational activities and outings, such as games and field trips.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td></td>
<td>$29,206.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Home Health Aides
Physical Therapist Aides
Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers
Personal Care Aides
Preschool Teachers, Except Special Education
Occupational Therapy Aides
Psychiatric Aides
Hotel, Motel, & Resort Desk Clerks

Post-Secondary Institutions with Programs
Auburn University
The University of Alabama
University of North Alabama
Civil Engineering Technicians

Apply theory and principles of civil engineering in planning, designing, and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Calculate dimensions, square footage, profile and component specifications, and material quantities using calculator or computer. Read and review project blueprints and structural specifications to determine dimensions of structure or system and material requirements. Draft detailed dimensional drawings and design layouts for projects and to ensure conformance to specifications. Confer with supervisor to determine project details such as plan preparation, acceptance testing, and evaluation of field conditions. Analyze proposed site factors and design maps, graphs, tracings, and diagrams to illustrate findings. Prepare reports and document project activities and data. Report maintenance problems occurring at project site to supervisor and negotiate changes to resolve system conflicts.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<td></td>
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<td>$34.11</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Architectural & Civil Drafters
Surveying & Mapping Technicians
Electrical & Electronics Drafters
Power Distributors & Dispatchers
Traffic Technicians
Mechanical Drafters
Construction & Building Inspectors

Post-Secondary Institutions with Programs
Bishop State Community College
Gadsden State Community College
J. F. Drake State Community and Technical College
Jacksonville State University
Lawson State Community College

2020 Career Exploration Guide
33

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Cleaners of Vehicles and Equipment

Wash or otherwise clean vehicles, machinery, and other equipment. Use such materials as water, cleaning agents, brushes, cloths, and hoses.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Clean and polish vehicle windows. Scrub, scrape, or spray machine parts, equipment, or vehicles, using scrapers, brushes, clothes, cleaners, disinfectants, insecticides, acid, abrasives, vacuums, or hoses. Apply paints, dyes, polishes, reconditioners, waxes, or masking materials to vehicles to preserve, protect, or restore color or condition. Inspect parts, equipment, or vehicles for cleanliness, damage, and compliance with standards or regulations. Maintain inventories of supplies. Press buttons to activate cleaning equipment or machines. Monitor operation of cleaning machines and stop machines or notify supervisors when malfunctions occur. Mix cleaning solutions, abrasive compositions, or other compounds, according to formulas. Turn valves or handles on equipment to regulate pressure or flow of water, air, steam, or abrasives from sprayer nozzles. Rinse objects and place them on drying racks or use cloth, squeegees, or air compressors to dry surfaces. Turn valves or disconnect hoses to eliminate water, cleaning solutions, or vapors from machinery or tanks. Sweep, shovel, or vacuum loose debris or salvageable scrap into containers and remove containers from work areas. Disassemble and reassemble machines or equipment or remove and reattach vehicle parts or trim, using hand tools.

License: No License Required.

Outlook: Satisfactory

Alabama Wage Data

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<thead>
<tr>
<th></th>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<tbody>
<tr>
<td>Entry</td>
<td>$8.33</td>
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<tr>
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<td>$11.24</td>
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<td>$15.99</td>
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</tbody>
</table>

Alabama Projections

2018 Estimated Employment: 5,730
2028 Projected Employment: 6,060
Average Total Openings: 895
Annual Growth Rate: 0.57%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Construction Laborers
Rock Splitters, Quarry
Landscaping & Groundskeeping Workers
Helpers--Brickmasons, Blockmasons, Stonemasons, & Tile & Marble Setters
Farmworkers & Laborers, Crop, Nursery, & Greenhouse
Janitors & Cleaners, Except Maids & Housekeeping
Cleaners
Automotive & Watercraft Service Attendants
Tire Repairers & Changers
Fishing & Hunting Workers
Roustabouts, Oil & Gas

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Clergy

Conduct religious worship and perform other spiritual functions associated with beliefs and practices of religious faith or denomination. Provide spiritual and moral guidance and assistance to members.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Pray and promote spirituality. Read from sacred texts, such as the Bible, Torah, or Koran. Prepare and deliver sermons or other talks. Organize and lead regular religious services. Plan or lead religious education programs. Instruct people who seek conversion to a particular faith. Counsel individuals or groups concerning their spiritual, emotional, or personal needs. Administer religious rites or ordinances. Devise ways in which congregational membership can be expanded. Visit people in homes, hospitals, or prisons to provide them with comfort and support. Study and interpret religious laws, doctrines, or traditions. Conduct special ceremonies, such as weddings, funerals, or confirmations. Train leaders of church, community, or youth groups. Respond to requests for assistance during emergencies or crises. Share information about religious issues by writing articles, giving speeches, or teaching. Prepare people for participation in religious ceremonies. Collaborate with committees or individuals to address financial or administrative issues pertaining to congregations. Refer people to community support services, psychologists, or doctors. Participate in fundraising activities to support congregational activities or facilities. Perform administrative duties, such as overseeing building management, ordering supplies, contracting for services or repairs, or supervising the work of staff members or volunteers. Organize or engage in interfaith, community, civic, educational, or recreational activities sponsored by or related to religious programs.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
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<td>Entry</td>
</tr>
<tr>
<td>$14.78</td>
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<tr>
<td><strong>Median</strong></td>
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<tr>
<td>$31.77</td>
<td>$66,080.00</td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Education Administrators, Postsecondary
- Social & Community Service Managers
- Education Administrators, Kindergarten through Secondary
- Clinical & Counseling Psychologists
- Mental Health Counselors
- Communications Teachers, Postsecondary
- Educational, Guidance, & Career Counselors & Advisors
- Directors, Religious Activities & Education

### Post-Secondary Institutions with Programs
- Amridge University
- Faulkner University
- Heritage Christian University
- Huntingdon College
- Huntsville Bible College
- Oakwood University
- Samford University
- Selma University
- South University-Montgomery
- Stillman College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Clinical Laboratory Technologists and Technicians

Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.

Education:  Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT:  Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks:  Conduct chemical analysis of body fluids, including blood, urine, or spinal fluid, to determine presence of normal or abnormal components. Analyze laboratory findings to check the accuracy of the results. Operate, calibrate, or maintain equipment used in quantitative or qualitative analysis, such as spectrophotometers, calorimeters, flame photometers, or computer-controlled analyzers. Collect and study blood samples to determine the number of cells, their morphology, or their blood group, blood type, or compatibility for transfusion purposes, using microscopic techniques. Enter data from analysis of medical tests or clinical results into computer for storage. Establish or monitor quality assurance programs or activities to ensure the accuracy of laboratory results. Analyze samples of biological material for chemical content or reaction. Set up, clean, and maintain laboratory equipment. Provide technical information about test results to physicians, family members, or researchers. Cultivate, isolate, or assist in identifying microbial organisms or perform various tests on these microorganisms. Supervise, train, or direct lab assistants, medical and clinical laboratory technicians or technologists, or other medical laboratory workers engaged in laboratory testing. Develop, standardize, evaluate, or modify procedures, techniques, or tests used in the analysis of specimens or in medical laboratory experiments.

License:  No License Required.

Outlook:  Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
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<td>$12.31</td>
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<tr>
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<td>Experienced</td>
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<tr>
<td>Average Total Openings:</td>
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</tr>
<tr>
<td>Annual Growth Rate:</td>
<td>0.60%</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Medical & Clinical Laboratory Technicians
Cytogenetic Technologists
Biological Technicians
Cytotechnologists
Diagnostic Medical Sonographers
Neurodiagnostic Technologists
Chemical Technicians
Forensic Science Technicians
Microbiology Technologist
Clinical Laboratory Scientist
Chief Medical Technologist
Clinical Laboratory Scientist (CLS)
Clinical Laboratory Technologist
Histologist Technologist
Medical Laboratory Technologist (Medical Lab Tech)
Medical Technologist (MT)
Medical Technologist

Post-Secondary Institutions with Programs
Jefferson State Community College
Auburn University at Montgomery
George C Wallace State Community College-Hanceville
Gadsden State Community College

2020 Career Exploration Guide
36

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Assess, diagnose, and treat mental and emotional disorders of individuals through observation, interview, and psychological tests. Help individuals with distress or maladjustment understand their problems through their knowledge of case history, interviews with patients, and theory. Provide individual or group counseling services to assist individuals in achieving more effective personal, social, educational, and vocational development and adjustment. May design behavior modification programs and consult with medical personnel regarding the best treatment for patients.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Tasks: Collect information about individuals or clients, using interviews, case histories, observational techniques, and other assessment methods. Counsel individuals, groups, or families to help them understand problems, deal with crisis situations, define goals, and develop realistic action plans. Document patient information including session notes, progress notes, recommendations, and treatment plans. Interact with clients to assist them in gaining insight, defining goals, and planning action to achieve effective personal, social, educational, or vocational development and adjustment. Develop therapeutic and treatment plans based on clients' interests, abilities, or needs. Identify psychological, emotional, or behavioral issues and diagnose disorders, using information obtained from interviews, tests, records, or reference materials. Use a variety of treatment methods, such as psychotherapy, hypnosis, behavior modification, stress reduction therapy, psychodrama, or play therapy. Write reports on clients and maintain required paperwork. Consult with or provide consultation to other doctors, therapists, or clinicians regarding patient care. Obtain and study medical, psychological, social, and family histories by interviewing individuals, couples, or families and by reviewing records.

License: Doctor Level Application Fee: $400.00; Renewal Fee: $200.00 plus $50.00 Continuing Education Fee

Outlook: Good

Alabama Employment Outlook

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<tr>
<td>Hourly Wage</td>
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<td>Entry</td>
<td>$21.26</td>
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<td>$28.88</td>
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<tr>
<td>Experienced</td>
<td>$49.51</td>
</tr>
</tbody>
</table>

2018 Estimated Employment: 1,320
2028 Projected Employment: 1,490
Average Total Openings: 115
Annual Growth Rate: 1.23%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Marriage & Family Therapists
- Mental Health Counselors
- Healthcare Social Workers
- Mental Health & Substance Abuse Social Workers
- School Psychologists
- Educational, Guidance, & Career Counselors & Advisors
- Child, Family, & School Social Workers
- Substance Abuse & Behavioral Disorder Counselors
- Psychology Teachers, Postsecondary
- Clergy
- Applied Behavior Science Specialist (ABSS)
- Child Psychologist
- Clinical Psychologist
- Clinical Therapist
- Counseling Psychologist
- Licensed Clinical Psychologist
- Licensed Professional Counselor (LPC)
- Pediatric Psychologist
- Psychologist
- Psychotherapist

Post-Secondary Institutions with Programs
- Alabama A & M University
- Alabama State University
- Athens State University
- Auburn University
- Auburn University at Montgomery
- Faulkner University
- Huntingdon College
- Jacksonville State University
- Judson College
- Samford University
- The University of Alabama
- Troy University
- Tuskegee University
- University of Alabama at Birmingham
- University of Alabama in Huntsville
- University of North Alabama
- University of South Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Coaches and Scouts

Instruct or coach groups or individuals in the fundamentals of sports for the primary purpose of competition. Demonstrate techniques and methods of participation. May evaluate athletes' strengths and weaknesses as possible recruits or to improve the athletes' technique to prepare them for competition. Those required to hold teaching certifications should be reported in the appropriate teaching category.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Plan, organize, and conduct practice sessions. Provide training direction, encouragement, motivation, and nutritional advice to prepare athletes for games, competitive events, or tours. Adjust coaching techniques, based on the strengths and weaknesses of athletes. Instruct individuals or groups in sports rules, game strategies, and performance principles, such as specific ways of moving the body, hands, or feet, to achieve desired results. Plan strategies and choose team members for individual games or sports seasons. Monitor the academic eligibility of student athletes. Counsel student athletes on academic, athletic, and personal issues. Analyze the strengths and weaknesses of opposing teams to develop game strategies. Coordinate travel arrangements and travel with team to away contests. Evaluate athletes' skills and review performance records to determine their fitness and potential in a particular area of athletics. Monitor athletes' use of equipment to ensure safe and proper use. Keep abreast of changing rules, techniques, technologies, and philosophies relevant to their sport. Explain and enforce safety rules and regulations. Contact the parents of players to provide information and answer questions. Arrange and conduct sports-related activities, such as training camps, skill-improvement courses, clinics, and pre-season try-outs. Explain and demonstrate the use of sports and training equipment, such as trampolines or weights. Perform activities that support a team or a specific sport, such as participating in community outreach activities, meeting with media representatives, and appearing at fundraising events.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry $17,086.00</td>
</tr>
<tr>
<td>Median</td>
<td>Median $31,264.00</td>
</tr>
<tr>
<td>Experienced</td>
<td>Experienced $83,696.00</td>
</tr>
</tbody>
</table>

2018 Estimated Employment: 2,860
2028 Projected Employment: 3,050
Average Total Openings: 450
Annual Growth Rate: 0.65%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Recreation Workers
Career/Technical Education Teachers, Secondary School
Directors, Religious Activities & Education
First-Line Supervisors of Non-Retail Sales Workers
Career/Technical Education Teachers, Middle School
Training & Development Managers
Recreational Therapists
Secondary School Teachers, Except Special &
Career/Technical Education
Career/Technical Education Teachers, Postsecondary
Health Education Specialists

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
38

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders

Set up, operate, or tend spraying or rolling machines to coat or paint any of a wide variety of products, including glassware, cloth, ceramics, metal, plastic, paper, or wood, with lacquer, silver, copper, rubber, varnish, glaze, enamel, oil, or rust-proofing materials. Includes painters of transportation vehicles such as painters in auto body repair facilities.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Hold or position spray guns to direct spray onto articles. Fill hoppers, reservoirs, troughs, or pans with material used to coat, paint, or spray, using conveyors or pails. Start and stop operation of machines, using levers or buttons. Determine paint flow, viscosity, and coating quality by performing visual inspections, or by using viscometers. Attach hoses or nozzles to machines, using wrenches and pliers, and make adjustments to obtain the proper dispersion of spray. Turn dials, handwheels, valves, or switches to regulate conveyor speeds, machine temperature, air pressure and circulation, and the flow or spray of coatings or paints. Observe machine gauges and equipment operation to detect defects or deviations from standards, and make adjustments as necessary. Examine, measure, weigh, or test sample products to ensure conformance to specifications.

License: No License Required.

Outlook: Satisfactory

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Alabama Employment Outlook

### Alabama Wage Data

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<tr>
<th></th>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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</thead>
<tbody>
<tr>
<td>Entry</td>
<td>$11.27</td>
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<tr>
<td>Median</td>
<td>$17.25</td>
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<tr>
<td>Experienced</td>
<td>$25.42</td>
<td>$52,874.00</td>
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</table>

### Alabama Projections

- **2018 Estimated Employment:** 1,980
- **2028 Projected Employment:** 2,180
- **Average Total Openings:** 245
- **Annual Growth Rate:** 0.96%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

- Automotive Paint Technician (Auto Paint Tech)
- Automotive Refinish Technician (Auto Refinish Tech)
- Coating Machine Operator
- Industrial Painter
- Machine Sprayer
- Marbleizer
- Mastic Sprayer
- Mobile Paint Specialist
- Paint Dipper
- Paint Line Operator
- Paint Operator
- Paint Prep Technician
- Paint Spray Tender
- Paint Technician
- Painting Machine Operator

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Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Commercial Pilots**

Pilot and navigate the flight of fixed-wing aircraft on nonscheduled air carrier routes, or helicopters. Requires Commercial Pilot certificate. Includes charter pilots with similar certification, and air ambulance and air tour pilots. Excludes regional, national, and international airline pilots.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Use instrumentation to pilot aircraft when visibility is poor. Start engines, operate controls, and pilot airplanes to transport passengers, mail, or freight according to flight plans, regulations, and procedures. Monitor engine operation, fuel consumption, and functioning of aircraft systems during flights. Check aircraft prior to flights to ensure that the engines, controls, instruments, and other systems are functioning properly. Consider airport altitudes, outside temperatures, plane weights, and wind speeds and directions to calculate the speed needed to become airborne. Contact control towers for takeoff clearances, arrival instructions, and other information, using radio equipment. Obtain and review data such as load weights, fuel supplies, weather conditions, and flight schedules to determine flight plans and identify needed changes. File instrument flight plans with air traffic control so that flights can be coordinated with other air traffic. Check baggage or cargo to ensure that it has been loaded correctly. Order changes in fuel supplies, loads, routes, or schedules to ensure safety of flights. Plan flights according to government and company regulations, using aeronautical charts and navigation instruments. Choose routes, altitudes, and speeds that will provide the fastest, safest, and smoothest flights. Co-pilot aircraft or perform captain's duties, as required. Coordinate flight activities with ground crews and air traffic control, and inform crew members of flight and test procedures. Request changes in altitudes or routes as circumstances dictate. Write specified information in flight records, such as flight times, altitudes flown, and fuel consumption. Supervise other crew members. Fly with other pilots or pilot-license applicants to evaluate their proficiency.

**License:** The FAA does not charge any fees.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry $***</td>
<td>Entry $49,358.00</td>
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<tr>
<td>Median $***</td>
<td>Median $89,554.00</td>
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<tr>
<td>Experienced $***</td>
<td>Experienced $125,482.00</td>
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</tbody>
</table>

| 2018 Estimated Employment: 1,180 |
| 2028 Projected Employment: 1,230 |
| Average Total Openings: 130 | Annual Growth Rate: 0.44% |

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Captains, Mates, & Pilots of Water Vessels
- Airfield Operations Specialists
- Airline Pilots, Copilots, & Flight Engineers
- Forest & Conservation Technicians
- Forest & Conservation Workers
- Firefighters
- Pesticide Handlers, Sprayers, & Applicators, Vegetation
- Agricultural Inspectors
- First-Line Supervisors of Firefighting & Prevention Workers

### Post-Secondary Institutions with Programs
- Auburn University
- George C Wallace State Community College-Hanceville

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Community Health Workers

Promote health within a community by assisting individuals to adopt healthy behaviors. Serve as an advocate for the health needs of individuals by assisting community residents in effectively communicating with healthcare providers or social service agencies. Act as liaison or advocate and implement programs that promote, maintain, and improve individual and overall community health. May deliver health-related preventive services such as blood pressure, glaucoma, and hearing screenings. May collect data to help identify community health needs.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Maintain updated client records with plans, notes, appropriate forms, or related information. Advise clients or community groups on issues related to improving general health, such as diet or exercise. Identify or contact members of high-risk or otherwise targeted groups, such as members of minority populations, low-income populations, or pregnant women. Contact clients in person, by phone, or in writing to ensure they have completed required or recommended actions. Distribute flyers, brochures, or other informational or educational documents to inform members of a targeted community. Refer community members to needed health services. Attend community meetings or health fairs to understand community issues or build relationships with community members.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
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<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
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</tr>
<tr>
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<td>Entry</td>
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<tr>
<td>$11.04</td>
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<td><strong>Median</strong></td>
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<td>$18.70</td>
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<tr>
<td>$28.01</td>
<td>$58,256.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Community Health Advisor
Community Health Advocate
Community Health Navigator
Community Health Outreach Worker
Community Health Promoter
Community Health Representative
Community Health Worker (CHW)
Community Liaison
Community Nutrition Advisor
Community Resource Navigator
Health Advocate
Health Navigator
Lay Health Advocate
Mental Health Advocate
Peer Health Promoter

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Compliance Officers

Examine, evaluate, and investigate eligibility for or conformity with laws and regulations governing contract compliance of licenses and permits, and perform other compliance and enforcement inspection and analysis activities not classified elsewhere.

Education:  Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT:  Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks:  Warn violators of infractions or penalties. Evaluate applications, records, or documents to gather information about eligibility or liability issues. Advise licensees or other individuals or groups concerning licensing, permit, or passport regulations. Prepare reports of activities, evaluations, recommendations, or decisions. Report law or regulation violations to appropriate boards or agencies. Confer with or interview officials, technical or professional specialists, or applicants to obtain information or to clarify facts relevant to licensing decisions.

License:  No License Required.

Outlook:  Satisfactory

Alabama Employment Outlook

Alabama Wage Data

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
</tr>
</thead>
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<tr>
<td>Entry</td>
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<tr>
<td>Median</td>
<td>$30.22</td>
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<td>Experienced</td>
<td>$50.34</td>
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Alabama Projections

<table>
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<tr>
<th>2018 Estimated Employment:</th>
<th>1,740</th>
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<tbody>
<tr>
<td>2028 Projected Employment:</td>
<td>1,840</td>
</tr>
<tr>
<td>Average Total Openings:</td>
<td>165</td>
</tr>
<tr>
<td>Annual Growth Rate:</td>
<td>0.51%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Gambling Surveillance Officers & Gambling Investigators
Animal Control Workers
Public Safety Telecommunicators
Dispatchers, Except Police, Fire, & Ambulance
Police Identification & Records Officers
Interviewers, Except Eligibility & Loan
Passenger Attendants
Correctional Officers & Jailers
Social & Human Service Assistants
Transportation Security Screeners

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Computer and Information Systems Managers
Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Direct daily operations of department, analyzing workflow, establishing priorities, developing standards and setting deadlines. Meet with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems. Review project plans to plan and coordinate project activity. Assign and review the work of systems analysts, programmers, and other computer-related workers. Provide users with technical support for computer problems. Develop computer information resources, providing for data security and control, strategic computing, and disaster recovery. Recruit, hire, train and supervise staff, or participate in staffing decisions. Stay abreast of advances in technology. Consult with users, management, vendors, and technicians to assess computing needs and system requirements. Develop and interpret organizational goals, policies, and procedures. Evaluate the organization's technology use and needs and recommend improvements, such as hardware and software upgrades. Review and approve all systems charts and programs prior to their implementation. Prepare and review operational reports or project progress reports. Evaluate data processing proposals to assess project feasibility and requirements. Control operational budget and expenditures. Purchase necessary equipment.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
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<td>Hourly Wage</td>
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<td>Entry</td>
<td>$37.11</td>
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<tr>
<td>Median</td>
<td>$58.33</td>
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<tr>
<td>Experienced</td>
<td>$93.63</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Computer Systems Engineers/Architects
Computer Network Architects
Logistics Engineers
Computer Systems Analysts
Media Technical Directors/Managers
Information Security Analysts
Transportation, Storage, & Distribution Managers
Logistics Analysts
Software Quality Assurance Analysts & Testers

Post-Secondary Institutions with Programs
Alabama A & M University
Alabama State University
Auburn University
Bishop State Community College
Central Alabama Community College
Enterprise State Community College
Gadsden State Community College
George C Wallace Community College
Jacksonville State University
Jefferson State Community College
Lurleen B Wallace Community College
Northeast Alabama Community College
Shelton State Community College
Snead State Community College
Southern Union State Community College
The University of Alabama
Troy University
Tuskegee University
University of Alabama at Birmingham
University of Alabama in Huntsville
University of North Alabama
University of West Alabama

2020 Career Exploration Guide
43

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Computer Network Support Specialists

Analyze, test, troubleshoot, and evaluate existing network systems, such as local area networks (LAN), wide area networks (WAN), cloud networks, servers, and other data communications networks. Perform network maintenance to ensure networks operate correctly with minimal interruption.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Back up network data. Configure security settings or access permissions for groups or individuals. Analyze and report computer network security breaches or attempted breaches. Identify the causes of networking problems, using diagnostic testing software and equipment. Document network support activities. Configure wide area network (WAN) or local area network (LAN) routers or related equipment. Install network software, including security or firewall software. Troubleshoot network or connectivity problems for users or user groups. Provide telephone support related to networking or connectivity issues. Evaluate local area network (LAN) or wide area network (WAN) performance data to ensure sufficient availability or speed, to identify network problems, or for disaster recovery purposes. Analyze network data to determine network usage, disk space availability, or server function. Perform routine maintenance or standard repairs to networking components or equipment. Configure and define parameters for installation or testing of local area network (LAN), wide area network (WAN), hubs, routers, switches, controllers, multiplexers, or related networking equipment. Test computer software or hardware, using standard diagnostic testing equipment and procedures. Install or repair network cables, including fiber optic cables. Monitor industry websites or publications for information about patches, releases, viruses, or potential problem identification. Create or update technical documentation for network installations or changes to existing installations. Train users in procedures related to network applications software or related systems. Test repaired items to ensure proper operation. Install and configure wireless networking equipment. Maintain logs of network activity. Document help desk requests and resolutions. Research hardware or software products to meet technical networking or security needs. Create or revise user instructions, procedures, or manuals. Run monthly network reports.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<tr>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
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<tr>
<td>$17.57</td>
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<td><strong>Median</strong></td>
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<tr>
<td>$27.84</td>
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<td><strong>Experienced</strong></td>
</tr>
<tr>
<td>$42.22</td>
<td>$87,814.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Configuration Technician
- Customer Engineer
- Customer Service Engineer
- Customer Support Engineer
- Field Systems Technician
- Network Analyst
- Network Consultant
- Network Operations Analyst
- Network Specialist
- Network Support Specialist
- Network Support Technician
- Network Technician
- Systems Support Specialist
- Technical Analyst
- Technical Support Specialist

Post-Secondary Institutions with Programs
- Strayer University-Alabama

2020 Career Exploration Guide
44
Computer Numerically Controlled Tool Operators

Operate computer-controlled tools, machines, or robots to machine or process parts, tools, or other work pieces made of metal, plastic, wood, stone, or other materials. May also set up and maintain equipment.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Measure dimensions of finished workpieces to ensure conformance to specifications, using precision measuring instruments, templates, and fixtures. Mount, install, align, and secure tools, attachments, fixtures, and workpieces on machines, using hand tools and precision measuring instruments. Stop machines to remove finished workpieces or to change tooling, setup, or workpiece placement, according to required machining sequences. Transfer commands from servers to computer numerical control (CNC) modules, using computer network links. Check to ensure that workpieces are properly lubricated and cooled during machine operation. Set up and operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic workpieces. Insert control instructions into machine control units to start operation. Review program specifications or blueprints to determine and set machine operations and sequencing, finished workpiece dimensions, or numerical control sequences. Listen to machines during operation to detect sounds such as those made by dull cutting tools or excessive vibration, and adjust machines to compensate for problems. Remove and replace dull cutting tools. Monitor machine operation and control panel displays, and compare readings to specifications to detect malfunctions. Enter commands or load control media, such as tapes, cards, or disks, into machine controllers to retrieve programmed instructions. Modify cutting programs to account for problems encountered during operation, and save modified programs. Calculate machine speed and feed ratios and the size and position of cuts. Adjust machine feed and speed, change cutting tools, or adjust machine controls when automatic programming is faulty or if machines malfunction. Lift workpieces to machines manually or with hoists or cranes. Stack or load finished items, or place items on conveyor systems. Control coolant systems. Maintain machines and remove and replace broken or worn machine tools, using hand tools. Confer with supervisors or programmers to resolve machine malfunctions or production errors or to obtain approval to continue production. Implement changes to machine programs, and enter new specifications, using computers. Set up future jobs while machines are operating. Clean machines, tooling, or parts, using solvents or solutions and rags.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hourly Wage</td>
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<tr>
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<td>Experienced</td>
<td>$25.51</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders
Rolling Machine Setters, Operators, & Tenders
Machinists
Multiple Machine Tool Setters, Operators, & Tenders
Heat Treating Equipment Setters, Operators, & Tenders
Lathe & Turning Machine Tool Setters, Operators, & Tenders
Sawing Machine Setters, Operators, & Tenders, Wood
Cutting & Slicing Machine Setters, Operators, & Tenders
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
CNC Technician (Computer Numerical Control Technician)

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Computer Systems Analysts

Analyze science, engineering, business, and other data processing problems to develop and implement solutions to complex applications problems, system administration issues, or network concerns. Perform systems management and integration functions, improve existing computer systems, and review computer system capabilities, workflow, and schedule limitations. May analyze or recommend commercially available software.

Education: Most of these occupations require a four-year bachelor’s degree, but some do not.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Test, maintain, and monitor computer programs and systems, including coordinating the installation of computer programs and systems. Troubleshoot program and system malfunctions to restore normal functioning. Expand or modify system to serve new purposes or improve work flow. Use the computer in the analysis and solution of business problems, such as development of integrated production and inventory control and cost analysis systems. Consult with management to ensure agreement on system principles. Confer with clients regarding the nature of the information processing or computation needs a computer program is to address. Develop, document, and revise system design procedures, test procedures, and quality standards. Train staff and users to work with computer systems and programs. Coordinate and link the computer systems within an organization to increase compatibility so that information can be shared. Assess the usefulness of pre-developed application packages and adapt them to a user environment. Define the goals of the system and devise flow charts and diagrams describing logical operational steps of programs. Provide staff and users with assistance solving computer-related problems, such as malfunctions and program problems.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
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<tr>
<td>Entry</td>
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<tr>
<td>Median</td>
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<td><strong>Annual Wage</strong></td>
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<tr>
<td><strong>Average Total Openings:</strong> 360</td>
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<tr>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Software Quality Assurance Analysts & Testers
Computer Network Architects
Database Administrators
Network & Computer Systems Administrators
Information Security Analysts
Web Developers
Web Administrators
Computer Programmers

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, via telephone, or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Answer user inquiries regarding computer software or hardware operation to resolve problems. Oversee the daily performance of computer systems. Read technical manuals, confer with users, or conduct computer diagnostics to investigate and resolve problems or to provide technical assistance and support. Set up equipment for employee use, performing or ensuring proper installation of cables, operating systems, or appropriate software. Develop training materials and procedures, or train users in the proper use of hardware or software. Refer major hardware or software problems or defective products to vendors or technicians for service. Enter commands and observe system functioning to verify correct operations and detect errors. Maintain records of daily data communication transactions, problems and remedial actions taken, or installation activities. Install and perform minor repairs to hardware, software, or peripheral equipment, following design or installation specifications. Prepare evaluations of software or hardware, and recommend improvements or upgrades. Confer with staff, users, and management to establish requirements for new systems or modifications.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<td>Experienced</td>
<td>$37.80</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Computer, Automated Teller, & Office Machine Repairers
- Audio & Video Technicians
- Librarians & Media Collections Specialists
- Broadcast Technicians
- Sound Engineering Technicians
- Electrical & Electronic Engineering Technologists & Technicians
- Web Administrators
- Desktop Publishers
- Audiovisual Equipment Installers & Repairers

Post-Secondary Institutions with Programs
- Strayer University-Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Computer, Automated Teller, and Office Machine Repairers

Repair, maintain, or install computers, word processing systems, automated teller machines, and electronic office machines, such as duplicating and fax machines.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Reassemble machines after making repairs or replacing parts. Converse with customers to determine details of equipment problems. Disassemble machines to examine parts, such as wires, gears, or bearings for wear or defects, using hand or power tools and measuring devices. Advise customers concerning equipment operation, maintenance, or programming. Align, adjust, or calibrate equipment according to specifications. Repair, adjust, or replace electrical or mechanical components or parts, using hand tools, power tools, or soldering or welding equipment. Travel to customers' stores or offices to service machines or to provide emergency repair service. Maintain parts inventories and order any additional parts needed for repairs. Operate machines to test functioning of parts or mechanisms. Reinstall software programs or adjust settings on existing software to fix machine malfunctions. Clean, oil, or adjust mechanical parts to maintain machines' operating efficiency and to prevent breakdowns. Maintain records of equipment maintenance work or repairs. Test new systems to ensure that they are in working order. Complete repair bills, shop records, time cards, or expense reports. Install and configure new equipment, including operating software or peripheral equipment. Analyze equipment performance records to assess equipment functioning. Read specifications, such as blueprints, charts, or schematics, to determine machine settings or adjustments. Update existing equipment, performing tasks such as installing updated circuit boards or additional memory. Test components or circuits of faulty equipment to locate defects, using oscilloscopes, signal generators, ammeters, voltmeters, or special diagnostic software programs. Assemble machines according to specifications, using hand or power tools and measuring devices. Lay cable and hook up electrical connections between machines, power sources, and phone lines. Enter information into computers to copy programs from one electronic component to another or to draw, modify, or store schematics. Fill machines with toners, inks, or other duplicating fluids. Train new repairers.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
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<td>Annual Growth Rate:</td>
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Related Occupations
Computer User Support Specialists
Radio, Cellular, & Tower Equipment Installers & Repairers
Audiovisual Equipment Installers & Repairers
Audio & Video Technicians
Electrical & Electronic Engineering Technologists & Technicians
Avionics Technicians
Telecommunications Equipment Installers & Repairers, Except Line Installers
Security & Fire Alarm Systems Installers
Broadcast Technicians
Home Appliance Repairers

Post-Secondary Institutions with Programs
Bevill State Community College
Central Alabama Community College
George C Wallace State Community College-Hanceville
Lawson State Community College
Lurleen B Wallace Community College
Northwest-Shoals Community College
Reid State Technical College
Shelton State Community College
Southern Union State Community College

For an explanation on omitted data, see the Missing Data section in the introduction.
Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Monitor installation of plumbing, wiring, equipment, or appliances to ensure that installation is performed properly and is in compliance with applicable regulations. Approve building plans that meet required specifications. Inspect and monitor construction sites to ensure adherence to safety standards, building codes, or specifications. Inspect bridges, dams, highways, buildings, wiring, plumbing, electrical circuits, sewers, heating systems, or foundations during and after construction for structural quality, general safety, or conformance to specifications and codes. Review and interpret plans, blueprints, site layouts, specifications, or construction methods to ensure compliance to legal requirements and safety regulations. Maintain daily logs and supplement inspection records with photographs. Conduct inspections, using survey instruments, metering devices, tape measures, or test equipment. Measure dimensions and verify level, alignment, or elevation of structures or fixtures to ensure compliance to building plans and codes. Train, direct, or supervise other construction inspectors. Confer with owners, violators, or authorities to explain regulations or recommend remedial actions.

**License:** License Fee and Biennial Renewal: $100.00; Lapsed License Fee: Renewed within 1 year of expiration date an additional $25.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<td></td>
<td>Annual Growth Rate: 0.53%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Energy Auditors
- Fire Inspectors & Investigators
- Occupational Health & Safety Technicians
- Agricultural Inspectors
- Environmental Engineering Technologists & Technicians
- Traffic Technicians
- Transportation Inspectors
- Conservation Scientists
- Airfield Operations Specialists

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris, and other waste materials. May assist other craft workers.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Tend pumps, compressors, or generators to provide power for tools, machinery, or equipment or to heat or move materials, such as asphalt. Lubricate, clean, or repair machinery, equipment, or tools. Signal equipment operators to facilitate alignment, movement, or adjustment of machinery, equipment, or materials. Read plans, instructions, or specifications to determine work activities. Measure, mark, or record openings or distances to layout areas where construction work will be performed. Clean or prepare construction sites to eliminate possible hazards. Dig ditches or trenches, backfill excavations, or compact and level earth to grade specifications, using picks, shovels, pneumatic tampers, or rakes. Load, unload, or identify building materials, machinery, or tools, distributing them to the appropriate locations, according to project plans or specifications.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$10.37</td>
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<td>$15.11</td>
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<tr>
<td>$22.53</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Rock Splitters, Quarry
Helpers--Brickmasons, Blockmasons, Stonemasons, & Tile & Marble Setters
Cleaners of Vehicles & Equipment
Terrazzo Workers & Finishers
Helpers--Carpenters
Roustabouts, Oil & Gas
Helpers--Painters, Paperhangers, Plasterers, & Stucco Masons
Cement Masons & Concrete Finishers
Paving, Surfacing, & Tamping Equipment Operators
 Pipelayers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Construction Managers

Plan, direct, or coordinate, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Participate in the conceptual development of a construction project and oversee its organization, scheduling, budgeting, and implementation. Includes managers in specialized construction fields, such as carpentry or plumbing.

Education: Most of these occupations typically require a four-year bachelor’s degree.

OJIT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Plan, schedule, or coordinate construction project activities to meet deadlines. Prepare and submit budget estimates, progress reports, or cost tracking reports. Interpret and explain plans and contract terms to representatives of the owner or developer, including administrative staff, workers, or clients. Direct and supervise construction or related workers. Prepare contracts or negotiate revisions to contractual agreements with architects, consultants, clients, suppliers, or subcontractors. Confer with supervisory personnel, owners, contractors, or design professionals to discuss and resolve matters, such as work procedures, complaints, or construction problems. Plan, organize, or direct activities concerned with the construction or maintenance of structures, facilities, or systems. Study job specifications to determine appropriate construction methods. Inspect or review projects to monitor compliance with building and safety codes or other regulations. Investigate damage, accidents, or delays at construction sites to ensure that proper construction procedures are being followed. Implement new or modified plans in response to delays, bad weather, or construction site emergencies. Develop or implement quality control programs. Requisition supplies or materials to complete construction projects. Determine labor requirements for dispatching workers to construction sites. Contract or oversee craft work, such as painting or plumbing. Inspect or review projects to monitor compliance with environmental regulations. Perform, or contract others to perform, pre-building assessments, such as conceptual cost estimating, rough order of magnitude estimating, feasibility, or energy efficiency, environmental, and sustainability assessments. Develop or implement environmental protection programs. Apply for and obtain all necessary permits or licenses. Evaluate construction methods and determine cost-effectiveness of plans, using computer models.

License: Prime Contractor Application Fee: $300.00; Prime Contractor Renewal Fee: $200/ Sub Contractor Application Fee: $150.00; Sub Contractor Renewal Fee: $100.00

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
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<td>Annual Growth Rate: 0.76%</td>
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<table>
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<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<tr>
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<td>Entry</td>
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<tr>
<td>$26.79</td>
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<tr>
<td>$42.49</td>
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<td>Experienced</td>
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<tr>
<td>$74.92</td>
<td>$155,823.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Energy Engineers, Except Wind & Solar
- Fire-Prevention & Protection Engineers
- Civil Engineers
- Occupational Health & Safety Specialists
- Transportation Engineers
- Conservation Scientists
- Environmental Engineers
- Architectural & Engineering Managers
- Transportation, Storage, & Distribution Managers
- General & Operations Managers

Post-Secondary Institutions with Programs
- Alabama A & M University
- Jefferson State Community College
- Tuskegee University

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Control and Valve Installers and Repairers, Except Mechanical Door

Install, repair, and maintain mechanical regulating and controlling devices, such as electric meters, gas regulators, thermostats, safety and flow valves, and other mechanical governors.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:** Record maintenance information, including test results, material usage, and repairs made. Disassemble and repair mechanical control devices or valves, such as regulators, thermostats, or hydrants, using power tools, hand tools, and cutting torches. Lubricate wearing surfaces of mechanical parts, using oils or other lubricants.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<th>Alabama Projections</th>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$13.58</td>
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<tr>
<td>$21.44</td>
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<tr>
<td><strong>Experienced</strong></td>
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<tr>
<td>$31.48</td>
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**Annual Growth Rate:** 0.33%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Transportation Vehicle, Equipment & Systems Inspectors, Except Aviation
Bus & Truck Mechanics & Diesel Engine Specialists
Motorboat Mechanics & Service Technicians
Stationary Engineers & Boiler Operators
Maintenance & Repair Workers, General
Security & Fire Alarm Systems Installers
Gas Plant Operators
Heating, Air Conditioning, & Refrigeration Mechanics & Installers
Signal & Track Switch Repairers
Gas Compressor & Gas Pumping Station Operators

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Prepare, season, and cook dishes such as soups, meats, vegetables, or desserts in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Inspect and clean food preparation areas, such as equipment and work surfaces, or serving areas to ensure safe and sanitary food-handling practices. Ensure freshness of food and ingredients by checking for quality, keeping track of old and new items, and rotating stock. Ensure food is stored and cooked at correct temperature by regulating temperature of ovens, broilers, grills, and roasters. Season and cook food according to recipes or personal judgment and experience. Turn or stir foods to ensure even cooking. Observe and test foods to determine if they have been cooked sufficiently, using methods such as tasting, smelling, or piercing them with utensils. Portion, arrange, and garnish food, and serve food to waiters or patrons. Weigh, measure, and mix ingredients according to recipes or personal judgment, using various kitchen utensils and equipment. Bake, roast, broil, and steam meats, fish, vegetables, and other foods. Wash, peel, cut, and seed fruits and vegetables to prepare them for consumption. Coordinate and supervise work of kitchen staff. Estimate expected food consumption, requisition or purchase supplies, or procure food from storage. Substitute for or assist other cooks during emergencies or rush periods. Consult with supervisory staff to plan menus, taking into consideration factors such as costs and special event needs. Prepare relishes and hors d'oeuvres. Carve and trim meats such as beef, veal, ham, pork, and lamb for hot or cold service, or for sandwiches. Bake breads, rolls, cakes, and pastries.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>$11.25</td>
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<tr>
<td>$15.68</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Cooks, Institution & Cafeteria
Bakers
Butchers & Meat Cutters
Cleaning, Washing, & Metal Pickling Equipment Operators & Tenders
Food Preparation Workers
Fast Food & Counter Workers
Cooks, Fast Food
Packers & Packagers, Hand
Cooks, Short Order
Food Cooking Machine Operators & Tenders

Post-Secondary Institutions with Programs
Cost Estimators

Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Collect historical cost data to estimate costs for current or future products. Consult with clients, vendors, personnel in other departments, or construction foremen to discuss and formulate estimates and resolve issues. Prepare estimates used by management for purposes such as planning, organizing, and scheduling work. Analyze blueprints and other documentation to prepare time, cost, materials, and labor estimates. Confer with engineers, architects, owners, contractors, and subcontractors on changes and adjustments to cost estimates. Assess cost effectiveness of products, projects or services, tracking actual costs relative to bids as the project develops. Prepare estimates for use in selecting vendors or subcontractors. Set up cost monitoring and reporting systems and procedures. Establish and maintain tendering process, and conduct negotiations. Prepare and maintain a directory of suppliers, contractors and subcontractors.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
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<td>$97,505.00</td>
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2018 Estimated Employment: 2,230
2028 Projected Employment: 2,440
Average Total Openings: 250
Annual Growth Rate: 0.90%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Logistics Analysts
Purchasing Agents, Except Wholesale, Retail, & Farm Products
Transportation, Storage, & Distribution Managers
Market Research Analysts & Marketing Specialists
Supply Chain Managers
Regulatory Affairs Specialists
Budget Analysts
Transportation Planners

Post-Secondary Institutions with Programs
Alabama A & M University
Alabama State University
Athens State University
Auburn University
Auburn University at Montgomery
Bevill State Community College
Birmingham-Southern College
Bishop State Community College
Central Alabama Community College
Chattahoochee Valley Community College
Coastal Alabama Community College
Enterprise State Community College
Faulkner University
George C Wallace State Community College-Hanceville
George C Wallace State Community College-Selma
Herzing University-Birmingham
Huntingdon College
J. F. Drake State Community and Technical College
Jacksonville State University
Jefferson State Community College
John C Calhoun State Community College
Lawson State Community College
Miles College
Northeast Alabama Community College
Samford University
Selma University
Shelton State Community College
Snead State Community College
South University-Montgomery
Southern Union State Community College

2020 Career Exploration Guide

54

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Counter and Rental Clerks

Receive orders, generally in person, for repairs, rentals, and services. May describe available options, compute cost, and accept payment.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Compute charges for merchandise or services and receive payments. Receive orders for services, such as rentals, repairs, dry cleaning, and storage. Explain rental fees, policies, and procedures. Provide information about rental items, such as availability, operation, or description. Advise customers on use and care of merchandise. Greet customers and discuss the type, quality, and quantity of merchandise sought for rental. Answer telephones to provide information and receive orders. Inspect and adjust rental items to meet needs of customer. Prepare rental forms, obtaining customer signature and other information, such as required licenses. Rent items, arrange for provision of services to customers, and accept returns. Keep records of transactions and of the number of customers entering an establishment. Receive, examine, and tag articles to be altered, cleaned, stored, or repaired. Reserve items for requested times and keep records of items rented. Prepare merchandise for display or for purchase or rental. Recommend and provide advice on a wide variety of products and services.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tr>
<th></th>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>$18.99</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Cashiers
Retail Salespersons
Hotel, Motel, & Resort Desk Clerks
Fast Food & Counter Workers
Stockers & Order Fillers
Tellers
Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
Amusement & Recreation Attendants
Cooks, Fast Food
Waiters & Waitresses

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Court, Municipal, and License Clerks

Perform clerical duties for courts of law, municipalities, or governmental licensing agencies and bureaus. May prepare docket of cases to be called; secure information for judges and court; prepare draft agendas or bylaws for town or city council; answer official correspondence; keep fiscal records and accounts; issue licenses or permits; and record data, administer tests, or collect fees.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

Tasks: Evaluate information on applications to verify completeness and accuracy and to determine whether applicants are qualified to obtain desired licenses. Verify the authenticity of documents, such as foreign identification or immigration documents. Record and edit the minutes of meetings and distribute to appropriate officials or staff members. Question applicants to obtain required information, such as name, address, or age, and record data on prescribed forms. Issue public notification of all official activities or meetings. Record and maintain all vital and fiscal records and accounts. Answer questions or provide advice to the public regarding licensing policies, procedures, or regulations. Prepare meeting agendas or packets of related information. Prepare and issue orders of the court, such as probation orders, release documentation, sentencing information, or summons. Prepare ordinances, resolutions, or proclamations so that they can be executed, recorded, archived, or distributed. Code information on license applications for entry into computers. Record case dispositions, court orders, or arrangements made for payment of court fees. Perform budgeting duties, such as assisting in budget preparation, expenditure review, or budget administration. Perform record checks on past or current licensees, as required by investigations. Prepare documents recording the outcomes of court proceedings. Examine legal documents submitted to courts for adherence to laws or court procedures. Perform general office duties, such as taking or transcribing dictation, typing or proofreading correspondence, distributing or filing official forms, or scheduling appointments. Perform administrative tasks, such as answering telephone calls, filing court documents, or maintaining office supplies or equipment. Respond to requests for information from the public, other municipalities, state officials, or state and federal legislative offices. Search files and contact witnesses, attorneys, or litigants to obtain information for the court. Coordinate or maintain office tracking systems for correspondence or follow-up actions. Answer inquiries from the general public regarding judicial procedures, court appearances, trial dates, adjournments, outstanding warrants, summonses, subpoenas, witness fees, or payment of fines. Train other workers or coordinate their work, as necessary. Instruct parties about timing of court appearances. Research information in the municipal archives upon request of public officials or private citizens. Perform contract administration duties, assisting with bid openings or the awarding of contracts.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>2018 Estimated Employment: 2,830</td>
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<td>2028 Projected Employment: 2,920</td>
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<tr>
<td></td>
<td>Average Total Openings: 275</td>
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<tr>
<td></td>
<td>Annual Growth Rate: 0.31%</td>
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<table>
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<td>$15.19</td>
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<tr>
<td>Experienced</td>
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</table>

Related Occupations
Receptionists & Information Clerks
Human Resources Assistants, Except Payroll & Timekeeping
Customer Service Representatives
Switchboard Operators, Including Answering Service
Tax Examiners & Collectors, & Revenue Agents
Bookkeeping, Accounting, & Auditing Clerks
Bill & Account Collectors
Office Clerks, General
Legal Secretaries & Administrative Assistants
Interviewers, Except Eligibility & Loan

Post-Secondary Institutions with Programs

For an explanation on omitted data, see the Missing Data section in the introduction.

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Crane and Tower Operators

Operate mechanical boom and cable or tower and cable equipment to lift and move materials, machines, or products in many directions.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Determine load weights and check them against lifting capacities to prevent overload. Move levers, depress foot pedals, or turn dials to operate cranes, cherry pickers, electromagnets, or other moving equipment for lifting, moving, or placing loads. Inspect and adjust crane mechanisms or lifting accessories to prevent malfunctions or damage. Inspect cables or grappling devices for wear and install or replace cables, as needed. Direct helpers engaged in placing blocking or outrigging under cranes. Clean, lubricate, and maintain mechanisms such as cables, pulleys, or grappling devices, making repairs, as necessary. Load or unload bundles from trucks, or move containers to storage bins, using moving equipment. Review daily work or delivery schedules to determine orders, sequences of deliveries, or special loading instructions.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Wage Data

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
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**2018 Estimated Employment:** 1,070

**2028 Projected Employment:** 1,130

**Average Total Openings:** 135

**Annual Growth Rate:** 0.58%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Operating Engineers & Other Construction Equipment Operators
- Excavating & Loading Machine & Dragline Operators, Surface Mining
- Pile Driver Operators
- Rail-Track Laying & Maintenance Equipment Operators
- Cabinetmakers & Bench Carpenters
- Drilling & Boring Machine Tool Setters, Operators, & Tenders
- Paving, Surfacing, & Tamping Equipment Operators
- Control & Valve Installers & Repairers, Except Mechanical Door
- Dredge Operators
- Loading & Moving Machine Operators, Underground Mining

### Post-Secondary Institutions with Programs

- 2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Customer Service Representatives

Interact with customers to provide basic or scripted information in response to routine inquiries about products and services. May handle and resolve general complaints. Excludes individuals whose duties are primarily installation, sales, repair, and technical support.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Confer with customers by telephone or in person to provide information about products or services, take or enter orders, cancel accounts, or obtain details of complaints. Check to ensure that appropriate changes were made to resolve customers' problems. Keep records of customer interactions or transactions, recording details of inquiries, complaints, or comments, as well as actions taken. Resolve customers’ service or billing complaints by performing activities such as exchanging merchandise, refunding money, or adjusting bills. Complete contract forms, prepare change of address records, or issue service discontinuance orders, using computers.

**License:** No License Required.

**Outlook:** Satisfactory

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### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td>Entry</td>
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<td>$24.72</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Bill & Account Collectors
- Interviewers, Except Eligibility & Loan
- Receptionists & Information Clerks
- Reservation & Transportation Ticket Agents & Travel Clerks
- Hotel, Motel, & Resort Desk Clerks
- Credit Authorizers, Checkers, & Clerks
- New Accounts Clerks
- Court, Municipal, & License Clerks
- Cargo & Freight Agents

**Post-Secondary Institutions with Programs**

- [58](#)
Cutting and Slicing Machine Setters, Operators, and Tenders

Set up, operate, or tend machines that cut or slice materials, such as glass, stone, cork, rubber, tobacco, food, paper, or insulating material.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Set up, operate, or tend machines that cut or slice materials, such as glass, stone, cork, rubber, tobacco, food, paper, or insulating material. Review work orders, blueprints, specifications, or job samples to determine components, settings, and adjustments for cutting and slicing machines. Examine, measure, and weigh materials or products to verify conformance to specifications, using measuring devices, such as rulers, micrometers, or scales. Press buttons, pull levers, or depress pedals to start and operate cutting and slicing machines. Start machines to verify setups, and make any necessary adjustments. Feed stock into cutting machines, onto conveyors, or under cutting blades, by threading, guiding, pushing, or turning handwheels. Monitor operation of cutting or slicing machines to detect malfunctions or to determine whether supplies need replenishment. Stack and sort cut material for packaging, further processing, or shipping, according to types and sizes of material. Adjust machine controls to alter position, alignment, speed, or pressure. Remove completed materials or products from cutting or slicing machines, and stack or store them for additional processing. Maintain production records, such as quantities, types, and dimensions of materials produced. Remove defective or substandard materials from machines, and readjust machine components so that products meet standards. Position stock along cutting lines, or against stops on beds of scoring or cutting machines. Move stock or scrap to and from machines manually, or by using carts, handtrucks, or lift trucks. Select and install machine components, such as cutting blades, rollers, and templates, according to specifications, using hand tools. Clean and lubricate cutting machines, conveyors, blades, saws, or knives, using steam hoses, scrapers, brushes, or oil cans.

**License:** No License Required.

**Outlook:** Satisfactory

<table>
<thead>
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<th>Alabama Wage Data</th>
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<td>Hourly Wage</td>
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<td>Experienced</td>
<td>$24.21</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Paper Goods Machine Setters, Operators, & Tenders
Extruding & Forming Machine Setters, Operators, & Tenders, Synthetic & Glass Fibers
Adhesive Bonding Machine Operators & Tenders
Multiple Machine Tool Setters, Operators, & Tenders
Rolling Machine Setters, Operators, & Tenders
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Molders, Shapers, & Casters, Except Metal & Plastic
Packaging & Filling Machine Operators & Tenders
Textile Cutting Machine Setters, Operators, & Tenders

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Cutting, Punching, and Press Machine Setters, Operators, and Tenders

Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material.

Education:  These occupations typically require less than a high school diploma - or the equivalent.

OJT:  Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks:  Examine completed workpieces for defects, such as chipped edges or marred surfaces and sort defective pieces according to types of flaws. Measure completed workpieces to verify conformance to specifications, using micrometers, gauges, calipers, templates, or rulers. Set stops on machine beds, change dies, and adjust components, such as rams or power presses, when making multiple or successive passes. Start machines, monitor their operations, and record operational data. Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material. Test and adjust machine speeds or actions, according to product specifications, using gauges and hand tools. Install, align, and lock specified punches, dies, cutting blades, or other fixtures in rams or beds of machines, using gauges, templates, feelers, shims, and hand tools. Read work orders or production schedules to determine specifications, such as materials to be used, locations of cutting lines, or dimensions and tolerances. Position guides, stops, holding blocks, or other fixtures to secure and direct workpieces, using hand tools and measuring devices. Position, align, and secure workpieces against fixtures or stops on machine beds or on dies. Load workpieces, plastic material, or chemical solutions into machines. Adjust ram strokes of presses to specified lengths, using hand tools. Clean and lubricate machines. Mark identifying data on workpieces. Operate forklifts to deliver materials. Lubricate workpieces with oil.

License:  No License Required.

Outlook:  Satisfactory

Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

- Sawing Machine Setters, Operators, & Tenders, Wood
- Packaging & Filling Machine Operators & Tenders
- Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
- Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders
- Print Binding & Finishing Workers
- Lathe & Turning Machine Tool Setters, Operators, & Tenders
- Plating Machine Setters, Operators, & Tenders
- Forging Machine Setters, Operators, & Tenders
- Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
- Woodworking Machine Setters, Operators, & Tenders, Except Sawing

Post-Secondary Institutions with Programs

- Bevill State Community College
- Bishop State Community College
- Gadsden State Community College
- George C Wallace State Community College-Hanceville
- J. F. Drake State Community and Technical College
- Lawson State Community College
- Northeast Alabama Community College
- Shelton State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Database Administrators

Administer, test, and implement computer databases, applying knowledge of database management systems. Coordinate changes to computer databases. Identify, investigate, and resolve database performance issues, database capacity, and database scalability. May plan, coordinate, and implement security measures to safeguard computer databases.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Test programs or databases, correct errors, and make necessary modifications. Plan, coordinate and implement security measures to safeguard information in computer files against accidental or unauthorized damage, modification or disclosure. Modify existing databases and database management systems or direct programmers and analysts to make changes. Specify users and user access levels for each segment of database. Write and code logical and physical database descriptions and specify identifiers of database to management system or direct others in coding descriptions. Develop standards and guidelines to guide the use and acquisition of software and to protect vulnerable information. Review procedures in database management system manuals for making changes to database. Revise company definition of data as defined in data dictionary. Train users and answer questions. Review workflow charts developed by programmer analyst to understand tasks computer will perform, such as updating records. Approve, schedule, plan, and supervise the installation and testing of new products and improvements to computer systems, such as the installation of new databases. Identify and evaluate industry trends in database systems to serve as a source of information and advice for upper management. Develop data model describing data elements and how they are used, following procedures and using pen, template or computer software.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<tr>
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<tr>
<td>Median</td>
<td>$39.00</td>
<td>$81,123.00</td>
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<tr>
<td>Experienced</td>
<td>$61.16</td>
<td>$127,224.00</td>
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</table>

2028 Projected Employment: 2,220
Average Total Openings: 175
Annual Growth Rate: 1.08%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Computer Systems Analysts
Software Quality Assurance Analysts & Testers
Web Developers
Computer Programmers
Computer Network Architects
Information Security Analysts
Web Administrators
Social Science Research Assistants
Computer User Support Specialists
Database Administration Manager
Database Administrator (DBA)
Database Analyst
Database Coordinator
Information Systems Manager
System Administrator

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Demonstrate merchandise and answer questions for the purpose of creating public interest in buying the product. May sell demonstrated merchandise.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Provide product samples, coupons, informational brochures, or other incentives to persuade people to buy products. Sell products being promoted and keep records of sales. Keep areas neat while working and return items to correct locations following demonstrations. Demonstrate or explain products, methods, or services to persuade customers to purchase products or use services. Record and report demonstration-related information, such as the number of questions asked by the audience or the number of coupons distributed. Suggest specific product purchases to meet customers' needs. Research or investigate products to be presented to prepare for demonstrations. Set up and arrange displays or demonstration areas to attract the attention of prospective customers. Identify interested and qualified customers to provide them with additional information. Visit trade shows, stores, community organizations, or other venues to demonstrate products or services or to answer questions from potential customers. Transport, assemble, and disassemble materials used in presentations. Practice demonstrations to ensure that they will run smoothly. Learn about competitors' products or consumers' interests or concerns to answer questions or provide more complete information. Instruct customers in alteration of products. Work as part of a team of demonstrators to accommodate large crowds.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
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<td>$12.02</td>
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<td>Experienced</td>
<td>$19.41</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Retail Salespersons
Postal Service Clerks
Receptionists & Information Clerks
Door-to-Door Sales Workers, News & Street Vendors, & Related Workers
Shampooers
Switchboard Operators, Including Answering Service
Parts Salespersons
Locker Room, Coatroom, & Dressing Room Attendants
Hotel, Motel, & Resort Desk Clerks
Fast Food & Counter Workers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Dental Assistants

Perform limited clinical duties under the direction of a dentist. Clinical duties may include equipment preparation and sterilization, preparing patients for treatment, assisting the dentist during treatment, and providing patients with instructions for oral healthcare procedures. May perform administrative duties such as scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Prepare patient, sterilize or disinfect instruments, set up instrument trays, prepare materials, or assist dentist during dental procedures. Record treatment information in patient records. Expose dental diagnostic x-rays. Take and record medical and dental histories and vital signs of patients. Assist dentist in management of medical or dental emergencies. Provide postoperative instructions prescribed by dentist. Instruct patients in oral hygiene and plaque control programs. Order and monitor dental supplies and equipment inventory. Fabricate temporary restorations or custom impressions from preliminary impressions. Make preliminary impressions for study casts and occlusal registrations for mounting study casts. Pour, trim, and polish study casts. Clean and polish removable appliances.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

#### Alabama Wage Data

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry</strong></td>
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</tr>
<tr>
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<tr>
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<tr>
<td>$21.67</td>
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#### Alabama Projections

<table>
<thead>
<tr>
<th></th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
</tr>
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<tbody>
<tr>
<td>Average Total Openings:</td>
<td>3,660</td>
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<tr>
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<td>1.01%</td>
<td>1.01%</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

Endoscopy Technicians
Dental Hygienists
Radiologic Technologists & Technicians
Surgical Technologists
Neurodiagnostic Technologists
Medical Assistants
Veterinary Technologists & Technicians
Nuclear Medicine Technologists
Cardiovascular Technologists & Technicians

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Dental Hygienists

Administer oral hygiene care to patients. Assess patient oral hygiene problems or needs and maintain health records. Advise patients on oral health maintenance and disease prevention. May provide advanced care such as providing fluoride treatment or administering topical anesthesia.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Clean calcareous deposits, accretions, and stains from teeth and beneath margins of gums, using dental instruments. Record and review patient medical histories. Examine gums, using probes, to locate periodontal recessed gums and signs of gum disease. Feel and visually examine gums for sores and signs of disease. Expose and develop x-ray film. Chart conditions of decay and disease for diagnosis and treatment by dentist. Maintain dental equipment and sharpen and sterilize dental instruments. Feel lymph nodes under patient's chin to detect swelling or tenderness that could indicate presence of oral cancer. Provide clinical services or health education to improve and maintain the oral health of patients or the general public. Apply fluorides or other cavity preventing agents to arrest dental decay. Maintain patient recall system. Administer local anesthetic agents. Remove excess cement from coronal surfaces of teeth.

License: In-State License by Regional Exam Fee: $250.00; Renewal Fee: $65.00

Outlook: Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
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<tr>
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<tr>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
Dental Assistants  
Radiologic Technologists & Technicians  
Medical Assistants  
Licensed Practical & Licensed Vocational Nurses  
Nuclear Medicine Technologists  
Physical Therapist Assistants  
Diagnostic Medical Sonographers  
Pharmacy Technicians  
Dental Hygienist  
Hygienist  
Oral Hygienist  
Registered Dental Hygienist (RDH)

---

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Dental Laboratory Technicians

Construct and repair full or partial dentures or dental appliances.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Read prescriptions or specifications and examine models or impressions to determine the design of dental products to be constructed. Test appliances for conformance to specifications and accuracy of occlusion, using articulators and micrometers. Melt metals or mix plaster, porcelain, or acrylic pastes and pour materials into molds or over frameworks to form dental prostheses or apparatus. Create a model of patient's mouth by pouring plaster into a dental impression and allowing plaster to set. Place tooth models on apparatus that mimics bite and movement of patient's jaw to evaluate functionality of model. Fabricate, alter, or repair dental devices, such as dentures, crowns, bridges, inlays, or appliances for straightening teeth. Remove excess metal or porcelain and polish surfaces of prostheses or frameworks, using polishing machines.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
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<th>2018 Estimated Employment: 880</th>
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<td>Entry</td>
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<tr>
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<tr>
<td>Experienced</td>
<td>$25.48</td>
<td>Experienced $53,005.00</td>
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</table>

**Alabama Projections**

- 2028 Projected Employment: 1,020
- Average Total Openings: 130
- Annual Growth Rate: 1.40%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Print Binding & Finishing Workers
- Photographic Process Workers & Processing Machine Operators
- Ophthalmic Laboratory Technicians
- Welders, Cutters, Solderers, & Brazers
- Electromechanical Equipment Assemblers
- Crushing, Grinding, & Polishing Machine Setters, Operators, & Tenders
- Jewelers & Precious Stone & Metal Workers
- Upholsterers
- Medical Equipment Preparers
- Medical Appliance Technicians

### Post-Secondary Institutions with Programs

- [Visit related institutions](#)
Detectives and Criminal Investigators

Conduct investigations related to suspected violations of federal, state, or local laws to prevent or solve crimes.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks: Check victims for signs of life, such as breathing and pulse. Obtain facts or statements from complainants, witnesses, and accused persons and record interviews, using recording device. Secure deceased body and obtain evidence from it, preventing bystanders from tampering with it prior to medical examiner's arrival. Record progress of investigation, maintain informational files on suspects, and submit reports to commanding officer or magistrate to authorize warrants. Prepare charges or responses to charges, or information for court cases, according to formalized procedures. Preserve, process, and analyze items of evidence obtained from crime scenes and suspects, placing them in proper containers and destroying evidence no longer needed. Obtain summary of incident from officer in charge at crime scene, taking care to avoid disturbing evidence. Note, mark, and photograph location of objects found, such as footprints, tire tracks, bullets and bloodstains, and take measurements of the scene. Prepare reports that detail investigation findings. Examine records and governmental agency files to find identifying data about suspects. Secure persons at scene, keeping witnesses from conversing or leaving the scene before investigators arrive. Provide information to lab personnel concerning the source of an item of evidence and tests to be performed. Analyze completed police reports to determine what additional information and investigative work is needed. Obtain and verify evidence by interviewing and observing suspects and witnesses or by analyzing records. Prepare and serve search and arrest warrants. Question individuals or observe persons and establishments to confirm information given to patrol officers. Identify case issues and evidence needed, based on analysis of charges, complaints, or allegations of law violations. Participate or assist in raids and arrests. Organize scene search, assigning specific tasks and areas of search to individual officers and obtaining adequate lighting as necessary. Summon medical help for injured individuals and alert medical personnel to take statements from them. Notify command of situation and request assistance. Testify before grand juries concerning criminal activity investigations. Block or rope off scene and check perimeter to ensure that entire scene is secured. Notify, or request notification of, medical examiner or district attorney representative. Search for and collect evidence, such as fingerprints, using investigative equipment. Determine scope, timing, and direction of investigations. Maintain surveillance of establishments to obtain identifying information on suspects. Collaborate with other offices and agencies to exchange information and coordinate activities. Perform undercover assignments and maintain surveillance, including monitoring authorized wiretaps. Examine records to locate links in chains of evidence or information.

License: Exam Fee: Paper $75.00; Permit/License Fee: $175.00; (plus $100.00 per category of work performed)

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<td>Hourly Wage</td>
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<tr>
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<td>Experienced</td>
<td>$59.43</td>
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</table>

Average Total Openings: 90
Annual Growth Rate: 0.25%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Police & Sheriff's Patrol Officers
First-Line Supervisors of Police & Detectives
Fire Inspectors & Investigators
Correctional Officers & Jailers
First-Line Supervisors of Correctional Officers
Airfield Operations Specialists
Social & Human Service Assistants

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Diagnostic Medical Sonographers

Produce ultrasonic recordings of internal organs for use by physicians. Includes vascular technologists.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:**
- Observe screen during scan to ensure that image produced is satisfactory for diagnostic purposes, making adjustments to equipment as required. Observe and care for patients throughout examinations to ensure their safety and comfort. Provide sonogram and oral or written summary of technical findings to physician for use in medical diagnosis. Select appropriate equipment settings and adjust patient positions to obtain the best sites and angles. Operate ultrasound equipment to produce and record images of the motion, shape, and composition of blood, organs, tissues, or bodily masses, such as fluid accumulations. Decide which images to include, looking for differences between healthy and pathological areas. Prepare patient for exam by explaining procedure, transferring patient to ultrasound table, scrubbing skin and applying gel, and positioning patient properly. Determine whether scope of exam should be extended, based on findings.
- Obtain and record accurate patient history, including prior test results or information from physical examinations. Maintain records that include patient information, sonographs and interpretations, files of correspondence, publications and regulations, or quality assurance records, such as pathology, biopsy, or post-operative reports. Record and store suitable images, using camera unit connected to the ultrasound equipment. Coordinate work with physicians or other healthcare team members, including providing assistance during invasive procedures. Clean, check, and maintain sonographic equipment, submitting maintenance requests or performing minor repairs as necessary. Perform clerical duties, such as scheduling exams or special procedures, keeping records, or archiving computerized images. Perform legal and ethical duties, including preparing safety or accident reports, obtaining written consent from patient to perform invasive procedures, or reporting symptoms of abuse or neglect. Supervise or train students or other medical sonographers. Perform medical procedures, such as administering oxygen, inserting and removing airways, taking vital signs, or giving emergency treatment, such as first aid or cardiopulmonary resuscitation (CPR). Maintain stock and supplies, preparing supplies for special examinations and ordering supplies when necessary.
- Obtain and record accurate patient history, including prior test results or information from physical examinations. Maintain records that include patient information, sonographs and interpretations, files of correspondence, publications and regulations, or quality assurance records, such as pathology, biopsy, or post-operative reports. Record and store suitable images, using camera unit connected to the ultrasound equipment. Coordinate work with physicians or other healthcare team members, including providing assistance during invasive procedures. Clean, check, and maintain sonographic equipment, submitting maintenance requests or performing minor repairs as necessary. Perform clerical duties, such as scheduling exams or special procedures, keeping records, or archiving computerized images. Perform legal and ethical duties, including preparing safety or accident reports, obtaining written consent from patient to perform invasive procedures, or reporting symptoms of abuse or neglect. Supervise or train students or other medical sonographers. Perform medical procedures, such as administering oxygen, inserting and removing airways, taking vital signs, or giving emergency treatment, such as first aid or cardiopulmonary resuscitation (CPR). Maintain stock and supplies, preparing supplies for special examinations and ordering supplies when necessary.

**License:** No License Required.

**Outlook:** Good

**Alabama Employment Outlook**

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<tbody>
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<td>$36.71</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Radiologic Technologists & Technicians
- Neurodiagnostic Technologists
- Cardiovascular Technologists & Technicians
- Radiation Therapists
- Nuclear Medicine Technologists
- Respiratory Therapists
- Endoscopy Technicians
- Medical & Clinical Laboratory Technicians

**Post-Secondary Institutions with Programs**
- Cardiac and Vascular Institute of Ultrasound
- George C Wallace State Community College-Hanceville
- H Councill Trenholm State Community College
- Lurleen B Wallace Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Dining Room and Cafeteria Attendants and Bartender Helpers
Facilitate food service. Clean tables; remove dirty dishes; replace soiled table linens; set tables; replenish supply of clean linens, silverware, glassware, and dishes; supply service bar with food; and serve items such as water, condiments, and coffee to patrons.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Wipe tables or seats with dampened cloths or replace dirty tablecloths. Set tables with clean linens, condiments, or other supplies. Locate items requested by customers. Scrape and stack dirty dishes and carry dishes and other tableware to kitchens for cleaning. Perform serving, cleaning, or stocking duties in establishments, such as cafeterias or dining rooms, to facilitate customer service. Carry food, dishes, trays, or silverware from kitchens or supply departments to serving counters. Clean up spilled food or drink or broken dishes and remove empty bottles and trash. Serve food to customers when waiters or waitresses need assistance. Serve ice water, coffee, rolls, or butter to patrons. Maintain adequate supplies of items, such as clean linens, silverware, glassware, dishes, or trays. Clean and polish counters, shelves, walls, furniture, or equipment in food service areas or other areas of restaurants and mop or vacuum floors. Fill beverage or ice dispensers. Stock cabinets or serving areas with condiments and refill condiment containers.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
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<tr>
<td>$12.71</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Food Servers, Nonrestaurant
Food Preparation Workers
Waiters & Waitresses
Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
Maids & Housekeeping Cleaners
Meat, Poultry, & Fish Cutters & Trimmers
Ushers, Lobby Attendants, & Ticket Takers
Fast Food & Counter Workers
Cooks, Fast Food
Locker Room, Coatroom, & Dressing Room Attendants

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
Directors, Religious Activities and Education

Coordinate or design programs and conduct outreach to promote the religious education or activities of a denominational group. May provide counseling, guidance, and leadership relative to marital, health, financial, and religious problems.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need none or short demonstration

**Tasks:** Identify and recruit potential volunteer workers. Develop or direct study courses or religious education programs within congregations. Publicize programs through sources, such as newsletters, bulletins, or mailings. Train and supervise religious education instructional staff. Select appropriate curricula or class structures for educational programs. Collaborate with other ministry members to establish goals and objectives for religious education programs or to develop ways to encourage program participation. Implement program plans by ordering needed materials, scheduling speakers, reserving space, or handling other administrative details. Counsel individuals regarding interpersonal, health, financial, or religious problems. Confer with clergy members, congregational officials, or congregational organizations to encourage support of or participation in religious education activities. Schedule special events, such as camps, conferences, meetings, seminars, or retreats. Analyze member participation or changes in congregational emphasis to determine needs for religious education. Attend workshops, seminars, or conferences to obtain program ideas, information, or resources. Locate and distribute resources, such as periodicals or curricula, to enhance the effectiveness of educational programs. Analyze revenue and program cost data to determine budget priorities.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
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<td>$147,369.00</td>
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</table>

**Related Occupations**
- Education & Childcare Administrators, Preschool & Daycare
- Recreation Workers
- Secondary School Teachers, Except Special & Career/Technical Education
- Training & Development Specialists
- Special Education Teachers, Secondary School
- Meeting, Convention, & Event Planners
- Training & Development Managers
- Adult Basic Education, Adult Secondary Education, & English as a Second Language Instructors
- Middle School Teachers, Except Special & Career/Technical Education
- Social & Human Service Assistants

**Post-Secondary Institutions with Programs**
- Amridge University
- Faulkner University
- Heritage Christian University
- Huntingdon College
- Huntsville Bible College
- Oakwood University
- Samford University
- Selma University

For an explanation on omitted data, see the Missing Data section in the introduction.

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Dispatchers, Except Police, Fire, and Ambulance

Schedule and dispatch workers, work crews, equipment, or service vehicles for conveyance of materials, freight, or passengers, or for normal installation, service, or emergency repairs rendered outside the place of business. Duties may include using radio, telephone, or computer to transmit assignments and compiling statistics and reports on work progress.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Monitor personnel or equipment locations and utilization to coordinate service and schedules. Schedule or dispatch workers, work crews, equipment, or service vehicles to appropriate locations, according to customer requests, specifications, or needs, using radios or telephones. Oversee all communications within specifically assigned territories. Relay work orders, messages, or information to or from work crews, supervisors, or field inspectors, using telephones or two-way radios. Confer with customers or supervising personnel to address questions, problems, or requests for service or equipment. Prepare daily work and run schedules. Record and maintain files or records of customer requests, work or services performed, charges, expenses, inventory, or other dispatch information. Receive or prepare work orders. Determine types or amounts of equipment, vehicles, materials, or personnel required, according to work orders or specifications. Advise personnel about traffic problems, such as construction areas, accidents, congestion, weather conditions, or other hazards. Arrange for necessary repairs to restore service and schedules.

**License:** Individual Licensing Fee: $25.00; Renewal Fee: $22.50

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tr>
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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Production, Planning, & Expediting Clerks
- Cargo & Freight Agents
- Customer Service Representatives
- Interviewers, Except Eligibility & Loan
- Hotel, Motel, & Resort Desk Clerks
- Concierges
- Reservation & Transportation Ticket Agents & Travel Clerks
- New Accounts Clerks
- Compliance Officers
- First-Line Supervisors of Gambling Services Workers

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Driver/Sales Workers

Drive truck or other vehicle over established routes or within an established territory and sell or deliver goods, such as food products, including restaurant take-out items, or pick up or deliver items such as commercial laundry. May also take orders, collect payment, or stock merchandise at point of delivery.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Drive trucks to deliver such items as food, medical supplies, or newspapers. Inform regular customers of new products or services and price changes. Record sales or delivery information on daily sales or delivery record. Listen to and resolve customers' complaints regarding products or services. Collect money from customers, make change, and record transactions on customer receipts. Maintain trucks and food-dispensing equipment and clean inside of machines that dispense food or beverages.

License: Testing Fee: $25.00; Commercial Learner License: $36.25; Skills Test Fee: $20.00; Class "A" License: $66.25; Class "B" License: $56.25; Class "C" License: $36.25

Outlook: Satisfactory

Alabama Employment Outlook

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<td>$25.35</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Parking Attendants
- Counter & Rental Clerks
- Stockers & Order Fillers
- Shipping, Receiving, & Inventory Clerks
- Couriers & Messengers
- Fast Food & Counter Workers
- Animal Caretakers
- Automotive & Watercraft Service Attendants
- Cashiers

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Drywall and Ceiling Tile Installers

Apply plasterboard or other wallboard to ceilings or interior walls of buildings. Apply or mount acoustical tiles or blocks, strips, or sheets of shock-absorbing materials to ceilings and walls of buildings to reduce or reflect sound. Materials may be of decorative quality. Includes lathers who fasten wooden, metal, or rockboard lath to walls, ceilings, or partitions of buildings to provide support base for plaster, fireproofing, or acoustical material.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Read blueprints or other specifications to determine methods of installation, work procedures, or material or tool requirements. Measure and mark surfaces to lay out work, according to blueprints or drawings, using tape measures, straightedges or squares, and marking devices. Fit and fasten wallboard or drywall into position on wood or metal frameworks, using glue, nails, or screws. Measure and cut openings in panels or tiles for electrical outlets, windows, vents, plumbing, or other fixtures, using keyhole saws or other cutting tools. Assemble or install metal framing or decorative trim for windows, doorways, or vents. Cut metal or wood framing and trim to size, using cutting tools. Inspect furrings, mechanical mountings, or masonry surfaces for plumbness and level, using spirit or water levels. Cut fixture or border tiles to size, using keyhole saws, and insert them into surrounding frameworks. Cut and screw together metal channels to make floor or ceiling frames, according to plans for the location of rooms or hallways. Hang drywall panels on metal frameworks of walls and ceilings in offices, schools, or other large buildings, using lifts or hoists to adjust panel heights, when necessary. Trim rough edges from wallboard to maintain even joints, using knives. Suspend angle iron grids or channel irons from ceilings, using wire. Coordinate work with drywall finishers who cover the seams between drywall panels. Install horizontal and vertical metal or wooden studs to frames so that wallboard can be attached to interior walls. Scribe and cut edges of tile to fit walls where wall molding is not specified. Hang dry lines to wall moldings to guide positioning of main runners. Fasten metal or rockboard lath to the structural framework of walls, ceilings, or partitions of buildings, using nails, screws, staples, or wire-ties. Install blanket insulation between studs and tack plastic moisture barriers over insulation. Seal joints between ceiling tiles and walls. Remove existing plaster, drywall, or paneling, using crowbars and hammers. Apply or mount acoustical tile or blocks, strips, or sheets of shock-absorbing materials to ceilings or walls of buildings to reduce reflection of sound or to decorate rooms. Mount tile, using adhesives, or by nailing, screwing, stapling, or wire-tying lath directly to structural frameworks.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<td><strong>Median</strong></td>
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<tr>
<td>$16.38</td>
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</tr>
<tr>
<td>$20.61</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Carpenters
Sheet Metal Workers
Brickmasons & Blockmasons
Insulation Workers, Mechanical
Structural Iron & Steel Workers
Reinforcing Iron & Rebar Workers
Tile & Stone Setters
Layout Workers
Boilermakers

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Education Administrators, Postsecondary

Plan, direct, or coordinate student instruction, administration, and services, as well as other research and educational activities, at postsecondary institutions, including universities, colleges, and junior and community colleges.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Design or use assessments to monitor student learning outcomes. Recruit, hire, train, and terminate departmental personnel. Direct, coordinate, and evaluate the activities of personnel, including support staff engaged in administering academic institutions, departments, or alumni organizations. Advise students on issues such as course selection, progress toward graduation, and career decisions. Plan, administer, and control budgets, maintain financial records, and produce financial reports. Formulate strategic plans for the institution. Establish operational policies and procedures and make any necessary modifications, based on analysis of operations, demographics, and other research information. Provide assistance to faculty and staff in duties such as teaching classes, conducting orientation programs, issuing transcripts, and scheduling events. Represent institutions at community and campus events, in meetings with other institution personnel, and during accreditation processes. Prepare reports on academic or institutional data. Promote the university by participating in community, state, and national events or meetings, and by developing partnerships with industry and secondary education institutions. Participate in faculty and college committee activities.

License: Application Fee: $30.00

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$26.13</td>
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<td>Median</td>
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<td>$43.78</td>
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<tr>
<td>$91.52</td>
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</table>

2018 Estimated Employment: 2,410
2028 Projected Employment: 2,560
Average Total Openings: 205
Annual Growth Rate: 0.59%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Human Resources Managers
Instructional Coordinators
Education Administrators, Kindergarten through Secondary
Social Work Teachers, Postsecondary
Training & Development Managers
Library Science Teachers, Postsecondary
Clergy
Training & Development Specialists
Education Teachers, Postsecondary
Educational, Guidance, & Career Counselors & Advisors

Post-Secondary Institutions with Programs
The University of Alabama
University of Mobile
University of West Alabama

2020 Career Exploration Guide
73
Education Administrators, Kindergarten through Secondary
Plan, direct, or coordinate the academic, administrative, or auxiliary activities of kindergarten, elementary, or secondary schools.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:** Evaluate curricula, teaching methods, and programs to determine their effectiveness, efficiency, and use, and to ensure that school activities comply with federal, state, and local regulations. Observe teaching methods and examine learning materials to evaluate and standardize curricula and teaching techniques, and to determine areas where improvement is needed. Counsel and provide guidance to students regarding personal, academic, vocational, or behavioral issues. Collaborate with teachers to develop and maintain curriculum standards, develop mission statements, and set performance goals and objectives. Direct and coordinate activities of teachers, administrators, and support staff at schools, public agencies, and institutions. Recruit, hire, train, and evaluate primary and supplemental staff. Confer with parents and staff to discuss educational activities, policies, and student behavioral or learning problems. Enforce discipline and attendance rules. Create school improvement plans by using student performance data. Set educational standards and goals, and help establish policies and procedures to carry them out. Plan and lead professional development activities for teachers, administrators, and support staff. Participate in special education-related activities, such as attending meetings and providing support to special educators throughout the district. Plan and develop instructional methods and content for educational, vocational, or student activity programs. Determine the scope of educational program offerings, and prepare drafts of course schedules and descriptions to estimate staffing and facility requirements. Prepare and submit budget requests and recommendations, or grant proposals to solicit program funding. Recommend personnel actions related to programs and services. Review and approve new programs, or recommend modifications to existing programs, submitting program proposals for school board approval as necessary. Develop partnerships with businesses, communities, and other organizations to help meet identified educational needs and to provide school-to-work programs. Review and interpret government codes, and develop programs to ensure adherence to codes and facility safety, security, and maintenance. Determine allocations of funds for staff, supplies, materials, and equipment, and authorize purchases. Direct and coordinate school maintenance services and the use of school facilities. Organize and direct committees of specialists, volunteers, and staff to provide technical and advisory assistance for programs. Prepare, maintain, or oversee the preparation and maintenance of attendance, activity, planning, or personnel reports and records.

**License:** Application Fee: $30.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
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<td>Experienced</td>
<td>Experienced $107,470.00</td>
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</tbody>
</table>

**2028 Projected Employment:** 3,840

**Average Total Openings:** 305

**Annual Growth Rate:** 0.35%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Instructional Coordinators
- Education Administrators, Postsecondary
- Social & Community Service Managers
- Clergy
- Training & Development Managers
- Dietitians & Nutritionists
- Family & Consumer Sciences Teachers, Postsecondary
- Criminal Justice & Law Enforcement Teachers, Postsecondary
- Human Resources Managers
- Education & Childcare Administrators, Preschool & Daycare

### Post-Secondary Institutions with Programs

- The University of Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Educational, Guidance, School, and Vocational Counselors**

Advise and assist students and provide educational and vocational guidance services.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

**Tasks:** Provide crisis intervention to students when difficult situations occur at schools. Confer with parents or guardians, teachers, administrators, and other professionals to discuss children's progress, resolve behavioral, academic, and other problems, and to determine priorities for students and their resource needs. Identify cases of domestic abuse or other family problems and encourage students or parents to seek additional assistance from mental health professionals. Counsel individuals to help them understand and overcome personal, social, or behavioral problems affecting their educational or vocational situations. Counsel students regarding educational issues, such as course and program selection, class scheduling and registration, school adjustment, truancy, study habits, and career planning. Maintain accurate and complete student records as required by laws, district policies, and administrative regulations. Prepare students for later educational experiences by encouraging them to explore learning opportunities and to persevere with challenging tasks. Teach classes and present self-help or information sessions on subjects related to education and career planning. Provide special services such as alcohol and drug prevention programs and classes that teach students to handle conflicts without resorting to violence. Conduct follow-up interviews with counselees to determine if their needs have been met. Instruct individuals in career development techniques, such as job search and application strategies, resume writing, and interview skills. Plan and promote career and employment-related programs and events, such as career planning presentations, work experience programs, job fairs, and career workshops. Plan and conduct orientation programs and group conferences to promote the adjustment of individuals to new life experiences, such as starting college. Evaluate students' or individuals' abilities, interests, and personality characteristics, using tests, records, interviews, or professional sources. Collaborate with teachers and administrators in the development, evaluation, and revision of school programs and in the preparation of master schedules for curriculum offerings. Observe students during classroom and play activities to evaluate students' performance, behavior, social development, and physical health. Establish and enforce administration policies and rules governing student behavior.

**License:** Application Fee: $30.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<tbody>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>Median</td>
<td>Median</td>
</tr>
<tr>
<td>Experienced</td>
<td>Experienced</td>
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<table>
<thead>
<tr>
<th>2018 Estimated Employment:</th>
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<tr>
<td>Annual Growth Rate:</td>
<td>0.74%</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- School Psychologists
- Social Work Teachers, Postsecondary
- Mental Health Counselors
- Marriage & Family Therapists
- Education Teachers, Postsecondary
- Instructional Coordinators
- Psychology Teachers, Postsecondary
- Clinical & Counseling Psychologists
- Adult Basic Education, Adult Secondary Education, & English as a Second Language Instructors
- Secondary School Teachers, Except Special & Career/Technical Education

**Post-Secondary Institutions with Programs**
- Alabama State University
- Auburn University
- Auburn University at Montgomery
- Jacksonville State University
- The University of Alabama
- Troy University
- University of Alabama at Birmingham
- University of Montevallo
- University of North Alabama
- University of South Alabama
- University of West Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Electrical and Electronics Engineering Technicians

Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, adjust, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks: Modify, maintain, or repair electronics equipment or systems to ensure proper functioning. Replace defective components or parts, using hand tools and precision instruments. Set up and operate specialized or standard test equipment to diagnose, test, or analyze the performance of electronic components, assemblies, or systems. Read blueprints, wiring diagrams, schematic drawings, or engineering instructions for assembling electronics units, applying knowledge of electronic theory and components. Identify and resolve equipment malfunctions, working with manufacturers or field representatives as necessary to procure replacement parts. Assemble electrical systems or prototypes, using hand tools or measuring instruments. Review electrical engineering plans to ensure adherence to design specifications and compliance with applicable electrical codes and standards. Assemble, test, or maintain circuitry or electronic components, according to engineering instructions, technical manuals, or knowledge of electronics, using hand or power tools. Review existing electrical engineering criteria to identify necessary revisions, deletions, or amendments to outdated material. Maintain system logs or manuals to document testing or operation of equipment. Select electronics equipment, components, or systems to meet functional specifications. Calculate design specifications or cost, material, and resource estimates, and prepare project schedules and budgets. Educate equipment operators on the proper use of equipment. Supervise the installation or operation of electronic equipment or systems. Compile and maintain records documenting engineering schematics, installed equipment, installation or operational problems, resources used, repairs, or corrective action performed. Modify electrical prototypes, parts, assemblies, or systems to correct functional deviations. Integrate software or hardware components, using computer, microprocessor, or control architecture. Procure parts and maintain inventory and related documentation. Participate in training or continuing education activities to stay abreast of engineering or industry advances. Research equipment or component needs, sources, competitive prices, delivery times, or ongoing operational costs. Provide user applications or engineering support or recommendations for new or existing equipment with regard to installation, upgrades, or enhancements. Specify, coordinate, or conduct quality control or quality assurance programs or procedures. Produce electronics drawings or other graphics representing industrial control, instrumentation, sensors, or analog or digital telecommunications networks, using computer-aided design (CAD) software.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>Entry $16.03</td>
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<tr>
<td>Median</td>
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<tr>
<td>Experienced</td>
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<td>$95,048.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Robotics Technicians
Mechanical Engineering Technologists & Technicians
Avionics Technicians
Broadcast Technicians
Industrial Engineering Technologists & Technicians
Geological Technicians, Except Hydrologic Technicians
Audio & Video Technicians
Radio, Cellular, & Tower Equipment Installers & Repairers
Computer User Support Specialists
Electrical & Electronics Repairers, Commercial & Industrial Equipment

Post-Secondary Institutions with Programs
Coastal Alabama Community College
Enterprise State Community College

2020 Career Exploration Guide
76

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Electrical and Electronics Repairers, Commercial and Industrial Equipment

Repair, test, adjust, or install electronic equipment, such as industrial controls, transmitters, and antennas.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Test faulty equipment to diagnose malfunctions, using test equipment or software, and applying knowledge of the functional operation of electronic units and systems. Study blueprints, schematics, manuals, or other specifications to determine installation procedures. Repair or adjust equipment, machines, or defective components, replacing worn parts, such as gaskets or seals in watertight electrical equipment. Maintain equipment logs that record performance problems, repairs, calibrations, or tests. Inspect components of industrial equipment for accurate assembly and installation or for defects, such as loose connections or frayed wires. Perform scheduled preventive maintenance tasks, such as checking, cleaning, or repairing equipment, to detect and prevent problems. Calibrate testing instruments and installed or repaired equipment to prescribed specifications. Examine work orders and converse with equipment operators to detect equipment problems and to ascertain whether mechanical or human errors contributed to the problems. Set up and test industrial equipment to ensure that it functions properly. Operate equipment to demonstrate proper use or to analyze malfunctions. Coordinate efforts with other workers involved in installing or maintaining equipment or components. Consult with customers, supervisors, or engineers to plan layout of equipment or to resolve problems in system operation or maintenance. Enter information into computer to copy program or to draw, modify, or store schematics, applying knowledge of software package used. Maintain inventory of spare parts. Install repaired equipment in various settings, such as industrial or military establishments. Develop or modify industrial electronic devices, circuits, or equipment, according to available specifications. Send defective units to the manufacturer or to a specialized repair shop for repair. Determine feasibility of using standardized equipment or develop specifications for equipment required to perform additional functions. Advise management regarding customer satisfaction, product performance, or suggestions for product improvements.

**License:** No License Required.

**Outlook:** Satisfactory

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$38.27</td>
<td>$79,596.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Robotics Technicians
- Industrial Engineering Technologists & Technicians
- Signal & Track Switch Repairers
- Industrial Machinery Mechanics
- Avionics Technicians
- Telecommunications Equipment Installers & Repairers, Except Line Installers
- Stationary Engineers & Boiler Operators
- Mechanical Engineering Technologists & Technicians
- Electrical & Electronics Repairers, Powerhouse, Substation, & Relay
- Electrical & Electronic Engineering Technologists & Technicians

**Post-Secondary Institutions with Programs**

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Electrical Power-Line Installers and Repairers

Install or repair cables or wires used in electrical power or distribution systems. May erect poles and light or heavy duty transmission towers.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Adhere to safety practices and procedures, such as checking equipment regularly and erecting barriers around work areas. Test conductors, according to electrical diagrams and specifications, to identify corresponding conductors and to prevent incorrect connections. Open switches or attach grounding devices to remove electrical hazards from disturbed or fallen lines or to facilitate repairs. Climb poles or use truck-mounted buckets to access equipment. Drive vehicles equipped with tools and materials to job sites. Identify defective sectionalizing devices, circuit breakers, fuses, voltage regulators, transformers, switches, relays, or wiring, using wiring diagrams and electrical-testing instruments. Install, maintain, and repair electrical distribution and transmission systems, including conduits, cables, wires, and related equipment, such as transformers, circuit breakers, and switches. Dig holes, using augers, and set poles, using cranes and power equipment. Place insulating or fireproofing materials over conductors and joints. Install watt-hour meters and connect service drops between power lines and consumers' facilities. Travel in trucks, helicopters, and airplanes to inspect lines for freedom from obstruction and adequacy of insulation. Splice or solder cables together or to overhead transmission lines, customer service lines, or street light lines, using hand tools, epoxies, or specialized equipment. String wire conductors and cables between poles, towers, trenches, pylons, and buildings, setting lines in place and using winches to adjust tension. Inspect and test power lines and auxiliary equipment to locate and identify problems, using reading and testing instruments. Attach cross-arms, insulators, and auxiliary equipment to poles prior to installing them. Coordinate work assignment preparation and completion with other workers. Replace or straighten damaged poles. Trim trees that could be hazardous to the functioning of cables or wires. Lay underground cable directly in trenches, or string it through conduit running through the trenches. Clean, tin, and splice corresponding conductors by twisting ends together or by joining ends with metal clamps and soldering connections. Pull up cable by hand from large reels mounted on trucks.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>Annual Wage</td>
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<td>Experienced</td>
<td>$46.38</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Commercial Divers
Maintenance & Repair Workers, General
 Plumbers, Pipefitters, & Steamfitters
 Ship Engineers
 Control & Valve Installers & Repairers, Except Mechanical
 Door
 Millwrights
 Transportation Vehicle, Equipment & Systems Inspectors, Except Aviation
 Electrical & Electronics Repairers, Powerhouse, Substation, & Relay
 Telecommunications Line Installers & Repairers
 Elevator & Escalator Installers & Repairers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Electrical, Electronic, and Electromechanical Assemblers

Assemble or modify electrical or electronic equipment, such as computers, test equipment telemetering systems, electric motors, and batteries.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Read and interpret schematic drawings, diagrams, blueprints, specifications, work orders, or reports to determine materials requirements or assembly instructions. Assemble electrical or electronic systems or support structures and install components, units, subassemblies, wiring, or assembly casings, using rivets, bolts, soldering or micro-welding equipment. Adjust, repair, or replace electrical or electronic component parts to correct defects and to ensure conformance to specifications. Position, align, or adjust workpieces or electrical parts to facilitate wiring or assembly. Explain assembly procedures or techniques to other workers. Clean parts, using cleaning solutions, air hoses, and cloths. Drill or tap holes in specified equipment locations to mount control units or to provide openings for elements, wiring, or instruments. Fabricate or form parts, coils, or structures according to specifications, using drills, calipers, cutters, or saws. Confer with supervisors or engineers to plan or review work activities or to resolve production problems.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

#### Alabama Wage Data

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<tr>
<th></th>
<th>Hourly Wage</th>
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<td><strong>Median</strong></td>
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<td><strong>Experienced</strong></td>
<td>$23.47</td>
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#### Alabama Projections

<table>
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<tr>
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<th>2018 Estimated Employment: 3,860</th>
<th>2028 Projected Employment: 4,310</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Total Openings:</strong></td>
<td>510</td>
<td></td>
</tr>
</tbody>
</table>

#### Annual Growth Rate: 1.12%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Coil Winders, Tapers, & Finishers
- Packaging & Filling Machine Operators & Tenders
- Welders, Cutters, Solderers, & Brazers
- Print Binding & Finishing Workers
- Inspectors, Testers, Sorters, Samplers, & Weighers
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Textile Winding, Twisting, & Drawing Out Machine Setters, Operators, & Tenders
- Team Assemblers
- Adhesive Bonding Machine Operators & Tenders
- Engine & Other Machine Assemblers
- Assembler; Assembly Worker; Electrical Assembler;
- Electronic Assembler
- Group Leader
- Electronics Assembler
- Factory Assembler
- Manufacturing Assembler
- Production Worker
- Transformer Assembler

### Post-Secondary Institutions with Programs

- Remington College-Mobile Campus
- Bishop State Community College
- Bevill State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Electricians

Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Plan layout and installation of electrical wiring, equipment, or fixtures, based on job specifications and local codes. Connect wires to circuit breakers, transformers, or other components. Test electrical systems or continuity of circuits in electrical wiring, equipment, or fixtures, using testing devices, such as ohmmeters, voltmeters, or oscilloscopes, to ensure compatibility and safety of system. Use a variety of tools or equipment, such as power construction equipment, measuring devices, power tools, and testing equipment, such as oscilloscopes, ammeters, or test lamps. Inspect electrical systems, equipment, or components to identify hazards, defects, or the need for adjustment or repair, and to ensure compliance with codes. Prepare sketches or follow blueprints to determine the location of wiring or equipment and to ensure conformance to building and safety codes. Diagnose malfunctioning systems, apparatus, or components, using test equipment and hand tools to locate the cause of a breakdown and correct the problem. Work from ladders, scaffolds, or roofs to install, maintain, or repair electrical wiring, equipment, or fixtures. Advise management on whether continued operation of equipment could be hazardous. Maintain current electrician's license or identification card to meet governmental regulations. Place conduit, pipes, or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or cables through the conduit to complete circuits between boxes. Direct or train workers to install, maintain, or repair electrical wiring, equipment, or fixtures. Repair or replace wiring, equipment, or fixtures, using hand tools or power tools. Install ground leads and connect power cables to equipment, such as motors. Assemble, install, test, or maintain electrical or electronic wiring, equipment, appliances, apparatus, or fixtures, using hand tools or power tools. Perform business management duties, such as maintaining records or files, preparing reports, or ordering supplies or equipment. Fasten small metal or plastic boxes to walls to house electrical switches or outlets. Construct or fabricate parts, using hand tools, according to specifications. Perform physically demanding tasks, such as digging trenches to lay conduit or moving or lifting heavy objects.

License: Electrical Contractor Examination Fee: $165.00; Journeyman Electrician Examination Fee: $115.00; Electrical Contractor License Fee: $150.00; Journeyman Electrician License Fee: $35.00; Electrical Contractor Renewal Fee: $15.00; Journeyman Electrician Renewal Fee: $35.00; Inactive Electrical Contractor License: $250.00; Reissuance or Replacement Card Fee: $25.00; Provisional License Fee: $75.00; Provisional License Renewal Fee: $75.00

Outlook: Satisfactory

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>$64,733.00</td>
<td></td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Heating, Air Conditioning, & Refrigeration Mechanics & Installers
Mobile Heavy Equipment Mechanics, Except Engines
Elevator & Escalator Installers & Repairers
Plumbers, Pipefitters, & Steamfitters
Telecommunications Equipment Installers & Repairers, Except Line Installers
Electrical & Electronics Repairers, Commercial & Industrial Equipment
Maintenance & Repair Workers, General
Stationary Engineers & Boiler Operators

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
80

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Eligibility Interviewers, Government Programs

Determine eligibility of persons applying to receive assistance from government programs and agency resources, such as welfare, unemployment benefits, social security, and public housing.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Interpret and explain information such as eligibility requirements, application details, payment methods, and applicants' legal rights. Interview benefits recipients at specified intervals to certify their eligibility for continuing benefits. Keep records of assigned cases, and prepare required reports. Compile, record, and evaluate personal and financial data to verify completeness and accuracy, and to determine eligibility status. Answer applicants' questions about benefits and claim procedures. Interview and investigate applicants for public assistance to gather information pertinent to their applications. Initiate procedures to grant, modify, deny, or terminate assistance, or refer applicants to other agencies for assistance. Check with employers or other references to verify answers and obtain further information.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$15.12</td>
<td>$31,445.00</td>
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<tr>
<td>Median</td>
<td>Median</td>
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<tr>
<td>$19.83</td>
<td>$41,237.00</td>
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<tr>
<td>Experienced</td>
<td>Experienced</td>
</tr>
<tr>
<td>$26.44</td>
<td>$54,994.00</td>
</tr>
</tbody>
</table>

**Annual Growth Rate:** 0.19%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Tax Examiners & Collectors, & Revenue Agents
- Human Resources Assistants, Except Payroll & Timekeeping
- Paralegals & Legal Assistants
- Executive Secretaries & Executive Administrative Assistants
- Brokerage Clerks
- Court, Municipal, & License Clerks
- Bill & Account Collectors
- Legal Secretaries & Administrative Assistants
- Billing & Posting Clerks
- Loan Interviewers & Clerks

### Post-Secondary Institutions with Programs

- 81

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Emergency Medical Technicians

Assess injuries and illnesses and administer basic emergency medical care. May transport injured or sick persons to medical facilities.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

**Tasks:** Administer first aid treatment or life support care to sick or injured persons in prehospital settings. Assess nature and extent of illness or injury to establish and prioritize medical procedures. Attend training classes to maintain certification licensure, keep abreast of new developments in the field, or maintain existing knowledge. Comfort and reassure patients. Communicate with dispatchers or treatment center personnel to provide information about situation, to arrange reception of victims, or to receive instructions for further treatment. Coordinate work with other emergency medical team members or police or fire department personnel. Decontaminate ambulance interior following treatment of patient with infectious disease and report case to proper authorities. Drive mobile intensive care unit to specified location, following instructions from emergency medical dispatcher. Immobilize patient for placement on stretcher and ambulance transport, using backboard or other spinal immobilization device. Maintain vehicles and medical and communication equipment and replenish first aid equipment and supplies. Observe, record, and report to physician the patient's condition or injury, the treatment provided, and reactions to drugs or treatment. Perform emergency diagnostic and treatment procedures, such as stomach suction, airway management, or heart monitoring, during ambulance ride.

**License:** License Fee: $12.00; Renewal Fee: $12.00; Renewal Expired: $62.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Wage Data</th>
<th>Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>2018 Estimated Employment:</strong> 3,820</td>
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<tr>
<td>Entry</td>
<td>$9.29</td>
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<tr>
<td>Median</td>
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<td>Experienced</td>
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<tr>
<td><strong>Annual Wage</strong></td>
<td><strong>2028 Projected Employment:</strong> 4,130</td>
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<tr>
<td>Entry</td>
<td>$19,310.00</td>
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<tr>
<td>Median</td>
<td>$29,571.00</td>
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<td><strong>Average Total Openings:</strong></td>
<td><strong>Annual Growth Rate:</strong> 0.77%</td>
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<tr>
<td>295</td>
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</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Alabama Projections

**2018 Estimated Employment:** 3,820

**2028 Projected Employment:** 4,130

**Average Total Openings:** 295

**Annual Growth Rate:** 0.77%

### Related Occupations

- Ambulance Driver
- First Responder
- Flight Paramedic
- Healthcare Specialist
- Medical Technician
- Paramedic
- Rescue Worker

### Post-Secondary Institutions with Programs

- John C Calhoun State Community College
- Chattahoochee Valley Community College
- George C Wallace Community College-Dothan
- Southern Union State Community College
- University of South Alabama
- Columbia Southern University
- Northeast Alabama Community College
- Northwest-Shoals Community College
- H Councill Trenholm State Community College
- George C Wallace State Community College-Hanceville
- Gadsden State Community College
- Lurleen B Wallace Community College
- Coastal Alabama Community College
- Herzing University-Birmingham
- Bevill State Community College
- Lawson State Community College
- Enterprise State Community College
- Jefferson State Community College
- Shelton State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
51-2031  
Engine and Other Machine Assemblers

Construct, assemble, or rebuild machines, such as engines, turbines, and similar equipment used in such industries as construction, extraction, textiles, and paper manufacturing.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Read and interpret assembly blueprints or specifications manuals, and plan assembly or building operations. Inspect, operate, and test completed products to verify functioning, machine capabilities, or conformance to customer specifications. Position or align components for assembly, manually or using hoists. Set and verify parts clearances. Verify conformance of parts to stock lists or blueprints, using measuring instruments such as calipers, gauges, or micrometers. Fasten or install piping, fixtures, or wiring and electrical components to form assemblies or subassemblies, using hand tools, rivet guns, or welding equipment. Remove rough spots and smooth surfaces to fit, trim, or clean parts, using hand tools or power tools. Lay out and drill, ream, tap, or cut parts for assembly. Rework, repair, or replace damaged parts or assemblies.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
<th>Average Total Openings:</th>
<th>Annual Growth Rate:</th>
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<tbody>
<tr>
<td>Entry</td>
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<td>$27,044.00</td>
<td>1,600</td>
<td>1,690</td>
<td>0.29%</td>
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<tr>
<td>Median</td>
<td>$24.57</td>
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<tr>
<td>Experienced</td>
<td>$29.54</td>
<td>$61,452.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Sawing Machine Setters, Operators, & Tenders, Wood
Print Binding & Finishing Workers
Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Cutting, Punching, & Press Machine Setters, Operators, & Tenders
Molders, Shapers, & Casters, Except Metal & Plastic
Lathe & Turning Machine Tool Setters, Operators, & Tenders
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Welders, Cutters, Solderers, & Brazers
Paper Goods Machine Setters, Operators, & Tenders

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Formulate mathematical models or other methods of computer analysis to develop, evaluate, or modify design, according to customer engineering requirements. Plan or conduct experimental, environmental, operational, or stress tests on models or prototypes of aircraft or aerospace systems or equipment. Formulate conceptual design of aeronautical or aerospace products or systems to meet customer requirements or conform to environmental regulations. Plan or coordinate investigation and resolution of customers' reports of technical problems with aircraft or aerospace vehicles. Write technical reports or other documentation, such as handbooks or bulletins, for use by engineering staff, management, or customers. Direct or coordinate activities of engineering or technical personnel involved in designing, fabricating, modifying, or testing of aircraft or aerospace products. Evaluate product data or design from inspections or reports for conformance to engineering principles, customer requirements, environmental regulations, or quality standards. Develop design criteria for aeronautical or aerospace products or systems, including testing methods, production costs, quality standards, environmental standards, or completion dates. Analyze project requests, proposals, or engineering data to determine feasibility, productibility, cost, or production time of aerospace or aeronautical products. Maintain records of performance reports for future reference.

License: Application Fee: $50.00; License Fee: $75.00; Renewal Fee: $100.00; Examination Fee: Traditional $350.00, CBT $375.00

Outlook: Satisfactory

Alabama Employment Outlook

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<td><strong>Annual Wage</strong></td>
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<td><strong>Experienced</strong></td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Electrical Engineers
Mechanical Engineers
Validation Engineers
Energy Engineers, Except Wind & Solar
Health & Safety Engineers, Except Mining Safety Engineers & Inspectors
Logistics Engineers
Fire-Prevention & Protection Engineers
Nuclear Engineers
Materials Engineers
Electronics Engineers, Except Computer

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
84

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
17-2051
Engineers, Civil

Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.

Education: Most of these occupations typically require a four-year bachelor's degree.
OJT: Employees in these occupations usually need over 4 years, up to and including 10 years
Tasks: Inspect project sites to monitor progress and ensure conformance to design specifications and safety or sanitation standards. Compute load and grade requirements, water flow rates, or material stress factors to determine design specifications. Provide technical advice to industrial or managerial personnel regarding design, construction, program modifications, or structural repairs. Test soils or materials to determine the adequacy and strength of foundations, concrete, asphalt, or steel. Manage and direct the construction, operations, or maintenance activities at project site. Direct or participate in surveying to lay out installations or establish reference points, grades, or elevations to guide construction. Estimate quantities and cost of materials, equipment, or labor to determine project feasibility. Plan and design transportation or hydraulic systems or structures, using computer-assisted design or drawing tools. Prepare or present public reports on topics such as bid proposals, deeds, environmental impact statements, or property and right-of-way descriptions. Design energy-efficient or environmentally sound civil structures. Identify environmental risks and develop risk management strategies for civil engineering projects. Direct engineering activities, ensuring compliance with environmental, safety, or other governmental regulations. Analyze survey reports, maps, drawings, blueprints, aerial photography, or other topographical or geologic data. Conduct studies of traffic patterns or environmental conditions to identify engineering problems and assess potential project impact.

License: Application Fee: $50.00; License Fee: $75.00; Renewal Fee: $100.00; Examination Fee: Traditional $350.00, CBT $375.00

Outlook: Satisfactory

Alabama Employment Outlook

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<td>Annual Wage</td>
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<tr>
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<tr>
<td>Experienced</td>
<td>$68.27</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Transportation Engineers
Fire-Prevention & Protection Engineers
Energy Engineers, Except Wind & Solar
Mining & Geological Engineers, Including Mining Safety Engineers
Environmental Engineers
Agricultural Engineers
Logistics Engineers
Construction Managers
Architectural & Engineering Managers
Conservation Scientists

Post-Secondary Institutions with Programs
Alabama A & M University
Auburn University
The University of Alabama
University of Alabama at Birmingham
University of Alabama in Huntsville
University of South Alabama

2020 Career Exploration Guide
85
See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Engineers, Electrical

Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Operate computer-assisted engineering or design software or equipment to perform engineering tasks. Prepare technical drawings, specifications of electrical systems, or topographical maps to ensure that installation and operations conform to standards and customer requirements. Confer with engineers, customers, or others to discuss existing or potential engineering projects or products. Design, implement, maintain, or improve electrical instruments, equipment, facilities, components, products, or systems for commercial, industrial, or domestic purposes. Direct or coordinate manufacturing, construction, installation, maintenance, support, documentation, or testing activities to ensure compliance with specifications, codes, or customer requirements. Compile data and write reports regarding existing or potential electrical engineering studies or projects. Perform detailed calculations to compute and establish manufacturing, construction, or installation standards or specifications. Prepare specifications for purchases of materials or equipment. Estimate labor, material, or construction costs for budget preparation purposes. Supervise or train project team members, as necessary.

License: Application Fee: $50.00; License Fee: $75.00; Renewal Fee: $100.00; Examination Fee: Traditional $350.00, CBT $375.00

Outlook: Good

Alabama Employment Outlook

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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$31.07</td>
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<td>$47.50</td>
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<td>Experienced</td>
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<tr>
<td>$73.64</td>
<td>$153,177.00</td>
</tr>
</tbody>
</table>

2018 Estimated Employment: 4,620
2028 Projected Employment: 5,170
Average Total Openings: 380
Annual Growth Rate: 1.14%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Aerospace Engineers
Mechanical Engineers
Electronics Engineers, Except Computer
Photonics Engineers
Logistics Engineers
Validation Engineers
Energy Engineers, Except Wind & Solar
Fire-Prevention & Protection Engineers
Industrial Engineers
Computer Hardware Engineers

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Research, design, develop, or test electronic components and systems for commercial, industrial, military, or scientific use employing knowledge of electronic theory and materials properties. Design electronic circuits and components for use in fields such as telecommunications, aerospace guidance and propulsion control, acoustics, or instruments and controls.

**Education:** Most of these occupations typically require a four-year bachelor’s degree.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Determine project material or equipment needs. Prepare engineering sketches or specifications for construction, relocation, or installation of equipment, facilities, products, or systems. Prepare documentation containing information such as confidential descriptions or specifications of proprietary hardware or software, product development or introduction schedules, product costs, or information about product performance weaknesses. Evaluate project work to ensure effectiveness, technical adequacy, or compatibility in the resolution of complex electronics engineering problems. Analyze electronics system requirements, capacity, cost, or customer needs to determine project feasibility. Confer with engineers, customers, vendors, or others to discuss existing or potential electronics engineering projects or products. Operate computer-assisted engineering or design software or equipment to perform electronics engineering tasks. Prepare necessary criteria, procedures, reports, or plans for successful conduct of the project with consideration given to site preparation, facility validation, installation, quality assurance, or testing. Plan or develop applications or modifications for electronic properties used in components, products, or systems to improve technical performance. Direct or coordinate activities concerned with manufacture, construction, installation, maintenance, operation, or modification of electronic equipment, products, or systems. Recommend repair or design modifications of electronics components or systems, based on factors such as environment, service, cost, or system capabilities. Develop or perform operational, maintenance, or testing procedures for electronic products, components, equipment, or systems.

**License:** Application Fee: $50.00; License Fee: $75.00; Renewal Fee: $100.00; Examination Fee: Traditional $350.00, CBT $375.00

**Outlook:** Satisfactory

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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
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<td>$30.80 Entry $64,059.00</td>
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<tr>
<td>Median</td>
<td>$53.30 Median $110,873.00</td>
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<tr>
<td>Experienced</td>
<td>$77.85 Experienced $161,922.00</td>
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</table>

2018 Estimated Employment: 1,740
2028 Projected Employment: 1,830
Average Total Openings: 125
Annual Growth Rate: 0.52%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Photonics Engineers
- Electrical Engineers
- Logistics Engineers
- Industrial Engineering Technologists & Technicians
- Computer Systems Engineers/Architects
- Aerospace Engineering & Operations Technologists & Technicians
- Aerospace Engineers
- Electrical & Electronic Engineering Technologists & Technicians
- Robotics Engineers
- Industrial Engineers

**Post-Secondary Institutions with Programs**
Engineers, Industrial

Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Estimate production costs, cost saving methods, and the effects of product design changes on expenditures for management review, action, and control. Plan and establish sequence of operations to fabricate and assemble parts or products and to promote efficient utilization. Analyze statistical data and product specifications to determine standards and establish quality and reliability objectives of finished product. Confer with clients, vendors, staff, and management personnel regarding purchases, product and production specifications, manufacturing capabilities, or project status. Communicate with management and user personnel to develop production and design standards. Evaluate precision and accuracy of production and testing equipment and engineering drawings to formulate corrective action plan. Recommend methods for improving utilization of personnel, material, and utilities. Record or oversee recording of information to ensure currency of engineering drawings and documentation of production problems. Draft and design layout of equipment, materials, and workspace to illustrate maximum efficiency using drafting tools and computer. Direct workers engaged in product measurement, inspection, and testing activities to ensure quality control and reliability. Develop manufacturing methods, labor utilization standards, and cost analysis systems to promote efficient staff and facility utilization. Review production schedules, engineering specifications, orders, and related information to obtain knowledge of manufacturing methods, procedures, and activities. Complete production reports, purchase orders, and material, tool, and equipment lists. Coordinate and implement quality control objectives, activities, or procedures to resolve production problems, maximize product reliability, or minimize costs. Implement methods and procedures for disposition of discrepant material and defective or damaged parts, and assess cost and responsibility. Apply statistical methods and perform mathematical calculations to determine manufacturing processes, staff requirements, and production standards. Study operations sequence, material flow, functional statements, organization charts, and project information to determine worker functions and responsibilities. Formulate sampling procedures and designs and develop forms and instructions for recording, evaluating, and reporting quality and reliability data.

License: Application Fee: $50.00; License Fee: $75.00; Renewal Fee: $100.00; Examination Fee: Traditional $350.00, CBT $375.00

Outlook: Very Good

Alabama Employment Outlook

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<tr>
<td></td>
<td>2018 Estimated Employment: 5,740</td>
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<tr>
<td>Hourly Wage</td>
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<td>Entry</td>
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<tr>
<td>$26.87</td>
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<td>$41.58</td>
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<td>$61.86</td>
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<tr>
<td></td>
<td>Average Total Openings: 565</td>
</tr>
<tr>
<td></td>
<td>Annual Growth Rate: 2.06%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Validation Engineers
Industrial Engineering Technologists & Technicians
Materials Engineers
Electrical Engineers
Energy Engineers, Except Wind & Solar
Mechanical Engineers
Logistics Analysts
Health & Safety Engineers, Except Mining Safety Engineers & Inspectors
Fire-Prevention & Protection Engineers

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Engineers, Mechanical

Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Read and interpret blueprints, technical drawings, schematics, or computer-generated reports. Research, design, evaluate, install, operate, or maintain mechanical products, equipment, systems or processes to meet requirements. Confer with engineers or other personnel to implement operating procedures, resolve system malfunctions, or provide technical information. Develop, coordinate, or monitor all aspects of production, including selection of manufacturing methods, fabrication, or operation of product designs. Investigate equipment failures or difficulties to diagnose faulty operation and recommend remedial actions. Develop or test models of alternate designs or processing methods to assess feasibility, sustainability, operating condition effects, potential new applications, or necessity of modification. Specify system components or direct modification of products to ensure conformance with engineering design, performance specifications, or environmental regulations. Recommend design modifications to eliminate machine or system malfunctions. Assist drafters in developing the structural design of products, using drafting tools or computer-assisted drafting equipment or software. Oversee installation, operation, maintenance, or repair to ensure that machines or equipment are installed and functioning according to specifications. Conduct research that tests or analyzes the feasibility, design, operation, or performance of equipment, components, or systems. Design test control apparatus or equipment or develop procedures for testing products. Provide feedback to design engineers on customer problems or needs. Research and analyze customer design proposals, specifications, manuals, or other data to evaluate the feasibility, cost, or maintenance requirements of designs or applications. Estimate costs or submit bids for engineering, construction, or extraction projects.

License: Application Fee: $50.00; License Fee: $75.00; Renewal Fee: $100.00; Examination Fee: Traditional $350.00, CBT $375.00

Outlook: Good

Alabama Employment Outlook

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<td>Entry</td>
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<tr>
<td>$28.12</td>
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<td>$41.74</td>
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<tr>
<td>$66.15</td>
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</tbody>
</table>

2018 Estimated Employment: 3,490
2028 Projected Employment: 4,020
Average Total Openings: 305
Annual Growth Rate: 1.41%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Aerospace Engineers
Electrical Engineers
Photonics Engineers
Industrial Engineering Technologists & Technicians
Electronics Engineers, Except Computer
Validation Engineers
Industrial Engineers
Logistics Engineers
Health & Safety Engineers, Except Mining Safety Engineers & Inspectors

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Environmental Engineers**

Research, design, plan, or perform engineering duties in the prevention, control, and remediation of environmental hazards using various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Provide technical support for environmental remediation or litigation projects, including remediation system design or determination of regulatory applicability. Collaborate with environmental scientists, planners, hazardous waste technicians, engineers, experts in law or business, or other specialists to address environmental problems. Assess the existing or potential environmental impact of land use projects on air, water, or land. Advise corporations or government agencies of procedures to follow in cleaning up contaminated sites to protect people and the environment. Inspect industrial or municipal facilities or programs to evaluate operational effectiveness or ensure compliance with environmental regulations. Design, or supervise the design of, systems, processes, or equipment for control, management, or remediation of water, air, or soil quality. Direct installation or operation of environmental monitoring devices or supervise related data collection programs. Prepare, review, or update environmental investigation or recommendation reports. Develop site-specific health and safety protocols, such as spill contingency plans or methods for loading or transporting waste. Obtain, update, or maintain plans, permits, or standard operating procedures. Prepare or present public briefings on the status of environmental engineering projects. Provide administrative support for projects by collecting data, providing project documentation, training staff, or performing other general administrative duties. Coordinate or manage environmental protection programs or projects, assigning or evaluating work. Request bids from suppliers or consultants. Monitor progress of environmental improvement programs. Serve as liaison with federal, state, or local agencies or officials on issues pertaining to solid or hazardous waste program requirements. Provide assistance with planning, quality assurance, safety inspection protocols, or sampling as part of a team conducting multimedia inspections at complex facilities.

**License:** Application Fee: $50.00; License Fee: $75.00; Renewal Fee: $100.00; Examination Fee: Traditional $350.00, CBT $375.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
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<tr>
<td>$58.69</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Mining & Geological Engineers, Including Mining Safety Engineers
- Energy Engineers, Except Wind & Solar
- Fire-Prevention & Protection Engineers
- Civil Engineers
- Environmental Scientists & Specialists, Including Health
- Agricultural Engineers
- Hydrologists
- Marine Engineers & Naval Architects
- Conservation Scientists
- Chemical Engineers
- Air Pollution Control Engineer
- Engineering Consultant
- Environmental Engineer
- Environmental Remediation Specialist
- Hazardous Substances Engineer
- Sanitary Engineer

### Post-Secondary Institutions with Programs
- The University of Alabama

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See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or public health. Using knowledge of various scientific disciplines, may collect, synthesize, study, report, and recommend action based on data derived from measurements or observations of air, food, soil, water, and other sources.

**Education:** Most of these occupations typically require a four-year bachelor’s degree.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Provide scientific or technical guidance, support, coordination, or oversight to governmental agencies, environmental programs, industry, or the public. Review and implement environmental technical standards, guidelines, policies, and formal regulations that meet all appropriate requirements. Collect, synthesize, analyze, manage, and report environmental data, such as pollution emission measurements, atmospheric monitoring measurements, meteorological or mineralogical information, or soil or water samples. Communicate scientific or technical information to the public, organizations, or internal audiences through oral briefings, written documents, workshops, conferences, training sessions, or public hearings. Provide advice on proper standards and regulations or the development of policies, strategies, or codes of practice for environmental management. Prepare charts or graphs from data samples, providing summary information on the environmental relevance of the data. Conduct environmental audits or inspections or investigations of violations. Monitor effects of pollution or land degradation and recommend means of prevention or control. Design or direct studies to obtain technical environmental information about planned projects.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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</thead>
<tbody>
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<td><strong>Hourly Wage</strong></td>
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</table>

**2018 Estimated Employment:** 920

**2028 Projected Employment:** 970

**Average Total Openings:** 105

**Annual Growth Rate:** 0.56%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Environmental Compliance Inspectors
- Conservation Scientists
- Hydrologists
- Environmental Engineers
- Geoscientists, Except Hydrologists & Geographers
- Validation Engineers
- Range Managers
- Zoologists & Wildlife Biologists
- Environmental Science & Protection Technicians, Including Health
- Chemists

### Post-Secondary Institutions with Programs
- Auburn University
- Auburn University at Montgomery
- Birmingham-Southern College
- Columbia Southern University
- Miles College
- Samford University
- The University of Alabama
- Troy University
- Tuskegee University
- University of Montevallo

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Excavating and Loading Machine and Dragline Operators
Operate or tend machinery at surface mining site, equipped with scoops, shovels, or buckets to excavate and load loose materials.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Move levers, depress foot pedals, and turn dials to operate power machinery, such as power shovels, stripping shovels, scraper loaders, or backhoes. Set up or inspect equipment prior to operation. Become familiar with digging plans, machine capabilities and limitations, and with efficient and safe digging procedures in a given application. Observe hand signals, grade stakes, or other markings when operating machines so that work can be performed to specifications. Operate machinery to perform activities such as backfilling excavations, vibrating or breaking rock or concrete, or making winter roads. Receive written or oral instructions regarding material movement or excavation. Move materials over short distances, such as around a construction site, factory, or warehouse. Create or maintain inclines or ramps. Lubricate, adjust, or repair machinery and replace parts, such as gears, bearings, or bucket teeth. Handle slides, mud, or pit cleanings or maintenance.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
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<td>Entry</td>
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<tr>
<td>$12.09</td>
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<td>Experienced</td>
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<tr>
<td>$34.18</td>
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</table>

2018 Estimated Employment: 950
2028 Projected Employment: 980
Average Total Openings: 115
Annual Growth Rate: 0.28%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Rail-Track Laying & Maintenance Equipment Operators
Paving, Surfacing, & Tamping Equipment Operators
Dredge Operators
Highway Maintenance Workers
Pipelayers
Pile Driver Operators
Earth Drillers, Except Oil & Gas
Fence Erectors
Operating Engineers & Other Construction Equipment Operators
Crane & Tower Operators
Aerial Tram Operator
Air Shovel Operator
Back Digger Operator
Back Filler Operator
Back Hoe Machine Operator
Back Hoe Operator
Backhoe Operator
Clam Shovel Operator
Diesel Scoop Operator
Dragline Oiler
Earth Moving Equipment Operator
Earth Moving Machine Operator
Earth Moving Technician
Electric Scoop Operator
Electric Shovel Operator

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
92

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Exercise Trainers and Group Fitness Instructors

Instruct or coach groups or individuals in exercise activities for the primary purpose of personal fitness. Demonstrate techniques and form, observe participants, and explain to them corrective measures necessary to improve their skills. Develop and implement individualized approaches to exercise.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Offer alternatives during classes to accommodate different levels of fitness. Plan routines, choose appropriate music, and choose different movements for each set of muscles, depending on participants' capabilities and limitations. Evaluate individuals' abilities, needs, and physical conditions, and develop suitable training programs to meet any special requirements. Observe participants and inform them of corrective measures necessary for skill improvement. Monitor participants' progress and adapt programs as needed. Teach proper breathing techniques used during physical exertion. Instruct participants in maintaining exertion levels to maximize benefits from exercise routines. Teach and demonstrate use of gymnastic and training equipment, such as trampolines and weights. Explain and enforce safety rules and regulations governing sports, recreational activities, and the use of exercise equipment. Provide students with information and resources regarding nutrition, weight control, and lifestyle issues. Conduct therapeutic, recreational, or athletic activities. Administer emergency first aid, wrap injuries, treat minor chronic disabilities, or refer injured persons to physicians. Maintain fitness equipment. Advise clients about proper clothing and shoes.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
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<tr>
<td>$9.27 Entry</td>
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<td>$17.28 Median</td>
<td>$35,948.00</td>
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<tr>
<td>$25.81 Experienced</td>
<td>$53,680.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Self-Enrichment Teachers
Preschool Teachers, Except Special Education
Career/Technical Education Teachers, Postsecondary
Physical Therapist Assistants
Skin care Specialists
Massage Therapists
Occupational Therapy Assistants
Physical Therapist Aides
Hairdressers, Hairstylists, & Cosmetologists

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Extruding and Drawing Machine Setters, Operators, and Tenders

Set up, operate, or tend machines to extrude or draw thermoplastic or metal materials into tubes, rods, hoses, wire, bars, or structural shapes.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Measure and examine extruded products to locate defects and to check for conformance to specifications, adjusting controls as necessary to alter products. Determine setup procedures and select machine dies and parts, according to specifications. Start machines and set controls to regulate vacuum, air pressure, sizing rings, and temperature, and to synchronize speed of extrusion. Reel extruded products into rolls of specified lengths and weights. Install dies, machine screws, and sizing rings on machines that extrude thermoplastic or metal materials. Change dies on extruding machines according to production line changes. Clean work areas. Troubleshoot, maintain, and make minor repairs to equipment.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>Entry</td>
<td>$9.23</td>
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<td>Median</td>
<td>Median</td>
<td>$14.25</td>
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<tr>
<td>Experienced</td>
<td>Experienced</td>
<td>$21.01</td>
<td>$43,703.00</td>
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</table>

Average Total Openings: 345

Annual Growth Rate: 0.48%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Heat Treating Equipment Setters, Operators, & Tenders
Sawing Machine Setters, Operators, & Tenders, Wood
Crushing, Grinding, & Polishing Machine Setters, Operators, & Tenders
Cutting, Punching, & Press Machine Setters, Operators, & Tenders
Machine Feeders & Offbearers
Mixing & Blending Machine Setters, Operators, & Tenders
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Molders, Shapers, & Casters, Except Metal & Plastic
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Forging Machine Setters, Operators, & Tenders

Post-Secondary Institutions with Programs
George C Wallace State Community College-Hanceville
H Councill Trenholm State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders

Set up, operate, or tend machines, such as glass-forming machines, plodder machines, and tuber machines, to shape and form products such as glassware, food, rubber, soap, brick, tile, clay, wax, tobacco, or cosmetics.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Adjust machine components to regulate speeds, pressures, and temperatures, and amounts, dimensions, and flow of materials or ingredients. Press control buttons to activate machinery and equipment. Examine, measure, and weigh materials or products to verify conformance to standards, using measuring devices such as templates, micrometers, or scales. Monitor machine operations and observe lights and gauges to detect malfunctions. Clear jams, and remove defective or substandard materials or products. Notify supervisors when extruded filaments fail to meet standards. Record and maintain production data, such as meter readings, and quantities, types, and dimensions of materials produced. Review work orders, specifications, or instructions to determine materials, ingredients, procedures, components, settings, and adjustments for extruding, forming, pressing, or compacting machines. Turn controls to adjust machine functions, such as regulating air pressure, creating vacuums, and adjusting coolant flow. Clean dies, arbors, compression chambers, and molds, using swabs, sponges, or air hoses. Synchronize speeds of sections of machines when producing products involving several steps or processes. Move materials, supplies, components, and finished products between storage and work areas, using work aids such as racks, hoists, and handtrucks.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<thead>
<tr>
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<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>Median</td>
<td>Median</td>
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<tr>
<td>Experienced</td>
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<tr>
<td>$10.27</td>
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<tr>
<td>$28.08</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Cutting, Punching, & Press Machine Setters, Operators, & Tenders
Adhesive Bonding Machine Operators & Tenders
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Sawing Machine Setters, Operators, & Tenders, Wood
Packaging & Filling Machine Operators & Tenders
Print Binding & Finishing Workers
Molders, Shapers, & Casters, Except Metal & Plastic
Engine & Other Machine Assemblers
Grinding, Lapping, Polishing, & Buffing Machine Tool
Setters, Operators, & Tenders
Cutting & Slicing Machine Setters, Operators, & Tenders

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Farm Equipment Mechanics and Service Technicians

Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:** Maintain, repair, and overhaul farm machinery and vehicles, such as tractors, harvesters, and irrigation systems. Dismantle defective machines for repair, using hand tools. Record details of repairs made and parts used. Reassemble machines and equipment following repair, testing operation and making adjustments, as necessary. Clean and lubricate parts. Test and replace electrical components and wiring, using test meters, soldering equipment, and hand tools. Tune or overhaul engines. Examine and listen to equipment, read inspection reports, and confer with customers to locate and diagnose malfunctions. Repair or replace defective parts, using hand tools, milling and woodworking machines, lathes, welding equipment, grinders, or saws. Drive trucks to haul tools and equipment for on-site repair of large machinery. Fabricate new metal parts, using drill presses, engine lathes, and other machine tools. Repair bent or torn sheet metal.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
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<tr>
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<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td><strong>Entry</strong></td>
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<tr>
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<tr>
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<tr>
<td>$30.62</td>
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</table>

2018 Estimated Employment: 860
2028 Projected Employment: 920
Average Total Openings: 95
Annual Growth Rate: 0.66%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Mobile Heavy Equipment Mechanics, Except Engines
- Motorboat Mechanics & Service Technicians
- Automotive Service Technicians & Mechanics
- Bus & Truck Mechanics & Diesel Engine Specialists
- Electric Motor, Power Tool, & Related Repairers
- Heating, Air Conditioning, & Refrigeration Mechanics & Installers
- Signal & Track Switch Repairers
- Recreational Vehicle Service Technicians
- Control & Valve Installers & Repairers, Except Mechanical
- Door
- Maintenance & Repair Workers, General
- Agricultural Mechanic
- Agricultural Technician
- Agriculture Mechanic
- Farm Equipment Mechanic
- Farm Equipment Service Technician
- Field Technician
- Mechanic
- Service Technician
- Tractor Mechanic
- Tractor Technician

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

96

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Fast Food and Counter Workers

Perform duties such as taking orders and serving food and beverages. Serve customers at counter or from a steam table. May take payment. May prepare food and beverages.

Education: Some of these occupations may require a high school diploma or GED certificate.

OJT: Employees in these occupations usually need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

Tasks: Communicate with customers regarding orders, comments, and complaints. Accept payment from customers, and make change as necessary. Scrub and polish counters, steam tables, and other equipment, and clean glasses, dishes, and fountain equipment. Perform cleaning duties such as sweeping, mopping, and washing dishes, to keep equipment and facilities sanitary. Balance receipts and payments in cash registers. Request and record customer orders, and compute bills using cash registers, multi counting machines, or pencil and paper. Serve food, beverages, or desserts to customers in such settings as take-out counters of restaurants or lunchrooms, business or industrial establishments, hotel rooms, and cars. Prepare daily food items, and cook simple foods and beverages, such as sandwiches, salads, soups, pizza, or coffee, using proper safety precautions and sanitary measures. Clean and organize eating, service, and kitchen areas. Monitor and order supplies or food items and restock as necessary to maintain inventory. Brew coffee and tea, and fill containers with requested beverages. Serve customers in eating places that specialize in fast service and inexpensive carry-out food. Collect and return dirty dishes to the kitchen for washing. Wash dishes, glassware, and silverware after meals. Wrap menu item such as sandwiches, hot entrees, and desserts for serving or for takeout. Notify kitchen personnel of shortages or special orders. Prepare and serve cold drinks, or frozen milk drinks or desserts, using drink-dispensing, milkshake, or frozen custard machines. Select food items from serving or storage areas and place them in dishes, on serving trays, or in take-out bags. Replenish foods at serving stations. Perform personnel activities such as supervising and training employees.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th></th>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
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<td>$11.42</td>
<td>$23,753.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Cooks, Fast Food
Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
Waiters & Waitresses
Cooks, Short Order
Cashiers
Stockers & Order Fillers
Food Servers, Nonrestaurant
Food Preparation Workers
Ushers, Lobby Attendants, & Ticket Takers
Dining Room & Cafeteria Attendants & Bartender Helpers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
97

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Financial and Investment Analysts

Conduct quantitative analyses of information involving investment programs or financial data of public or private institutions, including valuation of businesses.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

Tasks: Recommend investments and investment timing to companies, investment firm staff, or the public. Determine the prices at which securities should be syndicated and offered to the public. Present oral or written reports on general economic trends, individual corporations, and entire industries. Collaborate with investment bankers to attract new corporate clients to securities firms. Monitor fundamental economic, industrial, and corporate developments by analyzing information from financial publications and services, investment banking firms, government agencies, trade publications, company sources, or personal interviews. Evaluate and compare the relative quality of various securities in a given industry. Inform investment decisions by analyzing financial information to forecast business, industry, or economic conditions. Monitor developments in the fields of industrial technology, business, finance, and economic theory. Interpret data on price, yield, stability, future investment-risk trends, economic influences, and other factors affecting investment programs. Prepare plans of action for investment, using financial analyses. Conduct financial analyses related to investments in green construction or green retrofitting projects. Draw charts and graphs, using computer spreadsheets, to illustrate technical reports. Purchase investments for companies in accordance with company policy. Determine the financial viability of alternative energy generation or fuel production systems, based on power source or feedstock quality, financing costs, potential revenue, and total project costs. Forecast or analyze financial costs associated with climate change or other environmental factors, such as clean water supply and demand.

License: No License Required.

Outlook: Satisfactory

Alaska Employment Outlook

Alabama Wage Data

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<thead>
<tr>
<th></th>
<th>Hourly Wage</th>
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<tr>
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Alabama Projections

<table>
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<tr>
<th></th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
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</thead>
<tbody>
<tr>
<td>Average Total Openings</td>
<td></td>
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<td>Annual Growth Rate</td>
<td>0.88%</td>
<td></td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Accounting Analyst
Acquisition Analyst
Acquisition Specialist
Acquisitions Analyst
Alternative Financing Specialist
Bond Analyst
Brand Analyst
Equity Research Analyst
Finance Analyst
Financial Analyst
Fiscal Analyst
Investment Banker
Investment Underwriter
Mutual Fund Accountant
Planning Analyst
Portfolio Analyst
Real Estate Analyst
Real Estate Investor
Securities Analyst
Securities Consultant
Stock Analyst

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Financial Examiners

Enforce or ensure compliance with laws and regulations governing financial and securities institutions and financial and real estate transactions. May examine, verify, or authenticate records.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Direct and participate in formal and informal meetings with bank directors, trustees, senior management, counsels, outside accountants, and consultants to gather information and discuss findings. Recommend actions to ensure compliance with laws and regulations, or to protect solvency of institutions. Prepare reports, exhibits, and other supporting schedules that detail an institution's safety and soundness, compliance with laws and regulations, and recommended solutions to questionable financial conditions. Resolve problems concerning the overall financial integrity of banking institutions including loan investment portfolios, capital, earnings, and specific or large troubled accounts. Investigate activities of institutions to enforce laws and regulations and to ensure legality of transactions and operations or financial solvency. Review balance sheets, operating income and expense accounts, and loan documentation to confirm institution assets and liabilities. Plan, supervise, and review work of assigned subordinates. Review audit reports of internal and external auditors to monitor adequacy of scope of reports or to discover specific weaknesses in internal routines. Examine the minutes of meetings of directors, stockholders, and committees to investigate the specific authority extended at various levels of management. Train other examiners in the financial examination process. Establish guidelines for procedures and policies that comply with new and revised regulations and direct their implementation. Review and analyze new, proposed, or revised laws, regulations, policies, and procedures to interpret their meaning and determine their impact. Provide regulatory compliance training to employees. Evaluate data processing applications for institutions under examination to develop recommendations for coordinating existing systems with examination procedures. Review applications for mergers, acquisitions, establishment of new institutions, acceptance in Federal Reserve System, or registration of securities sales to determine their public interest value and conformance to regulations, and recommend acceptance or rejection. Verify and inspect cash reserves, assigned collateral, and bank-owned securities to check internal control procedures.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$16.12</td>
<td>$33,537.00</td>
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<tr>
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<td>Median</td>
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<tr>
<td>$25.13</td>
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<tr>
<td>$50.38</td>
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</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Compensation & Benefits Managers
- Financial Managers
- Fraud Examiners, Investigators & Analysts
- Market Research Analysts & Marketing Specialists
- Human Resources Managers
- Regulatory Affairs Specialists
- Management Analysts
- Budget Analysts

### Post-Secondary Institutions with Programs

For information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Financial Managers

Plan, direct, or coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.

**Education:** Most of these occupations require a four-year bachelor's degree, but some do not.

**OJT:** Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

**Tasks:** Establish and maintain relationships with individual or business customers or provide assistance with problems these customers may encounter. Plan, direct, or coordinate the activities of workers in branches, offices, or departments of establishments, such as branch banks, brokerage firms, risk and insurance departments, or credit departments. Recruit staff members. Prepare operational or risk reports for management analysis. Evaluate data pertaining to costs to plan budgets. Oversee training programs.

**License:** No License Required.

**Outlook:** Good

### Alabama Wage Data

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
</tr>
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<tbody>
<tr>
<td>Entry</td>
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<tr>
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<td>$55.08</td>
</tr>
<tr>
<td>Experienced</td>
<td>$***</td>
</tr>
</tbody>
</table>

| Entry Annual Wage | $67,179.00 |
| Median Annual Wage | $114,575.00 |
| Experienced Annual Wage | $*** |

| 2018 Estimated Employment: | 5,310 |
| 2028 Projected Employment: | 6,180 |
| Average Total Openings: | 530 |
| Annual Growth Rate: | 1.54% |

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Securities, Commodities, & Financial Services Sales Agents
- Sales Managers
- Marketing Managers
- Accountants & Auditors
- First-Line Supervisors of Non-Retail Sales Workers
- Financial Examiners
- Human Resources Specialists
- Compensation & Benefits Managers

### Post-Secondary Institutions with Programs

- Alabama A & M University
- Alabama State University
- Auburn University
- Auburn University at Montgomery
- Columbia Southern University
- Jacksonville State University
- Oakwood University
- Samford University
- Strayer University-Alabama
- The University of Alabama
- Troy University
- Tuskegee University
- University of Alabama at Birmingham
- University of Alabama in Huntsville
- University of Montevallo
- University of North Alabama
- University of South Alabama
- University of West Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Firefighters

Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

**OJT:** Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

**Tasks:** Rescue victims from burning buildings, accident sites, and water hazards. Dress with equipment such as fire-resistant clothing and breathing apparatus. Assess fires and situations and report conditions to superiors to receive instructions, using two-way radios. Move toward the source of a fire, using knowledge of types of fires, construction design, building materials, and physical layout of properties. Respond to fire alarms and other calls for assistance, such as automobile and industrial accidents. Create openings in buildings for ventilation or entrance, using axes, chisels, crowbars, electric saws, or core cutters. Drive and operate fire fighting vehicles and equipment. Inspect fire sites after flames have been extinguished to ensure that there is no further danger. Position and climb ladders to gain access to upper levels of buildings, or to rescue individuals from burning structures. Select and attach hose nozzles, depending on fire type, and direct streams of water or chemicals onto fires. Maintain contact with fire dispatchers at all times to notify them of the need for additional firefighters and supplies, or to detail any difficulties encountered. Collaborate with other firefighters as a member of a firefighting crew. Patrol burned areas after fires to locate and eliminate hot spots that may restart fires. Collaborate with police to respond to accidents, disasters, and arson investigation calls. Participate in fire drills and demonstrations of fire fighting techniques. Maintain knowledge of current firefighting practices by participating in drills and by attending seminars, conventions, and conferences. Prepare written reports that detail specifics of fire incidents. Participate in physical training activities to maintain a high level of physical fitness. Protect property from water and smoke, using waterproof salvage covers, smoke ejectors, and deodorants. Inform and educate the public on fire prevention. Salvage property by removing broken glass, pumping out water, and ventilating buildings to remove smoke. Orient self in relation to fire, using compass and map, and collect supplies and equipment dropped by parachute.

**License:** There are course tuition fees for the various programs that lead to certification required by State Law. No license fees required. Interested individuals are urged to contact the Alabama Fire College webpage (www.alabamafirecollege.org) for specific tuition requirements for the specific courses.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tr>
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<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$11.58</td>
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<td>Median</td>
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<td>$19.56</td>
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<td>$30.13</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- First-Line Supervisors of Firefighting & Prevention Workers
- Explosives Workers, Ordnance Handling Experts, & Blasters
- Electrical Power-Line Installers & Repairers
- Captains, Mates, & Pilots of Water Vessels
- Ship Engineers
- First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers
- Commercial Divers
- Water & Wastewater Treatment Plant & System Operators
- Hazardous Materials Removal Workers
- Rotary Drill Operators, Oil & Gas

**Post-Secondary Institutions with Programs**

- Athens State University
- Columbia Southern University

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Set up and operate equipment that mixes or blends ingredients used in the manufacturing of food products. Includes candy makers and cheese makers.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Record production and test data for each food product batch, such as the ingredients used, temperature, test results, and time cycle. Follow recipes to produce food products of specified flavor, texture, clarity, bouquet, or color. Set up, operate, and tend equipment that cooks, mixes, blends, or processes ingredients in the manufacturing of food products, according to formulas or recipes. Mix or blend ingredients, according to recipes, using a paddle or an agitator, or by controlling vats that heat and mix ingredients. Clean and sterilize vats and factory processing areas. Select and measure or weigh ingredients, using English or metric measures and balance scales. Turn valve controls to start equipment and to adjust operation to maintain product quality. Press switches and turn knobs to start, adjust, and regulate equipment, such as beaters, extruders, discharge pipes, and salt pumps. Observe gauges and thermometers to determine if the mixing chamber temperature is within specified limits, and turn valves to control the temperature. Observe and listen to equipment to detect possible malfunctions, such as leaks or plugging, and report malfunctions or undesirable tastes to supervisors.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
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</tr>
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<td>Entry</td>
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<tr>
<td>$21.36</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Food Cooking Machine Operators & Tenders
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders
- Packaging & Filling Machine Operators & Tenders
- Print Binding & Finishing Workers
- Machine Feeders & Offbearers
- Forging Machine Setters, Operators, & Tenders
- Molders, Shapers, & Casters, Except Metal & Plastic
- Mixing & Blending Machine Setters, Operators, & Tenders
- Food & Tobacco Roasting, Baking, & Drying Machine Operators & Tenders

### Post-Secondary Institutions with Programs

- Auburn University
- Samford University
- Tuskegee University

2020 Career Exploration Guide
Food Cooking Machine Operators and Tenders

Operate or tend cooking equipment, such as steam cooking vats, deep fry cookers, pressure cookers, kettles, and boilers, to prepare food products.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Tend or operate and control equipment, such as kettles, cookers, vats and tanks, and boilers, to cook ingredients or prepare products for further processing. Set temperature, pressure, and time controls, and start conveyers, machines, or pumps. Clean, wash, and sterilize equipment and cooking area, using water hoses, cleaning or sterilizing solutions, or rinses. Observe gauges, dials, and product characteristics, and adjust controls to maintain appropriate temperature, pressure, and flow of ingredients. Listen for malfunction alarms, and shut down equipment and notify supervisors when necessary. Remove cooked material or products from equipment. Turn valves or start pumps to add ingredients or drain products from equipment and to transfer products for storage, cooling, or further processing. Measure or weigh ingredients, using scales or measuring containers. Read work orders, recipes, or formulas to determine cooking times and temperatures, and ingredient specifications. Collect and examine product samples during production to test them for quality, color, content, consistency, viscosity, acidity, or specific gravity. Notify or signal other workers to operate equipment or when processing is complete. Record production and test data, such as processing steps, temperature and steam readings, cooking time, batches processed, and test results. Admit required amounts of water, steam, cooking oils, or compressed air into equipment, such as by opening water valves to cool mixtures to the desired consistency.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
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<td>Hourly Wage</td>
<td>Annual Wage</td>
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<td>Average Total Openings</td>
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<tr>
<td>Annual Growth Rate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

Food Batchmakers
Cutting & Slicing Machine Setters, Operators, & Tenders
Packaging & Filling Machine Operators & Tenders
Welders, Cutters, Solderers, & Brazers
Extruding & Forming Machine Setters, Operators, & Tenders, Synthetic & Glass Fibers
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Print Binding & Finishing Workers
Paper Goods Machine Setters, Operators, & Tenders
Adhesive Bonding Machine Operators & Tenders
Food & Tobacco Roasting, Baking, & Drying Machine Operators & Tenders

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Food Preparation Workers

Perform a variety of food preparation duties other than cooking, such as preparing cold foods and shellfish, slicing meat, and brewing coffee or tea.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

**Tasks:** Clean and sanitize work areas, equipment, utensils, dishes, or silverware. Store food in designated containers and storage areas to prevent spoilage. Portion and wrap the food, or place it directly on plates for service to patrons. Take and record temperature of food and food storage areas, such as refrigerators and freezers. Prepare a variety of foods, such as meats, vegetables, or desserts, according to customers' orders or supervisors' instructions, following approved procedures. Place food trays over food warmers for immediate service, or store them in refrigerated storage cabinets. Package take-out foods or serve food to customers. Stock cupboards and refrigerators, and tend salad bars and buffet meals. Wash, peel, and cut various foods, such as fruits and vegetables, to prepare for cooking or serving. Carry food supplies, equipment, and utensils to and from storage and work areas. Distribute food to waiters and waitresses to serve to customers. Cut, slice or grind meat, poultry, and seafood to prepare for cooking. Remove trash and clean kitchen garbage containers. Receive and store food supplies, equipment, and utensils in refrigerators, cupboards, and other storage areas. Weigh or measure ingredients. Inform supervisors when equipment is not working properly and when food and supplies are getting low, and order needed items. Assist cooks and kitchen staff with various tasks as needed, and provide cooks with needed items. Add cutlery, napkins, food, and other items to trays on assembly lines in hospitals, cafeterias, airline kitchens, and similar establishments. Use manual or electric appliances to clean, peel, slice, and trim foods. Scrape leftovers from dishes into garbage containers. Load dishes, glasses, and tableware into dishwashing machines. Make special dressings and sauces as condiments for sandwiches. Mix ingredients for green salads, molded fruit salads, vegetable salads, and pasta salads.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
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<tr>
<th></th>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
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<td>$13.28</td>
<td>$27,615.00</td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Food Servers, Nonrestaurant
- Dining Room & Cafeteria Attendants & Bartender Helpers
- Maids & Housekeeping Cleaners
- Cooks, Fast Food
- Meat, Poultry, & Fish Cutters & Trimmers
- Fast Food & Counter Workers
- Cooks, Short Order
- Waiters & Waitresses
- Janitors & Cleaners, Except Maids & Housekeeping
- Cleaners
- Cooks, Restaurant

### Post-Secondary Institutions with Programs

For an explanation on omitted data, see the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Food Servers, Nonrestaurant

Serve food to individuals outside of a restaurant environment, such as in hotel rooms, hospital rooms, residential care facilities, or cars.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Place food servings on plates or trays according to orders or instructions. Clean or sterilize dishes, kitchen utensils, equipment, or facilities. Monitor food distribution, ensuring that meals are delivered to the correct recipients and that guidelines, such as those for special diets, are followed. Examine trays to ensure that they contain required items. Load trays with accessories, such as eating utensils, napkins, or condiments. Take food orders and relay orders to kitchens or serving counters so they can be filled. Monitor food preparation or serving techniques to ensure that proper procedures are followed. Remove trays and stack dishes for return to kitchen after meals are finished. Carry food, silverware, or linen on trays or use carts to carry trays. Record amounts and types of special food items served to customers. Stock service stations with items, such as ice, napkins, or straws. Prepare food items, such as sandwiches, salads, soups, or beverages. Determine where patients or patrons would like to eat their meals and help them get situated.

**License:** No License Required.

**Outlook:** Satisfactory

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**Alabama Employment Outlook**

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<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry $7.98</td>
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<tr>
<td>Median $10.05</td>
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<td>Experienced $13.86</td>
<td>Experienced $28,822.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

Food Preparation Workers
Dining Room & Cafeteria Attendants & Bartender Helpers
Cooks, Fast Food
Stockers & Order Fillers
Animal Caretakers
Fast Food & Counter Workers
Waiters & Waitresses
Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
Janitors & Cleaners, Except Maids & Housekeeping
Cleaners

**Post-Secondary Institutions with Programs**

105

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Food Service Managers

Plan, direct, or coordinate activities of an organization or department that serves food and beverages.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:**
- Keep records required by government agencies regarding sanitation or food subsidies. Investigate and resolve complaints regarding food quality, service, or accommodations. Maintain food and equipment inventories, and keep inventory records. Monitor food preparation methods, portion sizes, and garnishing and presentation of food to ensure that food is prepared and presented in an acceptable manner. Schedule and receive food and beverage deliveries, checking delivery contents to verify product quality and quantity. Coordinate assignments of cooking personnel to ensure economical use of food and timely preparation. Monitor compliance with health and fire regulations regarding food preparation and serving, and building maintenance in lodging and dining facilities. Count money and make bank deposits. Establish standards for personnel performance and customer service. Perform some food preparation or service tasks, such as cooking, clearing tables, and serving food and drinks when necessary. Greet guests, escort them to their seats, and present them with menus and wine lists. Test cooked food by tasting and smelling it to ensure palatability and flavor conformity. Schedule staff hours and assign duties. Arrange for equipment maintenance and repairs, and coordinate a variety of services, such as waste removal and pest control. Review menus and analyze recipes to determine labor and overhead costs, and assign prices to menu items. Organize and direct worker training programs, resolve personnel problems, hire new staff, and evaluate employee performance in dining and lodging facilities. Review work procedures and operational problems to determine ways to improve service, performance, or safety. Assess staffing needs and recruit staff, using methods such as newspaper advertisements or attendance at job fairs. Order and purchase equipment and supplies. Record the number, type, and cost of items sold to determine which items may be unpopular or less profitable.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
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<tr>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
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<tr>
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<tr>
<td>$44.64</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Chefs & Head Cooks
- First-Line Supervisors of Material-Moving Machine & Vehicle Operators
- First-Line Supervisors of Helpers, Laborers, & Material Movers, Hand
- General & Operations Managers
- Lodging Managers
- Industrial Production Managers
- First-Line Supervisors of Personal Service Workers
- First-Line Supervisors of Food Preparation & Serving Workers
- First-Line Supervisors of Retail Sales Workers
- First-Line Supervisors of Housekeeping & Janitorial Workers

### Post-Secondary Institutions with Programs
- **Auburn University**
- **Coastal Alabama Community College**
- **Columbia Southern University**
- **Jefferson State Community College**
- **The University of Alabama**
- **Tuskegee University**
- **University of South Alabama**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Fundraisers

Organize activities to raise funds or otherwise solicit and gather monetary donations or other gifts for an organization. May design and produce promotional materials. May also raise awareness of the organization's work, goals, and financial needs.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

**Tasks:** Identify and build relationships with potential donors. Write and send letters of thanks to donors. Secure commitments of participation or donation from individuals or corporate donors. Develop fundraising activity plans that maximize participation or contributions and minimize costs. Develop strategies to encourage new or increased contributions. Create or update donor databases. Direct or supervise fundraising staff, including volunteer staff members. Develop or implement fundraising activities, such as annual giving campaigns or direct mail programs. Solicit cash or in-kind donations or sponsorships from individual, business, or government donors. Monitor progress of fundraising drives. Conduct research to identify the goals, net worth, charitable donation history, or other data related to potential donors, potential investors, or general donor markets. Compile or develop materials to submit to granting or other funding organizations. Establish fundraising or participation goals for special events or specified time periods. Monitor budgets, expense reports, or other financial data for fundraising organizations. Contact corporate representatives, government officials, or community leaders to increase awareness of organizational causes, activities, or needs. Recruit sponsors, participants, or volunteers for fundraising events. Write reports or prepare presentations to communicate fundraising program data. Design or produce materials such as posters, Web sites, or newsletters to promote, market, or advertise fundraising events. Write speeches, press releases, or other promotional materials to increase awareness of the causes, missions, or goals of organizations seeking funds. Explain the tax advantages of contributions to potential donors. Plan and direct special events for fundraising, such as silent auctions, dances, golf events, or walks. Attend community events, meetings, or conferences to promote organizational goals or solicit donations or sponsorships. Direct or coordinate Web-based fundraising activities, such as online auctions or donation Web sites.

**License:** No License Required.

**Outlook:** Satisfactory

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<td>Annual Wage</td>
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<tr>
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<tr>
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**Hourly Wage**

<table>
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<tr>
<th>Entry</th>
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<tr>
<td>Median</td>
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<td>Experienced</td>
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**Annual Wage**

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**2018 Estimated Employment:** 960

**2028 Projected Employment:** 1,030

**Average Total Openings:** 110

**Annual Growth Rate:** 0.72%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Annual Giving Officer
- Campaign Fundraiser
- Development Associate
- Development Coordinator
- Donor Officer
- Donor Relations Officer
- Donor Specialist
- fundraiser
- Fundraising Coordinator
- Fundraising Sale Representative
- Fundraising Specialist
- Grant Writer
- Grant Writing Specialist

### Post-Secondary Institutions with Programs

- 107

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
General and Operations Managers

Plan, direct, or coordinate the operations of public or private sector organizations, overseeing multiple departments or locations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. Usually manage through subordinate supervisors. Excludes First-Line Supervisors.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Review financial statements, sales or activity reports, or other performance data to measure productivity or goal achievement or to identify areas needing cost reduction or program improvement. Direct and coordinate activities of businesses or departments concerned with the production, pricing, sales, or distribution of products. Direct administrative activities directly related to making products or providing services. Prepare staff work schedules and assign specific duties. Monitor suppliers to ensure that they efficiently and effectively provide needed goods or services within budgetary limits. Direct or coordinate financial or budget activities to fund operations, maximize investments, or increase efficiency. Establish or implement departmental policies, goals, objectives, or procedures in conjunction with board members, organization officials, or staff members. Perform personnel functions, such as selection, training, or evaluation. Plan or direct activities, such as sales promotions, that require coordination with other department managers.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td>Experienced</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
First-Line Supervisors of Material-Moving Machine & Vehicle Operators
First-Line Supervisors of Office & Administrative Support Workers
Administrative Services Managers
Lodging Managers
Transportation, Storage, & Distribution Managers
Gambling Managers
Purchasing Managers
Food Service Managers
Wholesale & Retail Buyers, Except Farm Products

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
108
Graphic Designers

Design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Determine size and arrangement of illustrative material and copy, and select style and size of type. Confer with clients to discuss and determine layout design. Create designs, concepts, and sample layouts, based on knowledge of layout principles and esthetic design concepts. Develop graphics and layouts for product illustrations, company logos, and Web sites. Use computer software to generate new images. Review final layouts and suggest improvements as needed. Maintain archive of images, photos, or previous work products. Prepare illustrations or rough sketches of material, discussing them with clients or supervisors and making necessary changes. Draw and print charts, graphs, illustrations, and other artwork, using computer. Key information into computer equipment to create layouts for client or supervisor. Research new software or design concepts. Study illustrations and photographs to plan presentation of materials, products, or services.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<td><strong>Annual Wage</strong></td>
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</table>

**Average Total Openings:** 265

**Annual Growth Rate:** 0.32%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Special Effects Artists & Animators
- Art Directors
- Advertising & Promotions Managers
- Film & Video Editors
- Interior Designers
- Cartographers & Photogrammetrists
- Desktop Publishers

### Post-Secondary Institutions with Programs

- Enterprise State Community College
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders

Set up, operate, or tend grinding and related tools that remove excess material or burrs from surfaces, sharpen edges or corners, or buff, hone, or polish metal or plastic work pieces.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Inspect or measure finished workpieces to determine conformance to specifications, using measuring instruments, such as gauges or micrometers. Measure workpieces and lay out work, using precision measuring devices. Observe machine operations to detect any problems, making necessary adjustments to correct problems. Move machine controls to index workpieces, and to adjust machines for pre-selected operational settings. Study blueprints, work orders, or machining instructions to determine product specifications, tool requirements, and operational sequences. Select machine tooling to be used, using knowledge of machine and production requirements. Mount and position tools in machine chucks, spindles, or other tool holding devices, using hand tools. Activate machine start-up switches to grind, lap, hone, debar, shear, or cut workpieces, according to specifications. Set up, operate, or tend grinding and related tools that remove excess material or burrs from surfaces, sharpen edges or corners, or buff, hone, or polish metal or plastic workpieces. Set and adjust machine controls according to product specifications, using knowledge of machine operation. Brush or spray lubricating compounds on workpieces, or turn valve handles and direct flow of coolant against tools and workpieces. Lift and position workpieces, manually or with hoists, and secure them in hoppers or on machine tables, faceplates, or chucks, using clamps. Repair or replace machine parts, using hand tools, or notify engineering personnel when corrective action is required.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Sawing Machine Setters, Operators, & Tenders, Wood
Computer Numerically Controlled Tool Operators
Lathe & Turning Machine Tool Setters, Operators, & Tenders
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Multiple Machine Tool Setters, Operators, & Tenders
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Cutting, Punching, & Press Machine Setters, Operators, & Tenders
Cutting & Slicing Machine Setters, Operators, & Tenders
Heat Treating Equipment Setters, Operators, & Tenders
Print Binding & Finishing Workers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Hairdressers, Hairstylists, and Cosmetologists

Provide beauty services, such as cutting, coloring, and styling hair, and massaging and treating scalp. May shampoo hair, apply makeup, dress wigs, remove hair, and provide nail and skincare services.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Keep work stations clean and sanitize tools, such as scissors and combs. Bleach, dye, or tint hair, using applicator or brush. Cut, trim and shape hair or hairpieces, based on customers' instructions, hair type, and facial features, using clippers, scissors, trimmers and razors. Schedule client appointments. Update and maintain customer information records, such as beauty services provided. Demonstrate and sell hair care products and cosmetics. Analyze patrons' hair and other physical features to determine and recommend beauty treatment or suggest hair styles. Shampoo, rinse, condition, and dry hair and scalp or hairpieces with water, liquid soap, or other solutions. Operate cash registers to receive payments from patrons. Order, display, and maintain supplies. Comb, brush, and spray hair or wigs to set style. Develop new styles and techniques. Apply water or setting, straightening or waving solutions to hair, and use curlers, rollers, hot combs and curling irons to press and curl hair. Shape eyebrows and remove facial hair, using depilatory cream, tweezers, electrolysis or wax. Shave, trim, and shape beards and mustaches.

License: Original License Fee: $50.00; Personal Renewal Fee: $100.00; Apprentice Fee: $75.00; Written Examination: $75.00; Practical Examination: $130.00

Outlook: Satisfactory

### Alabama Employment Outlook

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<tr>
<td></td>
<td><strong>Annual Growth Rate:</strong> 0.60%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Skincare Specialists
- Manicurists & Pedicurists
- Barbers
- Dental Assistants
- Exercise Trainers & Group Fitness Instructors
- Self-Enrichment Teachers
- Massage Therapists
- Preschool Teachers, Except Special Education
- Shampooers
- Tailors, Dressmakers, & Custom Sewers

### Post-Secondary Institutions with Programs

- Alabama School of Nail Technology & Cosmetology
- Bevill State Community College
- Bishop State Community College
- Blue Cliff Career College
- Brown Beauty Barber School
- Central Alabama Community College
- Coastal Alabama Community College
- Gadsden State Community College
- George C Wallace Community College
- H Councill Trenholm State Community College
- J F Ingram State Technical College
- J. F. Drake State Community and Technical College
- Lawson State Community College
- Lurleen B Wallace Community College
- Midfield Institute of Cosmetology
- New Beginning College of Cosmetology
- Northeast Alabama Community College
- Northwest-Shoals Community College
- Paul Mitchell the School
- Reid State Technical College
- Remington College-Mobile Campus
- Shelton State Community College
- Southern Union State Community College

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See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Identify, remove, pack, transport, or dispose of hazardous materials, including asbestos, lead-based paint, waste oil, fuel, transmission fluid, radioactive materials, or contaminated soil. Specialized training and certification in hazardous materials handling or a confined entry permit are generally required. May operate earth-moving equipment or trucks.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Build containment areas prior to beginning abatement or decontamination work. Remove asbestos or lead from surfaces, using hand or power tools such as scrapers, vacuums, or high-pressure sprayers. Identify asbestos, lead, or other hazardous materials to be removed, using monitoring devices. Prepare hazardous material for removal or storage. Comply with prescribed safety procedures or federal laws regulating waste disposal methods. Load or unload materials into containers or onto trucks, using hoists or forklifts. Clean contaminated equipment or areas for reuse, using detergents or solvents, sandblasters, filter pumps, or steam cleaners. Remove or limit contamination following emergencies involving hazardous substances. Clean mold-contaminated sites by removing damaged porous materials or thoroughly cleaning all contaminated nonporous materials. Operate machines or equipment to remove, package, store, or transport loads of waste materials.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
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<td>$36.11</td>
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2018 Estimated Employment: 650
2028 Projected Employment: 720
Average Total Openings: 95
Annual Growth Rate: 1.08%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Tank Car, Truck, & Ship Loaders
- Explosives Workers, Ordnance Handling Experts, & Blasters
- Rotary Drill Operators, Oil & Gas
- Non-Destructive Testing Specialists
- Chemical Equipment Operators & Tenders
- Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders
- Boilermakers
- Gas Compressor & Gas Pumping Station Operators
- Pump Operators, Except Wellhead Pumpers
- First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers

Post-Secondary Institutions with Programs
- Samford University

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Healthcare Social Workers

Provide individuals, families, and groups with the psychosocial support needed to cope with chronic, acute, or terminal illnesses. Services include advising family caregivers. Provide patients with information and counseling, and make referrals for other services. May also provide case and care management or interventions designed to promote health, prevent disease, and address barriers to access to healthcare.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Collaborate with other professionals to evaluate patients' medical or physical condition and to assess client needs. Advocate for clients or patients to resolve crises. Refer patient, client, or family to community resources to assist in recovery from mental or physical illness and to provide access to services such as financial assistance, legal aid, housing, job placement or education. Investigate child abuse or neglect cases and take authorized protective action when necessary. Counsel clients and patients in individual and group sessions to help them overcome dependencies, recover from illness, and adjust to life. Plan discharge from care facility to home or other care facility. Monitor, evaluate, and record client progress according to measurable goals described in treatment and care plan. Modify treatment plans to comply with changes in clients' status. Identify environmental impediments to client or patient progress through interviews and review of patient records. Organize support groups or counsel family members to assist them in understanding, dealing with, and supporting the client or patient. Utilize consultation data and social work experience to plan and coordinate client or patient care and rehabilitation, following through to ensure service efficacy. Plan and conduct programs to combat social problems, prevent substance abuse, or improve community health and counseling services. Supervise and direct other workers providing services to clients or patients. Oversee Medicaid- and Medicare-related paperwork and recordkeeping in hospitals. Develop or advise on social policy and assist in community development. Conduct social research to advance knowledge in the social work field.

License: License Fee: $75.00; Examination Fee: $230.00; Bachelors/Masters or Clinical: $260.00; Renewal Fee: $100.00

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<td>Experienced</td>
<td>Experienced $63,331.00</td>
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</table>

2018 Estimated Employment: 2,900
2028 Projected Employment: 3,190

Average Total Openings: 325
Annual Growth Rate: 0.94%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Mental Health & Substance Abuse Social Workers
- Mental Health Counselors
- Marriage & Family Therapists
- Educational, Guidance, & Career Counselors & Advisors
- Clinical & Counseling Psychologists
- Child, Family, & School Social Workers
- Substance Abuse & Behavioral Disorder Counselors
- Patient Representatives

Post-Secondary Institutions with Programs
113

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Heating, Air Conditioning, and Refrigeration Mechanics and Installers

Install or repair heating, central air conditioning, HVAC, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

**Tasks:** Test electrical circuits or components for continuity, using electrical test equipment. Repair or replace defective equipment, components, or wiring. Discuss heating or cooling system malfunctions with users to isolate problems or to verify that repairs corrected malfunctions. Connect heating or air conditioning equipment to fuel, water, or refrigerant source to form complete circuit. Install, connect, or adjust thermostats, humidistats, or timers. Comply with all applicable standards, policies, or procedures, such as safety procedures or the maintenance of a clean work area. Study blueprints, design specifications, or manufacturers' recommendations to ascertain the configuration of heating or cooling equipment components and to ensure the proper installation of components. Install auxiliary components to heating or cooling equipment, such as expansion or discharge valves, air ducts, pipes, blowers, dampers, flues, or stokers. Braze or solder parts to repair defective joints and leaks. Lay out and connect electrical wiring between controls and equipment, according to wiring diagrams, using electrician's hand tools. Inspect and test systems to verify system compliance with plans and specifications or to detect and locate malfunctions. Record and report time, materials, faults, deficiencies, or other unusual occurrences on work orders. Perform mechanical overhauls and refrigerant reclaiming. Adjust system controls to settings recommended by manufacturer to balance system. Install expansion and control valves, using acetylene torches and wrenches. Install dehumidifiers or related equipment for spaces that require cool, dry air to operate efficiently, such as computer rooms. Recommend, develop, or perform preventive or general maintenance procedures, such as cleaning, power-washing, or vacuuming equipment, oiling parts, or changing filters. Cut or drill holes in floors, walls, or roof to install equipment, using power saws or drills. Mount compressor, condenser, and other components in specified locations on frames, using hand tools and acetylene welding equipment. Measure, cut, thread, or bend pipe or tubing, using pipe fitter's tools.

**License:** Examination Fee: $150.00; Practical examination fee to defray costs of testing: $350.00; Initial Fee for Certification of a Heating & Air Conditioning License: $190.00; Annual Renewal Fee for Active Heating & Air Conditioning Certification; Initial Fee for Certification of a Refrigeration License: $190.00; Annual Renewal Fee for Active Refrigeration Certification: $190.00; Late fee for certification renewal received after December 31: $250.00;

**Outlook:** Good

### Alabama Employment Outlook

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2018 Estimated Employment: 6,150
2028 Projected Employment: 6,870
Average Total Openings: 710
Annual Growth Rate: 1.12%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Electricians
- Elevator & Escalator Installers & Repairers
- Mobile Heavy Equipment Mechanics, Except Engines
- Control & Valve Installers & Repairers, Except Mechanical Door
- Motorboat Mechanics & Service Technicians
- Millwrights
- Maintenance & Repair Workers, General
- Automotive Service Technicians & Mechanics
- Aircraft Mechanics & Service Technicians
- Plumbers, Pipelayers, & Steamfitters

### Post-Secondary Institutions with Programs
- Bevill State Community College
- Bishop State Community College
- Gadsden State Community College
- George C Wallace Community College-Dothan
- George C Wallace State Community College-Hanceville
- H Council Trenholm State Community College
- J. F. Drake State Community and Technical College
- Lawson State Community College
- Lurleen B Wallace Community College
- Northwest-Shoals Community College
- Shelton State Community College

2020 Career Exploration Guide
114

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Heavy and Tractor-Trailer Truck Drivers

Drive a tractor-trailer combination or a truck with a capacity of at least 26,001 pounds Gross Vehicle Weight (GVW). May be required to unload truck. Requires commercial drivers’ license. Includes tow truck drivers.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Check vehicles to ensure that mechanical, safety, and emergency equipment is in good working order. Follow appropriate safety procedures for transporting dangerous goods. Inspect loads to ensure that cargo is secure. Maintain logs of working hours or of vehicle service or repair status, following applicable state and federal regulations. Secure cargo for transport, using ropes, blocks, chain, binders, or covers. Maneuver trucks into loading or unloading positions, following signals from loading crew and checking that vehicle and loading equipment are properly positioned. Report vehicle defects, accidents, traffic violations, or damage to the vehicles. Obtain receipts or signatures for delivered goods and collect payment for services when required. Drive trucks with capacities greater than 3 tons, including tractor-trailer combinations, to transport and deliver products, livestock, or other materials. Check all load-related documentation for completeness and accuracy. Read bills of lading to determine assignment details. Collect delivery instructions from appropriate sources, verifying instructions and routes. Drive trucks to weigh stations before and after loading and along routes in compliance with state regulations. Couple or uncouple trailers by changing trailer jack positions, connecting or disconnecting air or electrical lines, or manipulating fifth-wheel locks. Check conditions of trailers after contents have been unloaded to ensure that there has been no damage. Perform basic vehicle maintenance tasks, such as adding oil, fuel, or radiator fluid or performing minor repairs. Crank trailer landing gear up or down to safely secure vehicles. Read and interpret maps to determine vehicle routes. Operate equipment, such as truck cab computers, CB radios, phones, or global positioning systems (GPS) equipment to exchange necessary information with bases, supervisors, or other drivers. Plan or adjust routes based on changing conditions, using computer equipment, global positioning systems (GPS) equipment, or other navigation devices, to minimize fuel consumption and carbon emissions. Load or unload trucks or help others with loading or unloading, using special loading-related equipment or other equipment as necessary. Remove debris from loaded trailers.

License: Testing Fee: $25.00; Commercial Learner License: $36.25; Skills Test Fee: $20.00; Class "A" License: $66.25; Class "B" License: $56.25; Class "C" License: $36.25

Outlook: Satisfactory

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<td>Entry $25,688.00</td>
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<tr>
<td>Median</td>
<td>Median $41,151.00</td>
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<tr>
<td>Experienced</td>
<td>Experienced $64,211.00</td>
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2018 Estimated Employment: 35,370
2028 Projected Employment: 37,620
Average Total Openings: 4,375
Annual Growth Rate: 0.62%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Highway Maintenance Workers
Excavating & Loading Machine & Dragline Operators,
Surface Mining
Railroad Brake, Signal, & Switch Operators & Locomotive Firers
Paving, Surfacing, & Tamping Equipment Operators
Service Unit Operators, Oil & Gas
Motorboat Operators
Pile Driver Operators
Light Truck Drivers
Sailors & Marine Oilers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

115

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Help electricians by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 2 years, up to and including 4 years

**Tasks:** Measure, cut, and bend wire and conduit, using measuring instruments and hand tools. Trace out short circuits in wiring, using test meter. Strip insulation from wire ends, using wire stripping pliers, and attach wires to terminals for subsequent soldering. Examine electrical units for loose connections and broken insulation and tighten connections, using hand tools. Construct controllers and panels, using power drills, drill presses, taps, saws, and punches. Drill holes and pull or push wiring through openings, using hand and power tools. Clean work area and wash parts. Maintain tools, vehicles, and equipment and keep parts and supplies in order. Transport tools, materials, equipment, and supplies to work site by hand, handtruck, or heavy, motorized truck. Install copper-clad ground rods, using a manual post driver. Thread conduit ends, connect couplings, and fabricate and secure conduit support brackets, using hand tools. Disassemble defective electrical equipment, replace defective or worn parts, and reassemble equipment, using hand tools. Erect electrical system components and barricades, and rig scaffolds, hoists, and shoring. Perform semi-skilled and unskilled laboring duties related to the installation, maintenance and repair of a wide variety of electrical systems and equipment. Dig trenches or holes for installation of conduit or supports. Raise, lower, or position equipment, tools, and materials, using hoist, hand line, or block and tackle. Break up concrete, using airhammer, to facilitate installation, construction, or repair of equipment.

**License:** No License Required.

**Outlook:** Satisfactory

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### Alabama Employment Outlook

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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Helpers--Pipelayers, Plumbers, Pipefitters, & Steamfitters
- Helpers--Carpenters
- Helpers--Installation, Maintenance, & Repair Workers
- Terrazzo Workers & Finishers
- Rail-Track Laying & Maintenance Equipment Operators
- Carpenters
- Pipelayers
- Insulation Workers, Mechanical
- Rail Car Repairers
- Mechanical Door Repairers

### Post-Secondary Institutions with Programs

For an explanation on omitted data, see the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Helpers--Installation, Maintenance, and Repair Workers

Help installation, maintenance, and repair workers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties such as furnishing tools, materials, and supplies to other workers; cleaning work area, machines, and tools; and holding materials or tools for other workers.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Install or replace machinery, equipment, and new or replacement parts and instruments, using hand or power tools. Examine and test machinery, equipment, components, and parts for defects to ensure proper functioning. Tend and observe equipment and machinery to verify efficient and safe operation. Adjust, connect, or disconnect wiring, piping, tubing, and other parts, using hand or power tools. Clean or lubricate vehicles, machinery, equipment, instruments, tools, work areas, and other objects, using hand tools, power tools, and cleaning equipment. Hold or supply tools, parts, equipment, and supplies for other workers. Diagnose electrical problems and install and rewire electrical components. Disassemble broken or defective equipment to facilitate repair and reassemble equipment when repairs are complete. Position vehicles, machinery, equipment, physical structures, and other objects for assembly or installation, using hand tools, power tools, and moving equipment. Transfer tools, parts, equipment, and supplies to and from work stations and other areas. Adjust, maintain, and repair tools, equipment, and machines, and assist more skilled workers with similar tasks. Order new parts to maintain inventory. Apply protective materials to equipment, components, and parts to prevent defects and corrosion. Design, weld, and fabricate parts, using blueprints or other mechanical plans.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
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2018 Estimated Employment: 2,590
2028 Projected Employment: 2,790
Average Total Openings: 365
Annual Growth Rate: 0.76%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Pipelayers
- Engine & Other Machine Assemblers
- Rail-Track Laying & Maintenance Equipment Operators
- Helpers--Electricians
- Automotive Body & Related Repairers
- Molders, Shapers, & Casters, Except Metal & Plastic
- Helpers--Carpenters
- Sawing Machine Setters, Operators, & Tenders, Wood
- Recreational Vehicle Service Technicians
- Coating, Painting, & Spraying Machine Setters, Operators, & Tenders

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
 Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

Help plumbers, pipefitters, steamfitters, or pipelayers by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Measure, cut, thread and assemble new pipe, placing the assembled pipe in hangers or other supports. Cut or drill holes in walls or floors to accommodate the passage of pipes. Perform rough-ins, repair and replace fixtures and water heaters, and locate, repair, or remove leaking or broken pipes. Assist pipe fitters in the layout, assembly, and installation of piping for air, ammonia, gas, and water systems. Cut pipe and lift up to fitters. Fit or assist in fitting valves, couplings, or assemblies to tanks, pumps, or systems, using hand tools. Requisition tools and equipment, select type and size of pipe, and collect and transport materials and equipment to work site. Mount brackets and hangers on walls and ceilings to hold pipes, and set sleeves or inserts to provide support for pipes. Excavate and grade ditches, and lay and join pipe for water and sewer service. Disassemble and remove damaged or worn pipe. Clean shop, work area, and machines, using solvent and rags.

**License:** No License Required.

**Outlook:** Good

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**Alabama Employment Outlook**

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<th>Alabama Wage Data</th>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Helpers--Carpenters
- Helpers--Electricians
- Carpenters
- Terrazzo Workers & Finishers
- Tile & Stone Setters
- Cement Masons & Concrete Finishers
- Rail-Track Laying & Maintenance Equipment Operators
- Brickmasons & Blockmasons
- Carpet Installers
- Sheet Metal Workers

**Post-Secondary Institutions with Programs**

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
51-9198  Helpers--Production Workers

Help production workers by performing duties requiring less skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

**Tasks:** Load and unload items from machines, conveyors, and conveyances. Operate machinery used in the production process, or assist machine operators. Place products in equipment or on work surfaces for further processing, inspecting, or wrapping. Examine products to verify conformance to quality standards. Start machines or equipment to begin production processes. Observe equipment operations so that malfunctions can be detected, and notify operators of any malfunctions. Remove products, machine attachments, or waste material from machines. Lift raw materials, finished products, and packed items, manually or using hoists. Transfer finished products, raw materials, tools, or equipment between storage and work areas of plants and warehouses, by hand or using hand trucks or powered lift trucks. Pack and store materials and products. Help production workers by performing duties of lesser skill, such as supplying or holding materials or tools, or cleaning work areas and equipment.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Dishwashers
- Packaging & Filling Machine Operators & Tenders
- Landscaping & Groundskeeping Workers
- Coil Winders, Tapers, & Finishers
- Welders, Cutters, Solderers, & Brazers
- Slaughterers & Meat Packers
- Sewing Machine Operators
- Janitors & Cleaners, Except Maids & Housekeeping Cleaners
- Sawing Machine Setters, Operators, & Tenders, Wood
- Molders, Shapers, & Casters, Except Metal & Plastic

### Post-Secondary Institutions with Programs

119

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Highway Maintenance Workers

Maintain highways, municipal and rural roads, airport runways, and rights-of-way. Duties include patching broken or eroded pavement and repairing guard rails, highway markers, and snow fences. May also mow or clear brush from along road, or plow snow from roadway.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Set out signs and cones around work areas to divert traffic. Flag motorists to warn them of obstacles or repair work ahead. Perform preventative maintenance on vehicles and heavy equipment. Drive trucks to transport crews and equipment to work sites. Erect, install, or repair guardrails, road shoulders, berms, highway markers, warning signals, and highway lighting, using hand tools and power tools. Clean and clear debris from culverts, catch basins, drop inlets, ditches, and other drain structures. Drive heavy equipment and vehicles with adjustable attachments to sweep debris from paved surfaces, mow grass and weeds, remove snow and ice, and spread salt and sand. Haul and spread sand, gravel, and clay to fill washouts and repair road shoulders. Inspect, clean, and repair drainage systems, bridges, tunnels, and other structures. Remove litter and debris from roadways, including debris from rock and mud slides. Dump, spread, and tamp asphalt, using pneumatic tampers, to repair joints and patch broken pavement. Perform roadside landscaping work, such as clearing weeds and brush, and planting and trimming trees.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
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2018 Estimated Employment: 3,800
2028 Projected Employment: 3,920
Average Total Openings: 440
Annual Growth Rate: 0.30%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Paving, Surfacing, & Tamping Equipment Operators
- Rail-Track Laying & Maintenance Equipment Operators
- Pile Driver Operators
- Excavating & Loading Machine & Dragline Operators, Surface Mining
- Rail Yard Engineers, Dinkey Operators, & Hostlers
- Heavy & Tractor-Trailer Truck Drivers
- Service Unit Operators, Oil & Gas
- Helpers--Extraction Workers
- Gas Compressor & Gas Pumping Station Operators
- Pump Operators, Except Wellhead Pumpers

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Home Health Aides

Monitor the health status of an individual with disabilities or illness, and address their health-related needs, such as changing bandages, dressing wounds, or administering medication. Work is performed under the direction of offsite or intermittent onsite licensed nursing staff. Provide assistance with routine healthcare tasks or activities of daily living, such as feeding, bathing, toileting, or ambulation. May also help with tasks such as preparing meals, doing light housekeeping, and doing laundry depending on the patient's abilities.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Maintain records of patient care, condition, progress, or problems to report and discuss observations with supervisor or case manager. Administer prescribed oral medications, under the written direction of physician or as directed by home care nurse or aide, and ensure patients take their medicine. Care for patients by changing bed linens, washing and ironing laundry, cleaning, or assisting with their personal care. Provide patients with help moving in and out of beds, baths, wheelchairs, or automobiles and with dressing and grooming. Entertain, converse with, or read aloud to patients to keep them mentally healthy and alert. Care for children who are disabled or who have sick or disabled parents. Plan, purchase, prepare, or serve meals to patients or other family members, according to prescribed diets. Provide patients and families with emotional support and instruction in areas such as caring for infants, preparing healthy meals, living independently, or adapting to disability or illness. Direct patients in simple prescribed exercises or in the use of braces or artificial limbs. Check patients' pulse, temperature, and respiration. Perform a variety of duties as requested by client, such as obtaining household supplies or running errands. Massage patients or apply preparations or treatments, such as liniment, alcohol rubs, or heat-lamp stimulation. Accompany clients to doctors' offices or on other trips outside the home, providing transportation, assistance, and companionship. Change dressings.

License: No License Required.

Outlook: Very Good

Alabama Employment Outlook

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<td><strong>Alabama Wage Data</strong></td>
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<td>Hourly Wage</td>
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<td>$11.94</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Personal Care Aides
Childcare Workers
Physical Therapist Aides
Psychiatric Aides
Occupational Therapy Aides
Veterinary Assistants & Laboratory Animal Caretakers
Dietetic Technicians
Medical Assistants
Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers
Passenger Attendants

Post-Secondary Institutions with Programs

Southern Union State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop

Welcome patrons, seat them at tables or in lounge, and help ensure quality of facilities and service.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Provide guests with menus. Assign patrons to tables suitable for their needs and according to rotation so that servers receive an appropriate number of seatings. Greet guests and seat them at tables or in waiting areas. Answer telephone calls and respond to inquiries or transfer calls. Operate cash registers to accept payments for food and beverages. Speak with patrons to ensure satisfaction with food and service, to respond to complaints, or to make conversation. Take and prepare to-go orders. Maintain contact with kitchen staff, management, serving staff, and customers to ensure that dining details are handled properly and customers' concerns are addressed. Receive and record patrons' dining reservations. Inspect dining and serving areas to ensure cleanliness and proper setup. Inform patrons of establishment specialties and features. Inspect restrooms for cleanliness and availability of supplies and clean restrooms when necessary. Assist other restaurant workers by serving food and beverages, or by bussing tables.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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2018 Estimated Employment: 4,210
2028 Projected Employment: 4,470
Average Total Openings: 1,020
Annual Growth Rate: 0.60%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Waiters & Waitresses
Cashiers
Fast Food & Counter Workers
Ushers, Lobby Attendants, & Ticket Takers
Cooks, Fast Food
Stockers & Order Fillers
Dining Room & Cafeteria Attendants & Bartender Helpers
Food Servers, Nonrestaurant
Locker Room, Coatroom, & Dressing Room Attendants

Post-Secondary Institutions with Programs
See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Accommodate hotel, motel, and resort patrons by registering and assigning rooms to guests, issuing room keys or cards, transmitting and receiving messages, keeping records of occupied rooms and guests' accounts, making and confirming reservations, and presenting statements to and collecting payments from departing guests.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:**
- Greet, register, and assign rooms to guests of hotels or motels. Contact housekeeping or maintenance staff when guests report problems. Issue room keys and escort instructions to bellhops. Make and confirm reservations. Verify customers' credit, and establish how the customer will pay for the accommodation. Keep records of room availability and guests' accounts, manually or using computers. Post charges, such as those for rooms, food, liquor, or telephone calls, to ledgers, manually or by using computers. Review accounts and charges with guests during the check out process. Record guest comments or complaints, referring customers to managers as necessary. Compute bills, collect payments, and make change for guests. Transmit and receive messages, using telephones or telephone switchboards. Answer inquiries pertaining to hotel services, guest registration, and travel directions, or make recommendations regarding shopping, dining, or entertainment. Advise housekeeping staff when rooms have been vacated and are ready for cleaning. Perform bookkeeping activities, such as balancing accounts and conducting nightly audits. Clean and maintain lobby and common areas, such as restocking supplies and watering plants. Prepare for basic food service, such as setting up continental breakfast or coffee and tea supplies. Date-stamp, sort, and rack incoming mail and messages. Arrange tours, taxis, or restaurant reservations for customers. Deposit guests' valuables in hotel safes or safe-deposit boxes.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

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<tr>
<td>Interviewers, Except Eligibility &amp; Loan</td>
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<td>Receptionists &amp; Information Clerks</td>
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<td>Retail Salespersons</td>
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<td>Concierges</td>
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<tr>
<td>Customer Service Representatives</td>
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<tr>
<td>Pharmacy Aides</td>
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<tr>
<td>Bill &amp; Account Collectors</td>
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<td>Court, Municipal, &amp; License Clerks</td>
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### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Human Resources Managers

Plan, direct, or coordinate human resources activities and staff of an organization.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Serve as a link between management and employees by handling questions, interpreting and administering contracts and helping resolve work-related problems. Advise managers on organizational policy matters, such as equal employment opportunity and sexual harassment, and recommend needed changes. Analyze and modify compensation and benefits policies to establish competitive programs and ensure compliance with legal requirements. Perform difficult staffing duties, including dealing with understaffing, refereeing disputes, firing employees, and administering disciplinary procedures. Represent organization at personnel-related hearings and investigations. Negotiate bargaining agreements and help interpret labor contracts. Identify staff vacancies and recruit, interview, and select applicants. Plan, direct, supervise, and coordinate work activities of subordinates and staff relating to employment, compensation, labor relations, and employee relations. Prepare personnel forecast to project employment needs. Provide current and prospective employees with information about policies, job duties, working conditions, wages, opportunities for promotion, and employee benefits. Investigate and report on industrial accidents for insurance carriers. Administer compensation, benefits, and performance management systems, and safety and recreation programs. Analyze statistical data and reports to identify and determine causes of personnel problems and develop recommendations for improvement of organization's personnel policies and practices. Plan, organize, direct, control, or coordinate the personnel, training, or labor relations activities of an organization. Allocate human resources, ensuring appropriate matches between personnel. Oversee the evaluation, classification, and rating of occupations and job positions. Plan and conduct new employee orientation to foster positive attitude toward organizational objectives. Analyze training needs to design employee development, language training, and health and safety programs. Study legislation, arbitration decisions, and collective bargaining contracts to assess industry trends. Maintain records and compile statistical reports concerning personnel-related data such as hires, transfers, performance appraisals, and absenteeism rates. Prepare and follow budgets for personnel operations. Conduct exit interviews to identify reasons for employee termination. Develop, administer, and evaluate applicant tests. Develop or administer special projects in areas such as pay equity, savings bond programs, day care, and employee awards.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Training & Development Managers
- Compensation & Benefits Managers
- Social & Community Service Managers
- Human Resources Specialists
- Training & Development Specialists
- Education Administrators, Postsecondary
- Sales Managers
- Marketing Managers
- Purchasing Managers

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Human Resources Specialists
Recruit, screen, interview, or place individuals within an organization. May perform other activities in multiple human resources areas.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Interpret and explain human resources policies, procedures, laws, standards, or regulations. Hire employees and process hiring-related paperwork. Maintain current knowledge of Equal Employment Opportunity (EEO) and affirmative action guidelines and laws, such as the Americans with Disabilities Act (ADA). Prepare or maintain employment records related to events, such as hiring, termination, leaves, transfers, or promotions, using human resources management system software. Address employee relations issues, such as harassment allegations, work complaints, or other employee concerns. Review employment applications and job orders to match applicants with job requirements. Inform job applicants of details such as duties and responsibilities, compensation, benefits, schedules, working conditions, or promotion opportunities. Select qualified job applicants or refer them to managers, making hiring recommendations when appropriate. Schedule or conduct new employee orientations. Maintain and update human resources documents, such as organizational charts, employee handbooks or directories, or performance evaluation forms. Confer with management to develop or implement personnel policies or procedures. Contact job applicants to inform them of the status of their applications. Conduct exit interviews and ensure that necessary employment termination paperwork is completed. Interview job applicants to obtain information on work history, training, education, or job skills. Perform searches for qualified job candidates, using sources such as computer databases, networking, Internet recruiting resources, media advertisements, job fairs, recruiting firms, or employee referrals. Provide management with information or training related to interviewing, performance appraisals, counseling techniques, or documentation of performance issues. Analyze employment-related data and prepare required reports. Advise management on organizing, preparing, or implementing recruiting or retention programs. Develop or implement recruiting strategies to meet current or anticipated staffing needs.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<td><strong>Annual Wage</strong></td>
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2018 Estimated Employment: 5,620
2028 Projected Employment: 5,930
Average Total Openings: 610
Annual Growth Rate: 0.54%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Management Analysts
Public Relations Specialists
Fraud Examiners, Investigators & Analysts
Training & Development Specialists
Human Resources Managers
Market Research Analysts & Marketing Specialists
Securities, Commodities, & Financial Services Sales Agents
Equal Opportunity Representatives & Officers
Insurance Sales Agents

Post-Secondary Institutions with Programs
University of Mobile

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Industrial Engineering Technicians

Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May perform time and motion studies on worker operations in a variety of industries for purposes such as establishing standard production rates or improving efficiency.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Test selected products at specified stages in the production process for performance characteristics or adherence to specifications. Compile and evaluate statistical data to determine and maintain quality and reliability of products. Study time, motion, methods, or speed involved in maintenance, production, or other operations to establish standard production rate or improve efficiency. Read worker logs, product processing sheets, or specification sheets to verify that records adhere to quality assurance specifications. Verify that equipment is being operated and maintained according to quality assurance standards by observing worker performance. Aid in planning work assignments in accordance with worker performance, machine capacity, production schedules, or anticipated delays.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$15.86 Entry</td>
</tr>
<tr>
<td>Median</td>
<td>$24.15 Median</td>
</tr>
<tr>
<td>Experienced</td>
<td>$36.93 Experienced</td>
</tr>
<tr>
<td><strong>Annual Wage</strong></td>
<td>$32,976.00</td>
</tr>
<tr>
<td>$50,225.00</td>
<td></td>
</tr>
<tr>
<td>$76,812.00</td>
<td></td>
</tr>
</tbody>
</table>

2018 Estimated Employment: 1,060
2028 Projected Employment: 1,230
Average Total Openings: 130
Annual Growth Rate: 1.50%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Mechanical Engineering Technologists & Technicians
Validation Engineers
Commercial & Industrial Designers
Computer Numerically Controlled Tool Programmers
Electrical & Electronic Engineering Technologists & Technicians
Environmental Engineering Technologists & Technicians
Civil Engineering Technologists & Technicians

Post-Secondary Institutions with Programs
Bevill State Community College
Central Alabama Community College
Chattahoochee Valley Community College
Coastal Alabama Community College
Columbia Southern University
Gadsden State Community College
George C Wallace State Community College-Hanceville
H Councill Trenholm State Community College
J. F. Drake State Community and Technical College
Jacksonville State University
John C Calhoun State Community College
Lawson State Community College
Southern Union State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Repair or maintain the operating condition of industrial production or processing machinery or equipment. Repair or replace broken or malfunctioning components of machinery or equipment. Disassemble machinery or equipment to remove parts and make repairs. Observe and test the operation of machinery or equipment to diagnose malfunctions, using voltmeters or other testing devices. Reassemble equipment after completion of inspections, testing, or repairs. Clean, lubricate, or adjust parts, equipment, or machinery. Examine parts for defects, such as breakage or excessive wear. Operate newly repaired machinery or equipment to verify the adequacy of repairs. Analyze test results, machine error messages, or information obtained from operators to diagnose equipment problems. Record parts or materials used and order or requisition new parts or materials, as necessary. Record repairs and maintenance performed. Study blueprints or manufacturers’ manuals to determine correct installation or operation of machinery. Cut and weld metal to repair broken metal parts, fabricate new parts, or assemble new equipment. Enter codes and instructions to program computer-controlled machinery. Demonstrate equipment functions and features to machine operators.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hourly Wage</td>
</tr>
<tr>
<td>Entry</td>
<td>$15.69</td>
</tr>
<tr>
<td>Median</td>
<td>$23.86</td>
</tr>
<tr>
<td>Experienced</td>
<td>$35.99</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Electric Motor, Power Tool, & Related Repairers
- Maintenance & Repair Workers, General
- Mobile Heavy Equipment Mechanics, Except Engines
- Maintenance Workers, Machinery
- Automotive Service Technicians & Mechanics
- Electrical & Electronics Repairers, Commercial & Industrial Equipment
- Machinists
- Stationary Engineers & Boiler Operators
- Millwrights
- Industrial Engineering Technologists & Technicians

Post-Secondary Institutions with Programs
- [List of institutions]

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Industrial Production Managers

Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.

**Education:** Most of these occupations typically require a four-year bachelor’s degree.

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:** Review processing schedules or production orders to make decisions concerning inventory requirements, staffing requirements, work procedures, or duty assignments, considering budgetary limitations and time constraints. Direct or coordinate production, processing, distribution, or marketing activities of industrial organizations. Develop or implement production tracking or quality control systems, analyzing production, quality control, maintenance, or other operational reports to detect production problems. Review operations and confer with technical or administrative staff to resolve production or processing problems. Hire, train, evaluate, or discharge staff or resolve personnel grievances. Prepare and maintain production reports or personnel records. Set and monitor product standards, examining samples of raw products or directing testing during processing, to ensure finished products are of prescribed quality. Develop budgets or approve expenditures for supplies, materials, or human resources, ensuring that materials, labor, or equipment are used efficiently to meet production targets. Initiate or coordinate inventory or cost control programs. Coordinate or recommend procedures for facility or equipment maintenance or modification, including the replacement of machines. Review plans and confer with research or support staff to develop new products or processes. Maintain current knowledge of the quality control field, relying on current literature pertaining to materials use, technological advances, or statistical studies.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$30.74</td>
</tr>
<tr>
<td>Median</td>
<td>$49.61</td>
</tr>
<tr>
<td>Experienced</td>
<td>$79.52</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2018 Estimated Employment:</strong></td>
<td>3,610</td>
</tr>
<tr>
<td><strong>2028 Projected Employment:</strong></td>
<td>4,060</td>
</tr>
<tr>
<td><strong>Average Total Openings:</strong></td>
<td>325</td>
</tr>
<tr>
<td><strong>Annual Growth Rate:</strong></td>
<td>1.19%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

First-Line Supervisors of Material-Moving Machine & Vehicle Operators  
First-Line Supervisors of Helpers, Laborers, & Material Movers, Hand  
First-Line Supervisors of Production & Operating Workers  
General & Operations Managers  
Food Service Managers  
Industrial Engineers  
Power Distributors & Dispatchers  
Transportation, Storage, & Distribution Managers  
Industrial Engineering Technologists & Technicians

### Post-Secondary Institutions with Programs

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Industrial Truck and Tractor Operators

Operate industrial trucks or tractors equipped to move materials around a warehouse, storage yard, factory, construction site, or similar location.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Move levers or controls that operate lifting devices, such as forklifts, lift beams with swivel-hooks, hoists, or elevating platforms, to load, unload, transport, or stack material. Inspect product load for accuracy and safely move it around the warehouse or facility to ensure timely and complete delivery. Manually or mechanically load or unload materials from pallets, skids, platforms, cars, lifting devices, or other transport vehicles. Position lifting devices under, over, or around loaded pallets, skids, or boxes and secure material or products for transport to designated areas. Weigh materials or products and record weight or other production data on tags or labels. Perform routine maintenance on vehicles or auxiliary equipment, such as cleaning, lubricating, recharging batteries, fueling, or replacing liquefied-gas tank.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry $10.85</td>
<td>Entry $22,573.00</td>
<td>9,510</td>
<td>10,210</td>
</tr>
<tr>
<td>Median $16.05</td>
<td>Median $33,378.00</td>
<td></td>
<td>Average Total Openings: 1,180</td>
</tr>
<tr>
<td>Experienced $22.93</td>
<td>Experienced $47,691.00</td>
<td></td>
<td>Annual Growth Rate: 0.71%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Sawing Machine Setters, Operators, & Tenders, Wood
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Molders, Shapers, & Casters, Except Metal & Plastic
- Print Binding & Finishing Workers
- Adhesive Bonding Machine Operators & Tenders
- Welders, Cutters, Solderers, & Brazers
- Coil Winders, Tapers, & Finishers
- Pourers & Casters, Metal
- Light Truck Drivers
- Excavating & Loading Machine & Dragline Operators, Surface Mining

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Information Security Analysts

Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. Assess system vulnerabilities for security risks and propose and implement risk mitigation strategies. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.

Education: Most of these occupations require a four-year bachelor’s degree, but some do not.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Develop plans to safeguard computer files against accidental or unauthorized modification, destruction, or disclosure and to meet emergency data processing needs. Monitor current reports of computer viruses to determine when to update virus protection systems. Encrypt data transmissions and erect firewalls to conceal confidential information as it is being transmitted and to keep out tainted digital transfers. Perform risk assessments and execute tests of data processing system to ensure functioning of data processing activities and security measures. Modify computer security files to incorporate new software, correct errors, or change individual access status. Review violations of computer security procedures and discuss procedures with violators to ensure violations are not repeated. Document computer security and emergency measures policies, procedures, and tests. Confer with users to discuss issues such as computer data access needs, security violations, and programming changes. Monitor use of data files and regulate access to safeguard information in computer files. Coordinate implementation of computer system plan with establishment personnel and outside vendors. Train users and promote security awareness to ensure system security and to improve server and network efficiency.

License: No License Required.

Outlook: Excellent

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$23.93</td>
</tr>
<tr>
<td>Median</td>
<td>$40.51</td>
</tr>
<tr>
<td>Experienced</td>
<td>$65.82</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Computer Systems Analysts
Computer Network Architects
Computer Systems Engineers/Architects
Software Quality Assurance Analysts & Testers
Logistics Analysts
Web Administrators
Validation Engineers
Database Administrators
Computer & Information Systems Managers
Automatic Data Processing Systems Security Specialist
(ADP Systems Security)
Computer Security Information Specialist
Computer Security Specialist
Computer Systems Security Analyst
Cyber Security Specialist
Information Security Analyst
Information Security Specialist
Information Systems Security Analyst
Information Systems Security Officer (ISSO)
Information Systems Security Specialist
Information Technology Analyst (IT Analyst)
Information Technology Security Analyst (IT Security Analyst)
Internet Security Specialist
IT Auditor (Information Technology Auditor)
Network Security Analyst

Post-Secondary Institutions with Programs

Herzing University-Birmingham
Miles College
Oakwood University
Remington College-Mobile Campus

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Instructional Coordinators

Develop instructional material, coordinate educational content, and incorporate current technology into instruction in order to provide guidelines to educators and instructors for developing curricula and conducting courses. May train and coach teachers. Includes educational consultants and specialists, and instructional material directors.

Education:  Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Observe work of teaching staff to evaluate performance and to recommend changes that could strengthen teaching skills. Plan and conduct teacher training programs and conferences dealing with new classroom procedures, instructional materials and equipment, and teaching aids. Interpret and enforce provisions of state education codes and rules and regulations of state education boards. Conduct or participate in workshops, committees, and conferences designed to promote the intellectual, social, and physical welfare of students. Advise teaching and administrative staff in curriculum development, use of materials and equipment, and implementation of state and federal programs and procedures. Advise and teach students. Recommend, order, or authorize purchase of instructional materials, supplies, equipment, and visual aids designed to meet student educational needs and district standards. Update the content of educational programs to ensure that students are being trained with equipment and processes that are technologically current. Address public audiences to explain program objectives and to elicit support. Research, evaluate, and prepare recommendations on curricula, instructional methods, and materials for school systems.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>2018 Estimated Employment: 1,670</td>
</tr>
<tr>
<td>Entry</td>
<td>2028 Projected Employment: 1,730</td>
</tr>
<tr>
<td>Median</td>
<td>Average Total Openings: 165</td>
</tr>
<tr>
<td>Experienced</td>
<td>Annual Growth Rate: 0.36%</td>
</tr>
<tr>
<td>$15.23</td>
<td>Entry $31,677.00</td>
</tr>
<tr>
<td>$34.66</td>
<td>Median $72,086.00</td>
</tr>
<tr>
<td>$48.09</td>
<td>Experienced $100,028.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Education Administrators, Kindergarten through Secondary
Family & Consumer Sciences Teachers, Postsecondary
Education Administrators, Postsecondary
Communications Teachers, Postsecondary
Recreation & Fitness Studies Teachers, Postsecondary
Training & Development Managers
Education Teachers, Postsecondary
Educational, Guidance, & Career Counselors & Advisors
Secondary School Teachers, Except Special & Career/Technical Education
Training & Development Specialists

Post-Secondary Institutions with Programs
Alabama State University
Auburn University
Auburn University at Montgomery
Faulkner University
Jacksonville State University
Samford University
The University of Alabama
University of Alabama at Birmingham
University of Montevallo
University of West Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Insurance Claims and Policy Processing Clerks

Process new insurance policies, modifications to existing policies, and claims forms. Obtain information from policyholders to verify the accuracy and completeness of information on claims forms, applications and related documents, and company records. Update existing policies and company records to reflect changes requested by policyholders and insurance company representatives.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

Tasks: Prepare insurance claim forms or related documents and review them for completeness. Calculate amount of claim. Post or attach information to claim file. Transmit claims for payment or further investigation. Contact insured or other involved persons to obtain missing information. Review insurance policy to determine coverage. Process and record new insurance policies and claims. Organize or work with detailed office or warehouse records, using computers to enter, access, search or retrieve data. Provide customer service, such as limited instructions on proceeding with claims or referrals to auto repair facilities or local contractors. Correspond with insured or agent to obtain information or inform them of account status or changes. Review and verify data, such as age, name, address, and principal sum and value of property on insurance applications and policies. Compare information from application to criteria for policy reinstatement and approve reinstatement when criteria are met. Examine letters from policyholders or agents, original insurance applications, and other company documents to determine if changes are needed and effects of changes. Transcribe data to worksheets and enter data into computer for use in preparing documents and adjusting accounts. Notify insurance agent and accounting department of policy cancellation.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
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<tr>
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<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alabama Wage Data</strong></td>
<td><strong>Alabama Projections</strong></td>
</tr>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$12.66</td>
</tr>
<tr>
<td>Median</td>
<td>$17.38</td>
</tr>
<tr>
<td>Experienced</td>
<td>$24.83</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Bill & Account Collectors
Receptionists & Information Clerks
Secretaries & Administrative Assistants, Except Legal, Medical, & Executive
Switchboard Operators, Including Answering Service
Court, Municipal, & License Clerks
New Accounts Clerks
Office Clerks, General
Billing & Posting Clerks
Customer Service Representatives
Payroll & Timekeeping Clerks

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
132

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Insurance Sales Agents

Sell life, property, casualty, health, automotive, or other types of insurance. May refer clients to independent brokers, work as an independent broker, or be employed by an insurance company.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Customize insurance programs to suit individual customers, often covering a variety of risks. Sell various types of insurance policies to businesses and individuals on behalf of insurance companies, including automobile, fire, life, property, medical and dental insurance, or specialized policies, such as marine, farm/crop, and medical malpractice. Explain features, advantages, and disadvantages of various policies to promote sale of insurance plans. Perform administrative tasks, such as maintaining records and handling policy renewals. Seek out new clients and develop clientele by networking to find new customers and generate lists of prospective clients. Call on policyholders to deliver and explain policy, to analyze insurance program and suggest additions or changes, or to change beneficiaries. Confer with clients to obtain and provide information when claims are made on a policy. Interview prospective clients to obtain data about their financial resources and needs, the physical condition of the person or property to be insured, and to discuss any existing coverage. Contact underwriter and submit forms to obtain binder coverage. Select company that offers type of coverage requested by client to underwrite policy. Ensure that policy requirements are fulfilled, including any necessary medical examinations and the completion of appropriate forms. Develop marketing strategies to compete with other individuals or companies who sell insurance. Calculate premiums and establish payment method. Attend meetings, seminars, and programs to learn about new products and services, learn new skills, and receive technical assistance in developing new accounts.

License: License Fee: $80.00; Renewal Fee: $70.00

Outlook: Good

Alabama Employment Outlook

<table>
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<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$12.98</td>
</tr>
<tr>
<td>Median</td>
<td>$27.71</td>
</tr>
<tr>
<td>Experienced</td>
<td>$65.16</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Securities, Commodities, & Financial Services Sales Agents
Loan Officers
Personal Financial Advisors
Agents & Business Managers of Artists, Performers, & Athletes
Writers & Authors
Public Relations Specialists
Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products
Human Resources Specialists
Credit Analysts

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Interviewers, Except Eligibility and Loan

Interview persons by telephone, mail, in person, or by other means for the purpose of completing forms, applications, or questionnaires. Ask specific questions, record answers, and assist persons with completing form. May sort, classify, and file forms.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Ask questions in accordance with instructions to obtain various specified information, such as person's name, address, age, religious preference, or state of residency. Contact individuals to be interviewed at home, place of business, or field location, by telephone, mail, or in person. Compile, record, and code results or data from interview or survey, using computer or specified form. Review data obtained from interview for completeness and accuracy. Explain survey objectives and procedures to interviewees and interpret survey questions to help interviewees' comprehension. Identify and report problems in obtaining valid data. Identify and resolve inconsistencies in interviewees' responses by means of appropriate questioning or explanation. Meet with supervisor daily to submit completed assignments and discuss progress.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tbody>
<tr>
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<td><strong>Alabama Projections</strong></td>
</tr>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$10.08 Entry</td>
</tr>
<tr>
<td>Median</td>
<td>$14.45 Median</td>
</tr>
<tr>
<td>Experienced</td>
<td>$21.33 Experienced</td>
</tr>
<tr>
<td><strong>Entry</strong></td>
<td>$20,966.00</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>$30,057.00</td>
</tr>
<tr>
<td><strong>Experienced</strong></td>
<td>$44,359.00</td>
</tr>
<tr>
<td><strong>2018 Estimated Employment: 3,870</strong></td>
<td><strong>2028 Projected Employment: 3,940</strong></td>
</tr>
<tr>
<td><strong>Average Total Openings: 485</strong></td>
<td><strong>Annual Growth Rate: 0.17%</strong></td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Customer Service Representatives
Hotel, Motel, & Resort Desk Clerks
Receptionists & Information Clerks
Bill & Account Collectors
Medical Secretaries & Administrative Assistants
Reservation & Transportation Ticket Agents & Travel Clerks
Court, Municipal, & License Clerks
Tellers
Switchboard Operators, Including Answering Service

Post-Secondary Institutions with Programs

For an explanation on omitted data, see the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Janitors and Cleaners, Except Maids and Housekeeping Cleaners

Keep buildings in clean and orderly condition. Perform heavy cleaning duties, such as cleaning floors, shampooing rugs, washing walls and glass, and removing rubbish. Duties may include tending furnace and boiler, performing routine maintenance activities, notifying management of need for repairs, and cleaning snow or debris from sidewalk.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Service, clean, or supply restrooms. Clean building floors by sweeping, mopping, scrubbing, or vacuuming. Gather and empty trash. Follow procedures for the use of chemical cleaners and power equipment to prevent damage to floors and fixtures. Mix water and detergents or acids in containers to prepare cleaning solutions, according to specifications. Clean windows, glass partitions, or mirrors, using soapy water or other cleaners, sponges, or squeegees. Notify managers concerning the need for major repairs or additions to building operating systems. Requisition supplies or equipment needed for cleaning and maintenance duties. Dust furniture, walls, machines, or equipment. Strip, seal, finish, and polish floors. Clean and polish furniture and fixtures. Steam-clean or shampoo carpets. Move heavy furniture, equipment, or supplies, either manually or with hand trucks.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
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<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$8.28</td>
<td>$17,220.00</td>
</tr>
<tr>
<td>Median</td>
<td>Median</td>
</tr>
<tr>
<td>$10.99</td>
<td>$22,860.00</td>
</tr>
<tr>
<td>Experienced</td>
<td>Experienced</td>
</tr>
<tr>
<td>$16.15</td>
<td>$33,595.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Dishwashers
- Maids & Housekeeping Cleaners
- Helpers--Painters, Paperhangers, Plasterers, & Stucco
- Masons
- Food Servers, Nonrestaurant
- Food Preparation Workers
- Helpers--Production Workers
- Landscaping & Groundskeeping Workers
- Dining Room & Cafeteria Attendants & Bartender Helpers
- Animal Caretakers
- Stockers & Order Fillers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
53-7062 Laborers and Freight, Stock, and Material Movers, Hand
Manually move freight, stock, luggage, or other materials, or perform other general labor. Includes all manual laborers not elsewhere classified.

Education: These occupations typically require less than a high school diploma - or the equivalent.
OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month
Tasks: Move freight, stock, or other materials to and from storage or production areas, loading docks, delivery vehicles, ships, or containers, by hand or using trucks, tractors, or other equipment. Sort cargo before loading and unloading. Attach identifying tags to containers or mark them with identifying information. Read work orders or receive oral instructions to determine work assignments or material or equipment needs.
License: No License Required.
Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hourly Wage</td>
</tr>
<tr>
<td>Entry</td>
<td>$9.06</td>
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<tr>
<td>Median</td>
<td>$12.18</td>
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<tr>
<td>Experienced</td>
<td>$19.34</td>
</tr>
<tr>
<td>Average Total Openings:</td>
<td>6,140</td>
</tr>
<tr>
<td>Annual Growth Rate:</td>
<td>0.57%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Meter Readers, Utilities
Rail-Track Laying & Maintenance Equipment Operators
Fence Erectors
Molders, Shapers, & Casters, Except Metal & Plastic
Reinforcing Iron & Rebar Workers
Sawing Machine Setters, Operators, & Tenders, Wood
Packaging & Filling Machine Operators & Tenders
Pipelayers
Print Binding & Finishing Workers
Industrial Truck & Tractor Operators

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Landscaping and Groundskeeping Workers**

Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortarless segmental concrete masonry wall units.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need none or short demonstration

**Tasks:** Gather and remove litter. Use hand tools, such as shovels, rakes, pruning saws, saws, hedge or brush trimmers, or axes. Operate vehicles or powered equipment, such as mowers, tractors, twin-axle vehicles, snow blowers, chain-saws, electric clippers, sod cutters, or pruning saws. Water lawns, trees, or plants, using portable sprinkler systems, hoses, or watering cans. Prune or trim trees, shrubs, or hedges, using shears, pruners, or chain saws. Mix and spray or spread fertilizers, herbicides, or insecticides onto grass, shrubs, or trees, using hand or automatic sprayers or spreaders. Care for established lawns by mulching, aerating, weeding, grubbing, removing thatch, or trimming or edging around flower beds, walks, or walls. Follow planned landscaping designs to determine where to lay sod, sow grass, or plant flowers or foliage. Trim or pick flowers and clean flower beds. Attach wires from planted trees to support stakes. Plant seeds, bulbs, foliage, flowering plants, grass, ground covers, trees, or shrubs and apply mulch for protection, using gardening tools. Mow or edge lawns, using power mowers or edgers. Rake, mulch, and compost leaves. Decorate gardens with stones or plants.

**License:** Application Fee: $75.00; Annual License Fee: $175.00 (plus $45.00 per category of work performed)

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$8.85</td>
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<tr>
<td><strong>Median</strong></td>
<td><strong>Median</strong></td>
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<tr>
<td>$12.60</td>
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<tr>
<td><strong>Experienced</strong></td>
<td><strong>Experienced</strong></td>
</tr>
<tr>
<td>$18.68</td>
<td>$38,842.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Farmworkers & Laborers, Crop, Nursery, & Greenhouse
- Farmworkers, Farm, Ranch, & Aquacultural Animals
- Pipelayers
- Tire Repairers & Changers
- Logging Equipment Operators
- Rock Splitters, Quarry
- Helpers--Production Workers
- Construction Laborers
- Fence Erectors
- Janitors & Cleaners, Except Maids & Housekeeping
- Cleaners

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Laundry and Dry-Cleaning Workers

Operate or tend washing or dry-cleaning machines to wash or dry-clean industrial or household articles, such as cloth garments, suede, leather, furs, blankets, draperies, linens, rugs, and carpets. Includes spotters and dyers of these articles.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Load articles into washers or dry-cleaning machines, or direct other workers to perform loading. Start washers, dry cleaners, driers, or extractors, and turn valves or levers to regulate machine processes and the volume of soap, detergent, water, bleach, starch, and other additives. Operate extractors and driers, or direct their operation. Remove items from washers or dry-cleaning machines, or direct other workers to do so. Sort and count articles removed from dryers, and fold, wrap, or hang them. Clean machine filters, and lubricate equipment. Examine and sort into lots articles to be cleaned, according to color, fabric, dirt content, and cleaning technique required. Receive and mark articles for laundry or dry cleaning with identifying code numbers or names, using hand or machine markers.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018 Estimated Employment: 2,970</td>
</tr>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$8.04</td>
<td>$16,728.00</td>
</tr>
<tr>
<td>Median</td>
<td>Median</td>
</tr>
<tr>
<td>$10.28</td>
<td>$21,388.00</td>
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<tr>
<td>Experienced</td>
<td>Experienced</td>
</tr>
<tr>
<td>$14.23</td>
<td>$29,596.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Postal Service Mail Sorters, Processors, & Processing
- Machine Operators
- Shoe & Leather Workers & Repairers
- Cleaning, Washing, & Metal Pickling Equipment Operators & Tenders
- Cooks, Restaurant
- Print Binding & Finishing Workers
- Painting, Coating, & Decorating Workers
- Packers & Packagers, Hand
- Food Preparation Workers
- Machine Feeders & Offbearers
- Costume Attendants

**Post-Secondary Institutions with Programs**

2020 Career Exploration Guide

138

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Lawyers

Represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, or manage or advise clients on legal transactions. May specialize in a single area or may practice broadly in many areas of law.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:** Analyze the probable outcomes of cases, using knowledge of legal precedents. Advise clients concerning business transactions, claim liability, advisability of prosecuting or defending lawsuits, or legal rights and obligations. Select jurors, argue motions, meet with judges, and question witnesses during the course of a trial. Interpret laws, rulings and regulations for individuals and businesses. Present evidence to defend clients or prosecute defendants in criminal or civil litigation. Represent clients in court or before government agencies. Present and summarize cases to judges and juries. Study Constitution, statutes, decisions, regulations, and ordinances of quasi-judicial bodies to determine ramifications for cases. Prepare, draft, and review legal documents, such as wills, deeds, patent applications, mortgages, leases, and contracts. Negotiate settlements of civil disputes. Supervise legal assistants. Examine legal data to determine advisability of defending or prosecuting lawsuit. Evaluate findings and develop strategies and arguments in preparation for presentation of cases. Gather evidence to formulate defense or to initiate legal actions, by such means as interviewing clients and witnesses to ascertain the facts of a case. Prepare legal briefs and opinions, and file appeals in state and federal courts of appeal. Search for and examine public and other legal records to write opinions or establish ownership. Confer with colleagues with specialties in appropriate areas of legal issue to establish and verify bases for legal proceedings. Perform administrative and management functions related to the practice of law.

**License:** State Bar Exam Fee: $575.00; Annual License Renewal Fee: $325.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>2018 Estimated Employment: 7,670</td>
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<tr>
<td>Entry</td>
<td>2028 Projected Employment: 8,150</td>
</tr>
<tr>
<td>$24.91</td>
<td>Average Total Openings: 430</td>
</tr>
<tr>
<td>$48.39</td>
<td>Annual Growth Rate: 0.61%</td>
</tr>
<tr>
<td>$92.95</td>
<td>Experienced $193,334.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Administrative Law Judges, Adjudicators, & Hearing Officers
- Judges, Magistrate Judges, & Magistrates
- Equal Opportunity Representatives & Officers
- Securities, Commodities, & Financial Services Sales Agents
- Arbitrators, Mediators, & Conciliators
- Fraud Examiners, Investigators & Analysts
- Criminal Justice & Law Enforcement Teachers, Postsecondary
- Judicial Law Clerks
- Law Teachers, Postsecondary

**Post-Secondary Institutions with Programs**
- Samford University
- The University of Alabama
Librarians and Media Collections Specialists

Administer and maintain libraries or collections of information, for public or private access through reference or borrowing. Work in a variety of settings, such as educational institutions, museums, and corporations, and with various types of informational materials, such as books, periodicals, recordings, films, and databases. Tasks may include acquiring, cataloging, and circulating library materials, and user services such as locating and organizing information, providing instruction on how to access information, and setting up and operating a library's media equipment.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Tasks: Check books in and out of the library. Teach library patrons basic computer skills, such as searching computerized databases. Review and evaluate materials, using book reviews, catalogs, faculty recommendations, and current holdings to select and order print, audio-visual, and electronic resources. Keep up-to-date records of circulation and materials, maintain inventory, and correct cataloging errors. Search standard reference materials, including online sources and the Internet, to answer patrons' reference questions. Analyze patrons' requests to determine needed information and assist in furnishing or locating that information. Supervise daily library operations, budgeting, planning, and personnel activities, such as hiring, training, scheduling, and performance evaluations. Plan and teach classes on topics such as information literacy, library instruction, and technology use. Confer with colleagues, faculty, and community members and organizations to conduct informational programs, make collection decisions, and determine library services to offer. Code, classify, and catalog books, publications, films, audio-visual aids, and other library materials based on subject matter or standard library classification systems. Respond to customer complaints, taking action as necessary. Explain use of library facilities, resources, equipment, and services and provide information about library policies. Plan and deliver client-centered programs and services, such as special services for corporate clients, storytelling for children, newsletters, or programs for special groups. Locate unusual or unique information in response to specific requests. Troubleshoot problems with audio-visual equipment. Develop library policies and procedures. Direct and train library staff in duties, such as receiving, shelving, researching, cataloging, and equipment use. Evaluate materials to determine outdated or unused items to be discarded. Develop, maintain, and troubleshoot information access aids, such as databases, annotated bibliographies, web pages, electronic pathfinders, software programs, and online tutorials. Engage in professional development activities, such as taking continuing education classes and attending or participating in conferences, workshops, professional meetings, and associations.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
<th>Average Total Openings:</th>
<th>Annual Growth Rate:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>$15.04</td>
<td>$31,289.00</td>
<td>2,230</td>
<td>2,320</td>
<td>0.38%</td>
</tr>
<tr>
<td>Median</td>
<td>$26.70</td>
<td>$55,527.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced</td>
<td>$31.58</td>
<td>$65,678.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Archivists
Audio & Video Technicians
Library Science Teachers, Postsecondary
Computer User Support Specialists
Curators
Sound Engineering Technicians
Broadcast Technicians
Business Teachers, Postsecondary
Network & Computer Systems Administrators
Education Teachers, Postsecondary

Post-Secondary Institutions with Programs
University of South Alabama

2020 Career Exploration Guide
140

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers

Monitor recreational areas, such as pools, beaches, or ski slopes, to provide assistance and protection to participants.

33-9092

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Patrol or monitor recreational areas, such as trails, slopes, or swimming areas, on foot, in vehicles, or from towers. Rescue distressed persons, using rescue techniques and equipment. Contact emergency medical personnel in case of serious injury. Examine injured persons and administer first aid or cardiopulmonary resuscitation, if necessary, using training and medical supplies and equipment. Warn recreational participants of inclement weather, unsafe areas, or illegal conduct. Maintain quality of pool water by testing chemical levels. Complete and maintain records of weather and beach conditions, emergency medical treatments performed, and other relevant incident information. Instruct participants in skiing, swimming, or other recreational activities and provide safety precaution information. Inspect recreational equipment, such as rope tows, T-bars, J-bars, or chair lifts, for safety hazards and damage or wear. Inspect recreational facilities for cleanliness.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
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<td></td>
<td>Hourly Wage</td>
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<tr>
<td>Entry</td>
<td>$7.92</td>
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<tr>
<td>Median</td>
<td>$9.03</td>
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<tr>
<td>Experienced</td>
<td>$12.11</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Childcare Workers
Bailiffs
Personal Care Aides
Physical Therapist Aides
Security Guards
Parking Enforcement Workers
Baggage Porters & Bellhops
Funeral Attendants
Occupational Therapy Aides
Locker Room, Coatroom, & Dressing Room Attendants

Post-Secondary Institutions with Programs
Light Truck or Delivery Services Drivers

Drive a light vehicle, such as a truck or van, with a capacity of less than 26,001 pounds Gross Vehicle Weight (GVW), primarily to pick up merchandise or packages from a distribution center and deliver. May load and unload vehicle.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Obey traffic laws and follow established traffic and transportation procedures. Turn in receipts and money received from deliveries. Read maps and follow written or verbal geographic directions. Verify the contents of inventory loads against shipping papers. Load and unload trucks, vans, or automobiles. Drive vehicles with capacities under three tons to transport materials to and from specified destinations, such as railroad stations, plants, residences, offices, or within industrial yards. Maintain records, such as vehicle logs, records of cargo, or billing statements, in accordance with regulations. Inspect and maintain vehicle supplies and equipment, such as gas, oil, water, tires, lights, or brakes, to ensure that vehicles are in proper working condition. Present bills and receipts and collect payments for goods delivered or loaded. Report any mechanical problems encountered with vehicles. Perform emergency repairs, such as changing tires or installing light bulbs, fuses, tire chains, or spark plugs. Report delays, accidents, or other traffic and transportation situations to bases or other vehicles, using telephones or mobile two-way radios.

License: Testing Fee: $25.00; Commercial Learner License: $36.25; Skills Test Fee: $20.00; Class "A" License: $66.25; Class "B" License: $56.25; Class "C" License: $36.25

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<tbody>
<tr>
<td>Entry</td>
<td>$8.68</td>
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<tr>
<td>Median</td>
<td>$13.80</td>
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<tr>
<td>Experienced</td>
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<tr>
<th>Year</th>
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<th>Projected Employment</th>
<th>Average Total Openings</th>
<th>Annual Growth Rate</th>
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</thead>
<tbody>
<tr>
<td>2018</td>
<td>15,990</td>
<td></td>
<td>1,960</td>
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</tr>
<tr>
<td>2028</td>
<td>16,900</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Related Occupations
Fence Erectors
Refuse & Recyclable Material Collectors
Industrial Truck & Tractor Operators
Couriers & Messengers
Postal Service Mail Carriers
Shipping, Receiving, & Inventory Clerks
Laborers & Freight, Stock, & Material Movers, Hand
Heavy & Tractor-Trailer Truck Drivers
Helpers--Carpenters
Rail-Track Laying & Maintenance Equipment Operators

Post-Secondary Institutions with Programs
Loan Interviewers and Clerks

Interview loan applicants to elicit information; investigate applicants' backgrounds and verify references; prepare loan request papers; and forward findings, reports, and documents to appraisal department. Review loan papers to ensure completeness, and complete transactions between loan establishment, borrowers, and sellers upon approval of loan.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Verify and examine information and accuracy of loan application and closing documents. Assemble and compile documents for loan closings, such as title abstracts, insurance forms, loan forms, and tax receipts. Record applications for loan and credit, loan information, and disbursements of funds, using computers. Submit loan applications with recommendation for underwriting approval. Contact customers by mail, telephone, or in person concerning acceptance or rejection of applications. File and maintain loan records. Contact credit bureaus, employers, and other sources to check applicants' credit and personal references. Check value of customer collateral to be held as loan security. Interview loan applicants to obtain personal and financial data and to assist in completing applications. Prepare and type loan applications, closing documents, legal documents, letters, forms, government notices, and checks, using computers. Review customer accounts to determine whether payments are made on time and that other loan terms are being followed. Calculate, review, and correct errors on interest, principal, payment, and closing costs, using computers or calculators. Answer questions and advise customers regarding loans and transactions. Present loan and repayment schedules to customers.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>2018 Estimated Employment:</td>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>$11.21</td>
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<tr>
<td>Median</td>
<td>$16.69</td>
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<tr>
<td>Experienced</td>
<td>$23.33</td>
</tr>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Brokerage Clerks
Tax Examiners & Collectors, & Revenue Agents
Loan Officers
Tax Preparers
Bookkeeping, Accounting, & Auditing Clerks
Executive Secretaries & Executive Administrative Assistants
Paralegals & Legal Assistants
Customer Service Representatives
Credit Analysts
Billing & Posting Clerks

Post-Secondary Institutions with Programs

For an explanation on omitted data, see the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Loan Officers

Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and payment methods. Includes mortgage loan officers and agents, collection analysts, loan servicing officers, loan underwriters, and payday loan officers.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Meet with applicants to obtain information for loan applications and to answer questions about the process. Analyze applicants' financial status, credit, and property evaluations to determine feasibility of granting loans. Approve loans within specified limits, and refer loan applications outside those limits to management for approval. Explain to customers the different types of loans and credit options that are available, as well as the terms of those services. Submit applications to credit analysts for verification and recommendation. Review loan agreements to ensure that they are complete and accurate according to policy. Review and update credit and loan files. Obtain and compile copies of loan applicants' credit histories, corporate financial statements, and other financial information. Work with clients to identify their financial goals and to find ways of reaching those goals. Handle customer complaints and take appropriate action to resolve them. Stay abreast of new types of loans and other financial services and products to better meet customers' needs. Market bank products to individuals and firms, promoting bank services that may meet customers' needs. Analyze potential loan markets and develop referral networks to locate prospects for loans. Compute payment schedules.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
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<tr>
<td></td>
<td><strong>2018 Estimated Employment:</strong> 4,010</td>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>$16.16 Entry</td>
</tr>
<tr>
<td>Median</td>
<td>$27.07 Median</td>
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<tr>
<td>Experienced</td>
<td>$60.54 Experienced</td>
</tr>
<tr>
<td></td>
<td>$33,619.00</td>
</tr>
<tr>
<td></td>
<td>$56,291.00</td>
</tr>
<tr>
<td></td>
<td>$125,912.00</td>
</tr>
</tbody>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Insurance Sales Agents
- Customs Brokers
- Tax Preparers
- Loan Interviewers & Clerks
- Brokerage Clerks
- Personal Financial Advisors
- Securities, Commodities, & Financial Services Sales Agents
- Real Estate Sales Agents
- Credit Authorizers, Checkers, & Clerks
- Eligibility Interviewers, Government Programs

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Lodging Managers

Plan, direct, or coordinate activities of an organization or department that provides lodging and other accommodations.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Answer inquiries pertaining to hotel policies and services, and resolve occupants’ complaints. Participate in financial activities, such as the setting of room rates, the establishment of budgets, and the allocation of funds to departments. Confer and cooperate with other managers to ensure coordination of hotel activities. Greet and register guests. Monitor the revenue activity of the hotel or facility. Manage and maintain temporary or permanent lodging facilities. Train staff members. Observe and monitor staff performance to ensure efficient operations and adherence to facility's policies and procedures. Coordinate front-office activities of hotels or motels, and resolve problems. Inspect guest rooms, public areas, and grounds for cleanliness and appearance. Assign duties to workers, and schedule shifts. Receive and process advance registration payments, mail letters of confirmation, or return checks when registrations cannot be accepted. Interview and hire applicants. Purchase supplies, and arrange for outside services, such as deliveries, laundry, maintenance and repair, and trash collection. Collect payments and record data pertaining to funds and expenditures. Develop and implement policies and procedures for the operation of a department or establishment. Prepare required paperwork pertaining to departmental functions. Show, rent, or assign accommodations. Perform marketing and public relations activities. Organize and coordinate the work of staff and convention personnel for meetings to be held at a particular facility. Provide assistance to staff members by inspecting rooms, setting tables, or doing laundry. Arrange telephone answering services, deliver mail and packages, or answer questions regarding locations for eating and entertainment.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alabama Wage Data</strong></td>
<td><strong>Alabama Projections</strong></td>
</tr>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
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</tr>
<tr>
<td>Median</td>
<td>$25.59</td>
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<td>Experienced</td>
<td>$37.57</td>
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<tr>
<td><strong>2028 Projected Employment:</strong></td>
<td>710</td>
</tr>
<tr>
<td><strong>Average Total Openings:</strong></td>
<td>75</td>
</tr>
<tr>
<td><strong>Annual Growth Rate:</strong></td>
<td>0.75%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
General & Operations Managers
First-Line Supervisors of Office & Administrative Support Workers
First-Line Supervisors of Material-Moving Machine & Vehicle Operators
Gambling Managers
Food Service Managers
Administrative Services Managers
Transportation, Storage, & Distribution Managers
First-Line Supervisors of Personal Service Workers
First-Line Supervisors of Non-Retail Sales Workers
Residential Advisors
Bed & Breakfast Innkeeper
Front Desk Manager
Front Office Director
Front Office Manager
Guest Relations Manager
Guest Service Manager
Hotel Manager
Night Manager
Resort Manager
Rooms Director

Post-Secondary Institutions with Programs
University of Alabama at Birmingham

2020 Career Exploration Guide
145

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Logisticians
Analyze and coordinate the ongoing logistical functions of a firm or organization. Responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Maintain and develop positive business relationships with a customer's key personnel involved in, or directly relevant to, a logistics activity. Develop an understanding of customers' needs and take actions to ensure that such needs are met. Manage subcontractor activities, reviewing proposals, developing performance specifications, and serving as liaisons between subcontractors and organizations. Develop proposals that include documentation for estimates. Review logistics performance with customers against targets, benchmarks, and service agreements. Direct availability and allocation of materials, supplies, and finished products. Redesign the movement of goods to maximize value and minimize costs. Explain proposed solutions to customers, management, or other interested parties through written proposals and oral presentations. Direct team activities, establishing task priorities, scheduling and tracking work assignments, providing guidance, and ensuring the availability of resources. Perform managerial duties such as hiring and training employees and overseeing facility needs or requirements. Collaborate with other departments as necessary to meet customer requirements, to take advantage of sales opportunities or, in the case of shortages, to minimize negative impacts on a business. Report project plans, progress, and results. Protect and control proprietary materials. Stay informed of logistics technology advances and apply appropriate technology to improve logistics processes. Develop and implement technical project management tools, such as plans, schedules, and responsibility and compliance matrices. Provide project management services, including the provision and analysis of technical data. Manage the logistical aspects of product life cycles, including coordination or provisioning of samples, and the minimization of obsolescence. Perform system lifecycle cost analysis and develop component studies. Plan, organize, and execute logistics support activities, such as maintenance planning, repair analysis, and test equipment recommendations. Participate in the assessment and review of design alternatives and design change proposal impacts. Direct and support the compilation and analysis of technical source data necessary for product development. Support the development of training materials and technical manuals.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Experienced</td>
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</table>

**2018 Estimated Employment:** 3,650
**2028 Projected Employment:** 3,920
**Average Total Openings:** 390
**Annual Growth Rate:** 0.72%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Transportation, Storage, & Distribution Managers
- Logistics Analysts
- Purchasing Agents, Except Wholesale, Retail, & Farm Products
- Purchasing Managers
- Supply Chain Managers
- Management Analysts
- Information Security Analysts
- Transportation Planners

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide
146

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Machine Feeders and Offbearers

Feed materials into or remove materials from machines or equipment that is automatic or tended by other workers.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Inspect materials and products for defects, and to ensure conformance to specifications. Record production and operational data, such as amount of materials processed. Push dual control buttons and move controls to start, stop, or adjust machinery and equipment. Weigh or measure materials or products to ensure conformance to specifications. Identify and mark materials, products, and samples, following instructions. Clean and maintain machinery, equipment, and work areas to ensure proper functioning and safe working conditions. Load materials and products into machines and equipment, or onto conveyors, using hand tools and moving devices. Transfer materials and products to and from machinery and equipment, using industrial trucks or hand trucks. Fasten, package, or stack materials and products, using hand tools and fastening equipment.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>$10.55 Entry</td>
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<td>$49,294.00</td>
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| **2018 Estimated Employment:** | 1,420 |
| **2028 Projected Employment:** | 1,470 |
| **Average Total Openings:** | 195 |
| **Annual Growth Rate:** | 0.35% |

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Sawing Machine Setters, Operators, & Tenders, Wood
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders
- Print Binding & Finishing Workers
- Packaging & Filling Machine Operators & Tenders
- Textile Bleaching & Dyeing Machine Operators & Tenders
- Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
- Food Batchmakers
- Plating Machine Setters, Operators, & Tenders
- Forging Machine Setters, Operators, & Tenders

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Machinists

Set up and operate a variety of machine tools to produce precision parts and instruments out of metal. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Calculate dimensions or tolerances, using instruments, such as micrometers or vernier calipers. Machine parts to specifications, using machine tools, such as lathes, milling machines, shapers, or grinders. Measure, examine, or test completed units to check for defects and ensure conformance to specifications, using precision instruments, such as micrometers. Set up, adjust, or operate basic or specialized machine tools used to perform precision machining operations. Program computers or electronic instruments, such as numerically controlled machine tools. Study sample parts, blueprints, drawings, or engineering information to determine methods or sequences of operations needed to fabricate products. Monitor the feed and speed of machines during the machining process. Maintain machine tools in proper operational condition. Fit and assemble parts to make or repair machine tools. Align and secure holding fixtures, cutting tools, attachments, accessories, or materials onto machines. Confer with numerical control programmers to check and ensure that new programs or machinery will function properly and that output will meet specifications. Operate equipment to verify operational efficiency. Evaluate machining procedures and recommend changes or modifications for improved efficiency or adaptability. Diagnose machine tool malfunctions to determine need for adjustments or repairs. Design fixtures, tooling, or experimental parts to meet special engineering needs. Dispose of scrap or waste material in accordance with company policies and environmental regulations. Confer with engineering, supervisory, or manufacturing personnel to exchange technical information. Lay out, measure, and mark metal stock to display placement of cuts. Separate scrap waste and related materials for reuse, recycling, or disposal. Check work pieces to ensure that they are properly lubricated or cooled.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<td>Hourly Wage</td>
<td>Annual Wage</td>
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<td>Experienced</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Patternmakers
- Milling & Planing Machine Setters, Operators, & Tenders
- Model Makers
- Tool & Die Makers
- Computer Numerically Controlled Tool Operators
- Drilling & Boring Machine Tool Setters, Operators, & Tenders
- Cabinetmakers & Bench Carpenters
- Glass Blowers, Molders, Benders, & Finishers
- Computer Numerically Controlled Tool Programmers
- Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders

**Post-Secondary Institutions with Programs**

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Maids and Housekeeping Cleaners

Perform any combination of light cleaning duties to maintain private households or commercial establishments, such as hotels and hospitals, in a clean and orderly manner. Duties may include making beds, replenishing linens, cleaning rooms and halls, and vacuuming.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

Tasks: Keep storage areas and carts well-stocked, clean, and tidy. Carry linens, towels, toilet items, and cleaning supplies, using wheeled carts. Clean rooms, hallways, lobbies, lounges, restrooms, corridors, elevators, stairways, locker rooms, and other work areas so that health standards are met. Empty wastebaskets, empty and clean ashtrays, and transport other trash and waste to disposal areas. Sweep, scrub, wax, or polish floors, using brooms, mops, or powered scrubbing and waxing machines. Replenish supplies, such as drinking glasses, linens, writing supplies, and bathroom items. Clean rugs, carpets, upholstered furniture, and draperies, using vacuum cleaners and shampooers. Wash windows, walls, ceilings, and woodwork, waxing and polishing as necessary. Dust and polish furniture and equipment.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
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<th>Alabama Projections</th>
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<td></td>
<td>2028 Projected Employment: 14,460</td>
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<td>Hourly Wage</td>
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<tr>
<td>Entry</td>
<td>Entry $8.00 $16,631.00</td>
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<td>Median</td>
<td>Median $9.62 $20,019.00</td>
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<td>Experienced $13.02 $27,086.00</td>
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<tr>
<td>Average Total Openings:</td>
<td>Annual Growth Rate: 0.27%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Food Preparation Workers
Janitors & Cleaners, Except Maids & Housekeeping
Cleaners
Dining Room & Cafeteria Attendants & Bartender Helpers
Food Servers, Nonrestaurant
Laundry & Dry-Cleaning Workers
Locker Room, Coatroom, & Dressing Room Attendants
Graders & Sorters, Agricultural Products
Dishwashers
Meat, Poultry, & Fish Cutters & Trimmers
Pressers, Textile, Garment, & Related Materials

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Maintenance and Repair Workers, General

Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of a building in repair. Duties may involve pipe fitting; HVAC maintenance; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Inspect, operate, or test machinery or equipment to diagnose machine malfunctions. Dismantle machines, equipment, or devices to access and remove defective parts, using hoists, cranes, hand tools, or power tools. Perform routine maintenance, such as inspecting drives, motors, or belts, checking fluid levels, replacing filters, or doing other preventive maintenance actions. Diagnose mechanical problems and determine how to correct them, checking blueprints, repair manuals, or parts catalogs, as necessary. Repair machines, equipment, or structures, using tools such as hammers, hoists, saws, drills, wrenches, or equipment such as precision measuring instruments or electrical or electronic testing devices. Maintain or repair specialized equipment or machinery located in cafeterias, laundries, hospitals, stores, offices, or factories. Assemble, install, or repair wiring, electrical or electronic components, pipe systems, plumbing, machinery, or equipment. Clean or lubricate shafts, bearings, gears, or other parts of machinery. Adjust functional parts of devices or control instruments, using hand tools, levels, plumb bobs, or straightedges. Order parts, supplies, or equipment from catalogs or suppliers. Plan and lay out repair work, using diagrams, drawings, blueprints, maintenance manuals, or schematic diagrams. Perform general cleaning of buildings or properties. Paint or repair roofs, windows, doors, floors, woodwork, plaster, drywall, or other parts of building structures. Operate cutting torches or welding equipment to cut or join metal parts. Record type and cost of maintenance or repair work.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
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<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>Entry</td>
<td>Entry</td>
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<tr>
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<td>$16.75</td>
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<tr>
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2018 Estimated Employment: 16,570
2028 Projected Employment: 17,640
Average Total Openings: 1,765
Annual Growth Rate: 0.63%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Plumbers, Pipefitters, & Steamfitters
- Motorboat Mechanics & Service Technicians
- Stationary Engineers & Boiler Operators
- Industrial Machinery Mechanics
- Electric Motor, Power Tool, & Related Repairers
- Control & Valve Installers & Repairers, Except Mechanical
- Door
- Motorcycle Mechanics
- Millwrights
- Signal & Track Switch Repairers

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Maintenance Workers, Machinery

Lubricate machinery, change parts, or perform other routine machinery maintenance.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:**
- Start machines and observe mechanical operation to determine efficiency and to detect problems. Read work orders and specifications to determine machines and equipment requiring repair or maintenance.
- Inspect or test damaged machine parts, and mark defective areas or advise supervisors of repair needs.
- Reassemble machines after the completion of repair or maintenance work. Dismantle machines and remove parts for repair, using hand tools, chain falls, jacks, cranes, or hoists. Install, replace, or change machine parts and attachments, according to production specifications. Collaborate with other workers to repair or move machines, machine parts, or equipment.
- Inventory and requisition machine parts, equipment, and other supplies so that stock can be maintained and replenished. Record production, repair, and machine maintenance information. Set up and operate machines, and adjust controls to regulate operations. Lubricate or apply adhesives or other materials to machines, machine parts, or other equipment according to specified procedures. Collect and discard worn machine parts and other refuse to maintain machinery and work areas.
- Clean machines and machine parts, using cleaning solvents, cloths, air guns, hoses, vacuums, or other equipment. Transport machine parts, tools, equipment, and other material between work areas and storage, using cranes, hoists, or dollies. Replace, empty, or replenish machine and equipment containers such as gas tanks or boxes. Replace or repair metal, wood, leather, glass, or other lining in machines, or in equipment compartments or containers. Remove hardened material from machines or machine parts, using abrasives, power and hand tools, jackhammers, sledgehammers, or other equipment.

**License:** No License Required.

**Outlook:** Good

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**Alabama Wage Data**

<table>
<thead>
<tr>
<th></th>
<th>Entry</th>
<th>Median</th>
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**Alabama Projections**

- 2018 Estimated Employment: 1,300
- 2028 Projected Employment: 1,500
- Average Total Openings: 145
- Annual Growth Rate: 1.46%

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**Related Occupations**

- Industrial Machinery Mechanics
- Rail Car Repairers
- Rail-Track Laying & Maintenance Equipment Operators
- Gas Compressor & Gas Pumping Station Operators
- Cooling & Freezing Equipment Operators & Tenders
- Wellhead Pumpers
- Bus & Truck Mechanics & Diesel Engine Specialists
- Sawing Machine Setters, Operators, & Tenders, Wood
- Layout Workers
- Recreational Vehicle Service Technicians

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**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Management Analysts

Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Document findings of study and prepare recommendations for implementation of new systems, procedures, or organizational changes. Interview personnel and conduct on-site observation to ascertain unit functions, work performed, and methods, equipment, and personnel used. Analyze data gathered and develop solutions or alternative methods of proceeding. Plan study of work problems and procedures, such as organizational change, communications, information flow, integrated production methods, inventory control, or cost analysis. Confer with personnel concerned to ensure successful functioning of newly implemented systems or procedures. Gather and organize information on problems or procedures. Prepare manuals and train workers in use of new forms, reports, procedures or equipment, according to organizational policy. Review forms and reports and confer with management and users about format, distribution, and purpose, identifying problems and improvements. Develop and implement records management program for filing, protection, and retrieval of records, and assure compliance with program. Design, evaluate, recommend, and approve changes of forms and reports.

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Outlook: Good

### Alabama Employment Outlook

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<tr>
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<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>Entry</td>
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| 2018 Estimated Employment: | 6,510                        |
| 2028 Projected Employment:| 7,520                        |
| Average Total Openings:    | 760                          |
| Annual Growth Rate:        | 1.45%                        |

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Human Resources Specialists
- Training & Development Specialists
- Fraud Examiners, Investigators & Analysts
- Market Research Analysts & Marketing Specialists
- Marketing Managers
- Regulatory Affairs Managers
- Purchasing Agents, Except Wholesale, Retail, & Farm Products
- Transportation, Storage, & Distribution Managers
- Logisticians
- Training & Development Managers

### Post-Secondary Institutions with Programs

- Amridge University
- Auburn University at Montgomery
- Columbia Southern University
- Oakwood University
- Samford University
- South University-Montgomery
- Spring Hill College
- Strayer University-Alabama
- University of Mobile

2020 Career Exploration Guide

152

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Manicurists and Pedicurists

Clean and shape customers' fingernails and toenails. May polish or decorate nails.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Clean and sanitize tools and work environment. Apply undercoat and clear or colored polish onto nails with brush. Maintain supply inventories and records of client services. Shape and smooth ends of nails, using scissors, files, or emery boards. Prepare nail cuticles with water and oil, using cuticle knives to push back cuticles and scissors or nippers to trim cuticles. Prepare customers' nails in soapy water, using swabs, files, and orange sticks. Remove previously applied nail polish, using liquid remover and swabs. Use rotary abrasive wheels to shape and smooth nails or artificial extensions. Schedule client appointments and accept payments. Assess the condition of clients' hands, remove dead skin, and massage hands. Roughen surfaces of fingernails, using abrasive wheel. Advise clients on nail care and use of products and colors. Treat nails to repair or improve strength and resilience by wrapping. Extend nails using powder, solvent, and paper forms attached to tips of customers' fingers to support and shape artificial nails. Polish nails, using powdered polish and buffer. Whiten underside of nails with white paste or pencils. Promote and sell nail care products. Decorate clients' nails by piercing or attaching ornaments or designs.

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Outlook: Satisfactory

Alabama Employment Outlook

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<thead>
<tr>
<th>Related Occupations</th>
<th>Post-Secondary Institutions with Programs</th>
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<tbody>
<tr>
<td>Barbers</td>
<td>Lurleen B Wallace Community College</td>
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<tr>
<td>Hairdressers, Hairstylists, &amp; Cosmetologists</td>
<td>Paul Mitchell the School-Birmingham</td>
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<tr>
<td>Skincare Specialists</td>
<td>Shelton State Community College</td>
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<tr>
<td>Shampooers</td>
<td>Winonah's International School of Cosmetology</td>
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<td>Massage Therapists</td>
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<tr>
<td>Tailors, Dressmakers, &amp; Custom Sewers</td>
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<td>Locker Room, Coatroom, &amp; Dressing Room Attendants</td>
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<tr>
<td>File Clerks</td>
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<tr>
<td>Gambling Dealers</td>
<td></td>
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<tr>
<td>Shoe &amp; Leather Workers &amp; Repairers</td>
<td></td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

2020 Career Exploration Guide
Market Research Analysts and Marketing Specialists

Research conditions in local, regional, national, or online markets. Gather information to determine potential sales of a product or service, or plan a marketing or advertising campaign. May gather information on competitors, prices, sales, and methods of marketing and distribution. May employ search marketing tactics, analyze web metrics, and develop recommendations to increase search engine ranking and visibility to target markets.

Education: Most of these occupations typically require a four-year bachelor’s degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Prepare reports of findings, illustrating data graphically and translating complex findings into written text. Collect and analyze data on customer demographics, preferences, needs, and buying habits to identify potential markets and factors affecting product demand. Conduct research on consumer opinions and marketing strategies, collaborating with marketing professionals, statisticians, pollsters, and other professionals. Measure and assess customer and employee satisfaction. Devise and evaluate methods and procedures for collecting data, such as surveys, opinion polls, or questionnaires, or arrange to obtain existing data. Measure the effectiveness of marketing, advertising, and communications programs and strategies. Seek and provide information to help companies determine their position in the marketplace. Forecast and track marketing and sales trends, analyzing collected data. Gather data on competitors and analyze their prices, sales, and method of marketing and distribution. Monitor industry statistics and follow trends in trade literature. Attend staff conferences to provide management with information and proposals concerning the promotion, distribution, design, and pricing of company products or services. Direct trained survey interviewers. Develop and implement procedures for identifying advertising needs.

License: No License Required.

Outlook: Good

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<thead>
<tr>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>$47.69</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Survey Researchers
Marketing Managers
Compensation, Benefits, & Job Analysis Specialists
Compensation & Benefits Managers
Management Analysts
Public Relations Specialists
Regulatory Affairs Specialists
Advertising & Promotions Managers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Plan, direct, or coordinate marketing policies and programs, such as determining the demand for products and services offered by a firm and its competitors, and identify potential customers. Develop pricing strategies with the goal of maximizing the firm's profits or share of the market while ensuring the firm's customers are satisfied. Oversee product development or monitor trends that indicate the need for new products and services.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Identify, develop, or evaluate marketing strategy, based on knowledge of establishment objectives, market characteristics, and cost and markup factors. Formulate, direct, or coordinate marketing activities or policies to promote products or services, working with advertising or promotion managers. Evaluate the financial aspects of product development, such as budgets, expenditures, research and development appropriations, or return-on-investment and profit-loss projections. Develop pricing strategies, balancing firm objectives and customer satisfaction. Compile lists describing product or service offerings. Direct the hiring, training, or performance evaluations of marketing or sales staff and oversee their daily activities. Consult with product development personnel on product specifications, such as design, color, or packaging. Use sales forecasting or strategic planning to ensure the sale and profitability of products, lines, or services, analyzing business developments and monitoring market trends. Negotiate contracts with vendors or distributors to manage product distribution, establishing distribution networks or developing distribution strategies. Coordinate or participate in promotional activities or trade shows, working with developers, advertisers, or production managers, to market products or services. Initiate market research studies, or analyze their findings. Confer with legal staff to resolve problems, such as copyright infringement or royalty sharing with outside producers or distributors.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

#### Alabama Wage Data

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>$27.22</td>
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<tr>
<td>Median</td>
<td>$50.30</td>
</tr>
<tr>
<td>Experienced</td>
<td>$93.68</td>
</tr>
</tbody>
</table>

| Entry | $56,606.00 |
| Median | $104,630.00 |
| Experienced | $194,851.00 |

#### Alabama Projections

| 2018 Estimated Employment: | 950 |
| 2028 Projected Employment: | 1,030 |
| Average Total Openings:    | 95 |
| Annual Growth Rate:        | 0.82% |

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Sales Managers
- Market Research Analysts & Marketing Specialists
- Advertising & Promotions Managers
- Management Analysts
- Public Relations Specialists
- Purchasing Managers
- Training & Development Specialists
- Training & Development Managers
- Human Resources Managers
- Account Supervisor
- Brand Manager
- Business Development Director
- Business Development Manager
- Commercial Lines Manager
- Market Development Executive
- Marketing Coordinator
- Marketing Director
- Marketing Manager
- Product Manager

### Post-Secondary Institutions with Programs

- Auburn University

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Massage Therapists
Perform therapeutic massages of soft tissues and joints. May assist in the assessment of range of motion and muscle strength, or propose client therapy plans.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Massage and knead muscles and soft tissues of the body to provide treatment for medical conditions, injuries, or wellness maintenance. Confer with clients about their medical histories and problems with stress or pain to determine how massage will be most helpful. Apply finger and hand pressure to specific points of the body. Maintain treatment records. Assess clients' soft tissue condition, joint quality and function, muscle strength, and range of motion. Treat clients in professional settings or travel to clients' offices and homes. Provide clients with guidance and information about techniques for postural improvement and stretching, strengthening, relaxation, and rehabilitative exercises. Develop and propose client treatment plans that specify which types of massage are to be used. Refer clients to other types of therapists when necessary. Consult with other health care professionals, such as physiotherapists, chiropractors, physicians, and psychologists, to develop treatment plans for clients. Perform other adjunctive therapies or treatment techniques in addition to massage. Prepare and blend oils and apply the blends to clients' skin.

License: Application Fee: $25.00; License and Renewal Fee: $100.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

<table>
<thead>
<tr>
<th></th>
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<tr>
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<td>$9.07</td>
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Alabama Projections

<table>
<thead>
<tr>
<th></th>
<th>2018 Estimated Employment: 1,120</th>
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<tr>
<td></td>
<td>2028 Projected Employment: 1,280</td>
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<tr>
<td>Average Total Openings:</td>
<td>155</td>
</tr>
<tr>
<td>Annual Growth Rate:</td>
<td>1.36%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Skincare Specialists
Barbers
Self-Enrichment Teachers
Exercise Trainers & Group Fitness Instructors
File Clerks
Tour Guides & Escorts
Hairdressers, Hairstylists, & Cosmetologists
Manicurists & Pedicurists
Preschool Teachers, Except Special Education

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Meat, Poultry, and Fish Cutters and Trimmers

Use hands or hand tools to perform routine cutting and trimming of meat, poultry, and seafood.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Use knives, cleavers, meat saws, bandsaws, or other equipment to perform meat cutting and trimming. Weigh meats and tag containers for weight and contents. Inspect meat products for defects, bruises or blemishes and remove them along with any excess fat. Cut and trim meat to prepare for packing. Separate meats and byproducts into specified containers and seal containers.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>$14.35</td>
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</tbody>
</table>

**2018 Estimated Employment:** 12,340

**2028 Projected Employment:** 12,780

**Average Total Openings:** 1,595

**Annual Growth Rate:** 0.35%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Food Preparation Workers
- Dining Room & Cafeteria Attendants & Bartender Helpers
- Slaughterers & Meat Packers
- Food Servers, Nonrestaurant
- Cooks, Fast Food
- Cooks, Restaurant
- Cooks, Short Order
- Fast Food & Counter Workers
- Dishwashers
- Butchers & Meat Cutters

### Post-Secondary Institutions with Programs

- 157
- 2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
11-9111 Medical and Health Services Managers

Plan, direct, or coordinate medical and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Develop and maintain computerized record management systems to store and process data, such as personnel activities and information, and to produce reports. Direct, supervise and evaluate work activities of medical, nursing, technical, clerical, service, maintenance, and other personnel. Direct or conduct recruitment, hiring, and training of personnel. Develop and implement organizational policies and procedures for the facility or medical unit. Conduct and administer fiscal operations, including accounting, planning budgets, authorizing expenditures, establishing rates for services, and coordinating financial reporting. Maintain awareness of advances in medicine, computerized diagnostic and treatment equipment, data processing technology, government regulations, health insurance changes, and financing options. Plan, implement, and administer programs and services in a health care or medical facility, including personnel administration, training, and coordination of medical, nursing and physical plant staff. Prepare activity reports to inform management of the status and implementation plans of programs, services, and quality initiatives. Establish work schedules and assignments for staff, according to workload, space, and equipment availability. Maintain communication between governing boards, medical staff, and department heads by attending board meetings and coordinating interdepartmental functioning. Establish objectives and evaluative or operational criteria for units managed. Review and analyze facility activities and data to aid planning and cash and risk management and to improve service utilization. Manage change in integrated health care delivery systems, such as work restructuring, technological innovations, and shifts in the focus of care. Develop instructional materials and conduct in-service and community-based educational programs.

License: Application Fee: $150.00; State Written Exam Fee: $350.00; Renewal Fee: $125.00

Outlook: Good

Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>$70.19</td>
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</table>

Related Occupations

Education Administrators, Kindergarten through Secondary
Dietitians & Nutritionists
Social & Community Service Managers
Education Administrators, Postsecondary
Chief Executives
Human Resources Managers
Instructional Coordinators
Training & Development Managers
Purchasing Managers
Management Analysts

Post-Secondary Institutions with Programs

Bishop State Community College
Chattahoochee Valley Community College
Columbia Southern University
Enterprise State Community College
Fortis College
Gadsden State Community College
George C Wallace Community College
H Councill Trenholm State Community College
J. F. Drake State Community and Technical College
Northeast Alabama Community College
Northwest-Shoals Community College
Samford University
Shelton State Community College
South University-Montgomery
Southern Union State Community College
The University of Alabama
Tuskegee University
University of Alabama at Birmingham

For an explanation on omitted data, see the Missing Data section in the introduction.

2020 Career Exploration Guide
158

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Medical Assistants

Perform administrative and certain clinical duties under the direction of a physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Record patients' medical history, vital statistics, or information such as test results in medical records. Prepare treatment rooms for patient examinations, keeping the rooms neat and clean. Interview patients to obtain medical information and measure their vital signs, weight, and height. Show patients to examination rooms and prepare them for the physician. Prepare and administer medications as directed by a physician. Collect blood, tissue, or other laboratory specimens, log the specimens, and prepare them for testing. Authorize drug refills and provide prescription information to pharmacies. Explain treatment procedures, medications, diets, or physicians' instructions to patients. Clean and sterilize instruments and dispose of contaminated supplies. Perform routine laboratory tests and sample analyses. Perform general office duties, such as answering telephones, taking dictation, or completing insurance forms. Greet and log in patients arriving at office or clinic. Schedule appointments for patients. Help physicians examine and treat patients, handing them instruments or materials or performing such tasks as giving injections or removing sutures. Contact medical facilities or departments to schedule patients for tests or admission. Inventory and order medical, lab, or office supplies or equipment. Operate x-ray, electrocardiogram (EKG), or other equipment to administer routine diagnostic tests. Change dressings on wounds.

License: No License Required.

Outlook: Good

Alabama Wage Data

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<thead>
<tr>
<th></th>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<td>$39,485.00</td>
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</table>

Alabama Projections

2018 Estimated Employment: 9,180
2028 Projected Employment: 11,080
Average Total Openings: 1,305
Annual Growth Rate: 1.90%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Pharmacy Technicians
Physical Therapist Assistants
Licensed Practical & Licensed Vocational Nurses
Neurodiagnostic Technologists
Occupational Therapy Assistants
Dental Assistants
Social & Human Service Assistants
Registered Nurses
Speech-Language Pathology Assistants
Psychiatric Technicians

Post-Secondary Institutions with Programs

Bishop State Community College
Columbia Southern University
George C Wallace Community College-Dothan
Herzing University-Birmingham
Remington College-Mobile Campus
Snead State Community College
Southern Union State Community College
Tuskegee University

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Medical Equipment Preparers

Prepare, sterilize, install, or clean laboratory or healthcare equipment. May perform routine laboratory tasks and operate or inspect equipment.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks:
- Operate and maintain steam autoclaves, keeping records of loads completed, items in loads, and maintenance procedures performed. Clean instruments to prepare them for sterilization. Record sterilizer test results. Organize and assemble routine or specialty surgical instrument trays or other sterilized supplies, filling special requests as needed. Examine equipment to detect leaks, worn or loose parts, or other indications of disrepair. Report defective equipment to appropriate supervisors or staff. Maintain records of inventory or equipment usage and order medical instruments or supplies when inventory is low. Stock crash carts or other medical supplies. Start equipment and observe gauges and equipment operation to detect malfunctions and to ensure equipment is operating to prescribed standards. Check sterile supplies to ensure that they are not outdated. Attend hospital in-service programs related to areas of work specialization.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Endoscopy Technicians
- Semiconductor Processing Technicians
- Crushing, Grinding, & Polishing Machine Setters, Operators, & Tenders
- Dental Laboratory Technicians
- First-Line Supervisors of Housekeeping & Janitorial Workers
- Surgical Technologists
- Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders
- Pump Operators, Except Wellhead Pumpers
- Non-Destructive Testing Specialists

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Medical Equipment Repairers

Test, adjust, or repair biomedical or electromedical equipment.

Education:  Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT:  Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks:  Inspect and test malfunctioning medical or related equipment, following manufacturers' specifications and using test and analysis instruments. Test or calibrate components or equipment, following manufacturers' manuals and troubleshooting techniques, using hand tools, power tools, or measuring devices. Keep records of maintenance, repair, and required updates of equipment. Perform preventive maintenance or service, such as cleaning, lubricating, or adjusting equipment. Test, evaluate, and classify excess or in-use medical equipment and determine serviceability, condition, and disposition, in accordance with regulations. Examine medical equipment or facility's structural environment and check for proper use of equipment to protect patients and staff from electrical or mechanical hazards and to ensure compliance with safety regulations. Disassemble malfunctioning equipment and remove, repair, or replace defective parts, such as motors, clutches, or transformers. Plan and carry out work assignments, using blueprints, schematic drawings, technical manuals, wiring diagrams, or liquid or air flow sheets, following prescribed regulations, directives, or other instructions as required. Research catalogs or repair part lists to locate sources for repair parts, requisitioning parts and recording their receipt. Solder loose connections, using soldering iron. Explain or demonstrate correct operation or preventive maintenance of medical equipment to personnel. Contribute expertise to develop medical maintenance standard operating procedures. Evaluate technical specifications to identify equipment or systems best suited for intended use and possible purchase, based on specifications, user needs, or technical requirements. Study technical manuals or attend training sessions provided by equipment manufacturers to maintain current knowledge.

License:  No License Required.

Outlook:  Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<td>Median</td>
<td>$19.85</td>
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<td>Experienced</td>
<td>$35.18</td>
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</table>

2018 Estimated Employment: 940
2028 Projected Employment: 970
Average Total Openings: 105
Annual Growth Rate: 0.29%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Electrical & Electronics Repairers, Commercial & Industrial Equipment
- Robotics Technicians
- Industrial Engineering Technologists & Technicians
- Avionics Technicians
- Aircraft Mechanics & Service Technicians
- Mechanical Engineering Technologists & Technicians
- Electrical & Electronic Engineering Technologists & Technicians
- Telecommunications Equipment Installers & Repairers, Except Line Installers
- Audiovisual Equipment Installers & Repairers
- Medical Appliance Technicians

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the healthcare system. Classify medical and healthcare concepts, including diagnosis, procedures, medical services, and equipment, into the healthcare industry's numerical coding system. Includes medical coders.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

**Tasks:** Manage the department or supervise clerical workers, directing or controlling activities of personnel in the medical records department. Protect the security of medical records to ensure that confidentiality is maintained. Plan, develop, maintain, or operate a variety of health record indexes or storage and retrieval systems to collect, classify, store, or analyze information. Assign the patient to diagnosis-related groups (DRGs), using appropriate computer software. Compile and maintain patients' medical records to document condition and treatment and to provide data for research or cost control and care improvement efforts. Identify, compile, abstract, and code patient data, using standard classification systems. Review records for completeness, accuracy, and compliance with regulations. Process patient admission or discharge documents. Enter data, such as demographic characteristics, history and extent of disease, diagnostic procedures, or treatment into computer. Compile medical care and census data for statistical reports on diseases treated, surgery performed, or use of hospital beds. Retrieve patient medical records for physicians, technicians, or other medical personnel. Resolve or clarify codes or diagnoses with conflicting, missing, or unclear information by consulting with doctors or others or by participating in the coding team's regular meetings. Release information to persons or agencies according to regulations. Transcribe medical reports. Consult classification manuals to locate information about disease processes. Post medical insurance billings. Prepare statistical reports, narrative reports, or graphic presentations of information, such as tumor registry data for use by hospital staff, researchers, or other users. Process and prepare business or government forms. Train medical records staff. Develop in-service educational materials.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry</td>
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<tr>
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<tr>
<td>$29.59</td>
<td>$61,539.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Coder
- Health Information Clerk
- Health Information Specialist
- Health Information Technician (Health Information Tech)
- Medical Records Clerk
- Medical Records Coordinator
- Medical Records Technician (Medical Records Tech)
- Registered Health Information Technician (RHIT)

### Post-Secondary Institutions with Programs

- Enterprise State Community College
- Fortis Institute-Birmingham
- Gadsden State Community College
- Shelton State Community College
- Bishop State Community College
- George C Wallace State Community College-Hanceville
- Southern Union State Community College
- Alabama State University
- Herzing University-Birmingham

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Medical Secretaries

Perform secretarial duties using specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties may include scheduling appointments, billing patients, and compiling and recording medical charts, reports, and correspondence.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Answer telephones and direct calls to appropriate staff. Schedule and confirm patient diagnostic appointments, surgeries, or medical consultations. Operate office equipment, such as voice mail messaging systems, and use word processing, spreadsheet, or other software applications to prepare reports, invoices, financial statements, letters, case histories, or medical records. Maintain medical records, technical library, or correspondence files. Greet visitors, ascertain purpose of visit, and direct them to appropriate staff. Compile and record medical charts, reports, or correspondence, using typewriter or personal computer. Receive and route messages or documents, such as laboratory results, to appropriate staff. Transmit correspondence or medical records by mail, e-mail, or fax. Perform various clerical or administrative functions, such as ordering and maintaining an inventory of supplies.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>Hourly Wage</td>
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<td>$11.48 Entry</td>
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<tr>
<td>Median</td>
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<td>Experienced</td>
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<td>$23,873.00</td>
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<td>$50,153.00</td>
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</table>

Average Total Openings: 815

Annual Growth Rate: 1.34%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Receptionists & Information Clerks
Interviewers, Except Eligibility & Loan
Switchboard Operators, Including Answering Service
Court, Municipal, & License Clerks
Office Clerks, General
Bill & Account Collectors
Hotel, Motel, & Resort Desk Clerks
Insurance Claims & Policy Processing Clerks
Word Processors & Typists

Post-Secondary Institutions with Programs
Fortis Institute-Birmingham
Ross Medical Education Center-Huntsville

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Meeting, Convention, and Event Planners

Coordinate activities of staff, convention personnel, or clients to make arrangements for group meetings, events, or conventions.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Consult with customers to determine objectives and requirements for events, such as meetings, conferences, and conventions. Review event bills for accuracy and approve payment. Coordinate services for events, such as accommodation and transportation for participants, facilities, catering, signage, displays, special needs requirements, printing and event security. Arrange the availability of audio-visual equipment, transportation, displays, and other event needs. Confer with staff at a chosen event site to coordinate details. Inspect event facilities to ensure that they conform to customer requirements. Maintain records of event aspects, including financial details. Monitor event activities to ensure compliance with applicable regulations and laws, satisfaction of participants, and resolution of any problems that arise. Negotiate contracts with such service providers and suppliers as hotels, convention centers, and speakers. Evaluate and select providers of services according to customer requirements. Plan and develop programs, agendas, budgets, and services according to customer requirements. Hire, train, and supervise volunteers and support staff required for events. Conduct post-event evaluations to determine how future events could be improved. Direct administrative details, such as financial operations, dissemination of promotional materials, and responses to inquiries. Meet with sponsors and organizing committees to plan scope and format of events, to establish and monitor budgets, or to review administrative procedures and event progress. Read trade publications, attend seminars, and consult with other meeting professionals to keep abreast of meeting management standards and trends.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<tr>
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<td>$21.78 Median</td>
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<td>Experienced</td>
<td>$31.86 Experienced</td>
</tr>
</tbody>
</table>

Average Total Openings: 110
Annual Growth Rate: 0.64%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Public Relations Specialists
Advertising & Promotions Managers
Agents & Business Managers of Artists, Performers, & Athletes
Human Resources Specialists
Administrative Services Managers
Marketing Managers
Writers & Authors
Recreation Workers
Travel Guides

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Mental Health and Substance Abuse Social Workers

Assess and treat individuals with mental, emotional, or substance abuse problems, including abuse of alcohol, tobacco, and/or other drugs. Activities may include individual and group therapy, crisis intervention, case management, client advocacy, prevention, and education.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Counsel clients in individual or group sessions to assist them in dealing with substance abuse, mental or physical illness, poverty, unemployment, or physical abuse. Monitor, evaluate, and record client progress with respect to treatment goals. Interview clients, review records, conduct assessments, or confer with other professionals to evaluate the mental or physical condition of clients or patients. Collaborate with counselors, physicians, or nurses to plan or coordinate treatment, drawing on social work experience and patient needs. Counsel or aid family members to assist them in understanding, dealing with, or supporting the client or patient. Refer patient, client, or family to community resources for housing or treatment to assist in recovery from mental or physical illness, following through to ensure service efficacy. Modify treatment plans according to changes in client status. Educate clients or community members about mental or physical illness, abuse, medication, or available community resources. Assist clients in adhering to treatment plans, such as setting up appointments, arranging for transportation to appointments, or providing support. Increase social work knowledge by reviewing current literature, conducting social research, or attending seminars, training workshops, or classes. Plan or conduct programs to prevent substance abuse, combat social problems, or improve health or counseling services in community. Supervise or direct other workers who provide services to clients or patients.

License: Counselor Certification Kit Fee: $95.00; Application Fee (Includes one year Membership): $250.00; Written Exam Fee: $175.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry $11.56</td>
<td>Entry $24,050.00</td>
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<tr>
<td>Median $17.22</td>
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<tr>
<td>Experienced $27.46</td>
<td>Experienced $57,115.00</td>
</tr>
</tbody>
</table>

Alabama Projections

| 2018 Estimated Employment: 1,060 |
| 2028 Projected Employment: 1,160 |
| Average Total Openings: 120 |
| Annual Growth Rate: 0.85% |

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Healthcare Social Workers
Mental Health Counselors
Marriage & Family Therapists
Educational, Guidance, & Career Counselors & Advisors
Child, Family, & School Social Workers
Clinical & Counseling Psychologists
Substance Abuse & Behavioral Disorder Counselors
Probation Officers & Correctional Treatment Specialists
Rehabilitation Counselors
Psychology Teachers, Postsecondary

Post-Secondary Institutions with Programs

Amridge University
University of Mobile
University of West Alabama

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Merchandise Displayers and Window Trimmers

Plan and erect commercial displays, such as those in windows and interiors of retail stores and at trade exhibitions.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Plan commercial displays to entice and appeal to customers. Arrange properties, furniture, merchandise, backdrops, or other accessories, as shown in prepared sketches. Change or rotate window displays, interior display areas, or signage to reflect changes in inventory or promotion. Place prices or descriptive signs on backdrops, fixtures, merchandise, or floor. Consult with store managers, buyers, sales associates, housekeeping staff, or engineering staff to determine appropriate placement of displays or products. Maintain props, products, or mannequins, inspecting them for imperfections, doing touch-ups, cleaning up after customers, or applying preservative coatings as necessary. Develop ideas or plans for merchandise displays or window decorations. Assemble or set up displays, furniture, or products in store space, using colors, lights, pictures, or other accessories to display the product. Install booths, exhibits, displays, carpets, or drapes, as guided by floor plan of building or specifications. Select themes, lighting, colors, or props to be used. Consult with advertising or sales staff to determine type of merchandise to be featured and time and place for each display. Attend training sessions or corporate planning meetings to obtain new ideas for product launches. Collaborate with others to obtain products or other display items. Construct or assemble displays or display components from fabric, glass, paper, or plastic, using hand tools or woodworking power tools, according to specifications. Obtain plans from display designers or display managers and discuss their implementation with clients or supervisors. Take photographs of displays or signage.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>$9.57 Entry</td>
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<tr>
<td>Median</td>
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<tr>
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<tr>
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<td>$47,457.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Painters, Construction & Maintenance
- Floral Designers
- Postal Service Clerks
- Retail Salespersons
- Stockers & Order Fillers
- Shipping, Receiving, & Inventory Clerks
- Weighers, Measurers, Checkers, & Samplers
- Recordkeeping

### Post-Secondary Institutions with Programs

166

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Operate or tend furnaces, such as gas, oil, coal, electric-arc or electric induction, open-hearth, or oxygen furnaces, to melt and refine metal before casting or to produce specified types of steel.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Regulate supplies of fuel and air, or control flow of electric current and water coolant to heat furnaces and adjust temperatures. Draw smelted metal samples from furnaces or kettles for analysis, and calculate types and amounts of materials needed to ensure that materials meet specifications. Weigh materials to be charged into furnaces, using scales. Record production data, and maintain production logs. Observe air and temperature gauges or metal color and fluidity, and turn fuel valves or adjust controls to maintain required temperatures. Operate controls to move or discharge metal workpieces from furnaces. Inspect furnaces and equipment to locate defects and wear. Drain, transfer, or remove molten metal from furnaces, and place it into molds, using hoists, pumps, or ladles. Kindle fires, and shovel fuel and other materials into furnaces or onto conveyors by hand, with hoists, or by directing crane operators.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$10.26 Entry</td>
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<tr>
<td></td>
<td>$21,338.00</td>
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<tr>
<td>Median</td>
<td>$15.54 Median</td>
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<tr>
<td></td>
<td>$32,309.00</td>
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<td>Experienced</td>
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<tr>
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<td>$56,316.00</td>
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<td><strong>2018 Estimated Employment:</strong></td>
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<td><strong>2028 Projected Employment:</strong></td>
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<tr>
<td><strong>Average Total Openings:</strong></td>
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<tr>
<td><strong>Annual Growth Rate:</strong></td>
<td>0.79%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Molders, Shapers, & Casters, Except Metal & Plastic
- Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
- Mixing & Blending Machine Setters, Operators, & Tenders
- Sawing Machine Setters, Operators, & Tenders, Wood
- Heat Treating Equipment Setters, Operators, & Tenders
- Refractory Materials Repairers, Except Brickmasons
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
- Pourers & Casters, Metal
- Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders

### Post-Secondary Institutions with Programs

Millwrights

Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 4 years, up to and including 10 years

Tasks: Insert shims, adjust tension on nuts and bolts, or position parts, using hand tools and measuring instruments, to set specified clearances between moving and stationary parts. Level bedplate and establish centerline, using straightedge, levels, and transit. Align machines or equipment, using hoists, jacks, hand tools, squares, rules, micrometers, lasers, or plumb bobs. Assemble and install equipment, using hand tools and power tools. Signal crane operator to lower basic assembly units to bedplate, and align unit to centerline. Conduct preventative maintenance and repair, and lubricate machines and equipment. Replace defective parts of machine or adjust clearances and alignment of moving parts. Attach moving parts and subassemblies to basic assembly unit, using hand tools and power tools. Assemble machines, and bolt, weld, rivet, or otherwise fasten them to foundation or other structures, using hand tools and power tools. Lay out mounting holes, using measuring instruments, and drill holes with power drill. Position steel beams to support bedplates of machines and equipment, using blueprints and schematic drawings, to determine work procedures. Shrink-fit bushings, sleeves, rings, liners, gears, and wheels to specified items, using portable gas heating equipment. Move machinery and equipment, using hoists, dollies, rollers, and trucks. Dismantle machinery and equipment for shipment to installation site, usually performing installation and maintenance work as part of team. Weld, repair, and fabricate equipment or machinery. Dismantle machines, using hammers, wrenches, crowbars, and other hand tools. Fabricate and dismantle parts, equipment, and machines, using a cutting torch or other cutting equipment. Bolt parts, such as side and deck plates, jaw plates, and journals, to basic assembly unit. Construct foundation for machines, using hand tools and building materials such as wood, cement, and steel. Install robot and modify its program, using teach pendant. Troubleshoot equipment, electrical components, hydraulics, or other mechanical systems. Connect power unit to machines or steam piping to equipment, and test unit to evaluate its mechanical operation. Operate engine lathe to grind, file, and turn machine parts to dimensional specifications.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>$15.53</td>
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<tr>
<td>Median</td>
<td>$23.41</td>
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<tr>
<td>Experienced</td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Plumbers, Pipefitters, & Steamfitters
Maintenance & Repair Workers, General
Industrial Machinery Mechanics
Commercial Divers
Heating, Air Conditioning, & Refrigeration Mechanics & Installers
Electricians
Ship Engineers
Sheet Metal Workers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
168

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Mixing and Blending Machine Setters, Operators, and Tenders

Set up, operate, or tend machines to mix or blend materials, such as chemicals, tobacco, liquids, color pigments, or explosive ingredients.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Weigh or measure materials, ingredients, or products to ensure conformance to requirements. Compound or process ingredients or dyes, according to formulas. Read work orders to determine production specifications or information. Observe production or monitor equipment to ensure safe and efficient operation. Mix or blend ingredients by starting machines and mixing for specified times. Dump or pour specified amounts of materials into machinery or equipment. Collect samples of materials or products for laboratory testing. Operate or tend machines to mix or blend any of a wide variety of materials, such as spices, dough batter, tobacco, fruit juices, chemicals, livestock feed, food products, color pigments, or explosive ingredients. Add or mix chemicals or ingredients for processing, using hand tools or other devices. Stop mixing or blending machines when specified product qualities are obtained and open valves and start pumps to transfer mixtures. Examine materials, ingredients, or products visually or with hands to ensure conformance to established standards. Transfer materials, supplies, or products between work areas, using moving equipment or hand tools. Test samples of materials or products to ensure compliance with specifications, using test equipment. Record operational or production data on specified forms. Tend accessory equipment, such as pumps or conveyors, to move materials or ingredients through production processes. Unload mixtures into containers or onto conveyors for further processing. Clean and maintain equipment, using hand tools.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry</td>
<td>$10.93 Entry $22,734.00</td>
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<tr>
<td>Median</td>
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<td><strong>2028 Projected Employment:</strong> 2,220</td>
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<tr>
<td><strong>Average Total Openings:</strong> 260</td>
<td></td>
</tr>
<tr>
<td><strong>Annual Growth Rate:</strong> 0.35%</td>
<td></td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders
Heat Treating Equipment Setters, Operators, & Tenders
Crushing, Grinding, & Polishing Machine Setters, Operators, & Tenders
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Molders, Shapers, & Casters, Except Metal & Plastic
Metal-Refining Furnace Operators & Tenders
Food Batchmakers
Textile Bleaching & Dyeing Machine Operators & Tenders
Gas Compressor & Gas Pumping Station Operators
Cooling & Freezing Equipment Operators & Tenders

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
169

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Mobile Heavy Equipment Mechanics, Except Engines

Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and mining.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:**
- Repair and replace damaged or worn parts. Test mechanical products and equipment after repair or assembly to ensure proper performance and compliance with manufacturers' specifications. Operate and inspect machines or heavy equipment to diagnose defects. Read and understand operating manuals, blueprints, and technical drawings. Dismantle and reassemble heavy equipment using hoists and hand tools.
- Overhaul and test machines or equipment to ensure operating efficiency. Adjust, maintain, and repair or replace subassemblies, such as transmissions and crawler heads, using hand tools, jacks, and cranes.
- Repair, rewire, and troubleshoot electrical systems. Diagnose faults or malfunctions to determine required repairs, using engine diagnostic equipment such as computerized test equipment and calibration devices. Examine parts for damage or excessive wear, using micrometers and gauges. Weld or solder broken parts and structural members, using electric or gas welders and soldering tools. Research, order, and maintain parts inventory for services and repairs. Fit bearings to adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment. Schedule maintenance for industrial machines and equipment, and keep equipment service records. Clean, lubricate, and perform other routine maintenance work on equipment and vehicles. Assemble gear systems, and align frames and gears. Clean parts by spraying them with grease solvent or immersing them in tanks of solvent. Adjust and maintain industrial machinery, using control and regulating devices. Fabricate needed parts or items from sheet metal. Direct workers who are assembling or disassembling equipment or cleaning parts.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$16.58</td>
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<tr>
<td>Median</td>
<td>$24.60</td>
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<tr>
<td>Experienced</td>
<td>$32.61</td>
</tr>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Automotive Service Technicians & Mechanics
- Farm Equipment Mechanics & Service Technicians
- Motorboat Mechanics & Service Technicians
- Bus & Truck Mechanics & Diesel Engine Specialists
- Electric Motor, Power Tool, & Related Repairers
- Heating, Air Conditioning, & Refrigeration Mechanics & Installers
- Industrial Machinery Mechanics
- Electricians
- Maintenance & Repair Workers, General

**Post-Secondary Institutions with Programs**

2020 Career Exploration Guide
170

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
51-4072  Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders

Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Measure and visually inspect products for surface and dimension defects to ensure conformance to specifications, using precision measuring instruments. Observe continuous operation of automatic machines to ensure that products meet specifications and to detect jams or malfunctions, making adjustments as necessary. Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products. Turn valves and dials of machines to regulate pressure, temperature, and speed and feed rates, and to set cycle times. Read specifications, blueprints, and work orders to determine setups, temperatures, and time settings required to mold, form, or cast plastic materials, as well as to plan production sequences. Observe meters and gauges to verify and record temperatures, pressures, and press-cycle times. Connect water hoses to cooling systems of dies, using hand tools. Remove parts, such as dies, from machines after production runs are finished. Perform maintenance work such as cleaning and oiling machines. Smooth and clean inner surfaces of molds, using brushes, scrapers, air hoses, or grinding wheels, and fill imperfections with refractory material.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
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<td>Entry</td>
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<tr>
<td>$9.87</td>
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<td>$15.10</td>
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<tr>
<td>$25.41</td>
<td>$52,848.00</td>
</tr>
</tbody>
</table>

**2018 Estimated Employment:** 4,470

**2028 Projected Employment:** 4,670

**Average Total Openings:** 520

**Annual Growth Rate:** 0.45%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Packaging & Filling Machine Operators & Tenders
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Forging Machine Setters, Operators, & Tenders
- Welders, Cutters, Solderers, & Brazers
- Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders
- Woodworking Machine Setters, Operators, & Tenders, Except Sawing
- Sawing Machine Setters, Operators, & Tenders, Wood
- Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
- Adhesive Bonding Machine Operators & Tenders
- Molders, Shapers, & Casters, Except Metal & Plastic

### Post-Secondary Institutions with Programs

<table>
<thead>
<tr>
<th>Post-Secondary Institutions with Programs</th>
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</thead>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Multiple Machine Tool Setters, Operators, and Tenders

Set up, operate, or tend more than one type of cutting or forming machine tool or robot.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Observe machine operation to detect workpiece defects or machine malfunctions, adjusting machines as necessary. Set up and operate machines, such as lathes, cutters, shears, borers, millers, grinders, presses, drills, or auxiliary machines, to make metallic and plastic workpieces. Inspect workpieces for defects, and measure workpieces to determine accuracy of machine operation, using rules, templates, or other measuring instruments. Read blueprints or job orders to determine product specifications and tooling instructions and to plan operational sequences. Start machines and turn handwheels or valves to engage feeding, cooling, and lubricating mechanisms. Select, install, and adjust alignment of drills, cutters, dies, guides, and holding devices, using templates, measuring instruments, and hand tools. Move controls or mount gears, cams, or templates in machines to set feed rates and cutting speeds, depths, and angles. Position, adjust, and secure stock material or workpieces against stops, on arbors, or in chucks, fixtures, or automatic feeding mechanisms, manually or using hoists. Set machine stops or guides to specified lengths as indicated by scales, rules, or templates. Perform minor machine maintenance, such as oiling or cleaning machines, dies, or workpieces, or adding coolant to machine reservoirs. Measure and mark reference points and cutting lines on workpieces, using traced templates, compasses, and rules. Compute data, such as gear dimensions or machine settings, applying knowledge of shop mathematics. Instruct other workers in machine set-up and operation. Change worn machine accessories, such as cutting tools or brushes, using hand tools. Make minor electrical and mechanical repairs and adjustments to machines and notify supervisors when major service is required. Extract or lift jammed pieces from machines, using fingers, wire hooks, or lift bars. Record operational data, such as pressure readings, lengths of strokes, feed rates, or speeds.

License: No License Required.

Outlook: Good

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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2018 Estimated Employment: 2,590
2028 Projected Employment: 2,910
Average Total Openings: 320
Annual Growth Rate: 1.19%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Rolling Machine Setters, Operators, & Tenders
Cutting & Slicing Machine Setters, Operators, & Tenders
Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders
Sawing Machine Setters, Operators, & Tenders, Wood
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Tool Grinders, Filers, & Sharpeners
Computer Numerically Controlled Tool Operators
Lathe & Turning Machine Tool Setters, Operators, & Tenders
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Paper Goods Machine Setters, Operators, & Tenders

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
172
Conduct, direct, plan, and lead instrumental or vocal performances by musical artists or groups, such as orchestras, bands, choirs, and glee clubs; or create original works of music.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Tasks: Use gestures to shape the music being played, communicating desired tempo, phrasing, tone, color, pitch, volume, and other performance aspects. Direct groups at rehearsals and live or recorded performances to achieve desired effects such as tonal and harmonic balance dynamics, rhythm, and tempo. Study scores to learn the music in detail, and to develop interpretations. Apply elements of music theory to create musical and tonal structures, including harmonies and melodies. Consider such factors as ensemble size and abilities, availability of scores, and the need for musical variety, to select music to be performed. Determine voices, instruments, harmonic structures, rhythms, tempos, and tone balances required to achieve the effects desired in a musical composition. Experiment with different sounds, and types and pieces of music, using synthesizers and computers as necessary to test and evaluate ideas. Transcribe ideas for musical compositions into musical notation, using instruments, pen and paper, or computers. Audition and select performers for musical presentations. Plan and schedule rehearsals and performances, and arrange details such as locations, accompanists, and instrumentalists. Write musical scores for orchestras, bands, choral groups, or individual instrumentalists or vocalists, using knowledge of music theory and of instrumental and vocal capabilities. Position members within groups to obtain balance among instrumental or vocal sections. Perform administrative tasks such as applying for grants, developing budgets, negotiating contracts, and designing and printing programs and other promotional materials. Confer with producers and directors to define the nature and placement of film or television music. Meet with soloists and concertmasters to discuss and prepare for performances. Fill in details of orchestral sketches, such as adding vocal parts to scores. Explore and develop musical ideas based on sources such as imagination or sounds in the environment. Write music for commercial mediums, including advertising jingles or film soundtracks. Transpose music from one voice or instrument to another to accommodate particular musicians. Rewrite original musical scores in different musical styles by changing rhythms, harmonies, or tempos. Arrange music composed by others, changing the music to achieve desired effects. Assign and review staff work in such areas as scoring, arranging, and copying music, and vocal coaching. Study films or scripts to determine how musical scores can be used to create desired effects or moods. Transcribe musical compositions and melodic lines to adapt them to a particular group, or to create a particular musical style. Create original musical forms, or write within circumscribed musical forms such as sonatas, symphonies, or operas. Collaborate with other colleagues, such as copyists, to complete final scores. Copy parts from scores for individual performers.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018 Estimated Employment:</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Directors, Religious Activities & Education
- Film & Video Editors
- Broadcast Announcers & Radio Disc Jockeys
- Art, Drama, & Music Teachers, Postsecondary
- Special Effects Artists & Animators
- Secondary School Teachers, Except Special & Career/Technical Education
- Poets, Lyricists & Creative Writers
- Kindergarten Teachers, Except Special Education
- Writers & Authors
- Middle School Teachers, Except Special & Career/Technical Education

Post-Secondary Institutions with Programs
- Huntingdon College
- John C Calhoun State Community College
- Judson College
- Oakwood University
- Samford University
- Stillman College
- University of Mobile

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Musicians and Singers

Play one or more musical instruments or sing. May perform on stage, for broadcasting, or for sound or video recording.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks: Perform before live audiences in concerts, recitals, educational presentations, and other social gatherings. Sing a cappella or with musical accompaniment. Interpret or modify music, applying knowledge of harmony, melody, rhythm, and voice production to individualize presentations and maintain audience interest. Specialize in playing a specific family of instruments or a particular type of music. Sing as a soloist or as a member of a vocal group. Observe choral leaders or prompters for cues or directions in vocal presentation. Memorize musical selections and routines, or sing following printed text, musical notation, or customer instructions. Play musical instruments as soloists, or as members or guest artists of musical groups such as orchestras, ensembles, or bands. Sight-read musical parts during rehearsals. Play from memory or by following scores. Practice singing exercises and study with vocal coaches to develop voice and skills and to rehearse for upcoming roles. Listen to recordings to master pieces or to maintain and improve skills. Teach music for specific instruments. Provide the musical background for live shows, such as ballets, operas, musical theatre, and cabarets. Audition for orchestras, bands, or other musical groups. Seek out and learn new music suitable for live performance or recording. Make or participate in recordings in music studios. Promote their own or their group’s music by participating in media interviews and other activities. Make or participate in recordings.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
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<tr>
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<tr>
<td>$27.59</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Door-to-Door Sales Workers, News & Street Vendors, & Related Workers
Self-Enrichment Teachers
Tour Guides & Escorts
Actors
Retail Salespersons
Stockers & Order Fillers
Broadcast Announcers & Radio Disc Jockeys
Costume Attendants
Music Directors & Composers
Preschool Teachers, Except Special Education

Post-Secondary Institutions with Programs
Alabama A & M University
Alabama State University
Auburn University
Birmingham Southern College
Chattahoochee Valley Community College
Faulkner University
Jacksonville State University
Miles College
Oakwood University
Samford University
Shelton State Community College
Talladega College
The University of Alabama
Troy University
University of Alabama at Birmingham
University of Alabama in Huntsville
University of Mobile
University of Montevallo
University of North Alabama
University of South Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Network and Computer Systems Administrators

Install, configure, and maintain an organization's local area network (LAN), wide area network (WAN), data communications network, operating systems, and physical and virtual servers. Perform system monitoring and verify the integrity and availability of hardware, network, and server resources and systems. Review system and application logs and verify completion of scheduled jobs, including system backups. Analyze network and server resource consumption and control user access. Install and upgrade software and maintain software licenses. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Maintain and administer computer networks and related computing environments including computer hardware, systems software, applications software, and all configurations. Perform data backups and disaster recovery operations. Diagnose, troubleshoot, and resolve hardware, software, or other network and system problems, and replace defective components when necessary. Configure, monitor, and maintain email applications or virus protection software. Operate master consoles to monitor the performance of computer systems and networks, and to coordinate computer network access and use. Monitor network performance to determine whether adjustments need to be made, and to determine where changes will need to be made in the future. Plan, coordinate, and implement network security measures to protect data, software, and hardware. Analyze equipment performance records to determine the need for repair or replacement. Confer with network users about how to solve existing system problems. Recommend changes to improve systems and network configurations, and determine hardware or software requirements related to such changes. Design, configure, and test computer hardware, networking software and operating system software. Perform routine network startup and shutdown procedures, and maintain control records. Load computer tapes and disks, and install software and printer paper or forms. Train people in computer system use. Maintain logs related to network functions, as well as maintenance and repair records. Gather data pertaining to customer needs, and use the information to identify, predict, interpret, and evaluate system and network requirements. Coordinate with vendors and with company personnel to facilitate purchases.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>Entry</td>
<td>$21.69</td>
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<td>$35.68</td>
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<td>Experienced</td>
<td>$56.60</td>
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**2028 Projected Employment:** 4,310

**Average Total Openings:** 315

**Annual Growth Rate:** 0.60%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Computer Network Architects
Computer Systems Analysts
Database Administrators
Software Quality Assurance Analysts & Testers
Computer Systems Engineers/Architects
Computer User Support Specialists
Information Security Analysts
Web Administrators
Network Administrator
Network Coordinator
Network Manager
Network Support Coordinator
Network Support Manager
Network Systems Administrator
Network Systems Coordinator
Wide Area Network Administrator (WAN Administrator)

Post-Secondary Institutions with Programs

For an explanation on omitted data, see the Missing Data section in the introduction.

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Provide or assist with basic care or support under the direction of onsite licensed nursing staff. Perform duties such as monitoring of health status, feeding, bathing, dressing, grooming, toileting, or ambulation of patients in a health or nursing facility. May include medication administration and other health-related tasks. Includes nursing care attendants, nursing aides, and nursing attendants.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Turn or reposition bedridden patients. Answer patient call signals, signal lights, bells, or intercom systems to determine patients' needs. Feed patients or assist patients to eat or drink. Measure and record food and liquid intake or urinary and fecal output, reporting changes to medical or nursing staff. Provide physical support to assist patients to perform daily living activities, such as getting out of bed, bathing, dressing, using the toilet, standing, walking, or exercising. Document or otherwise report observations of patient behavior, complaints, or physical symptoms to nurses. Remind patients to take medications or nutritional supplements. Review patients' dietary restrictions, food allergies, and preferences to ensure patient receives appropriate diet. Undress, wash, and dress patients who are unable to do so for themselves. Observe or examine patients to detect symptoms that may require medical attention, such as bruises, open wounds, or blood in urine. Lift or assist others to lift patients to move them on or off beds, examination tables, surgical tables, or stretchers. Supply, collect, or empty bedpans. Communicate with patients to ascertain feelings or need for assistance or social and emotional support. Record vital signs, such as temperature, blood pressure, pulse, or respiration rate, as directed by medical or nursing staff. Gather information from caregivers, nurses, or physicians about patient condition, treatment plans, or appropriate activities. Wash, groom, shave, or drape patients to prepare them for surgery, treatment, or examination. Prepare or serve food trays. Change bed linens or make beds. Exercise patients who are comatose, paralyzed, or have restricted mobility. Restock patient rooms with personal hygiene items, such as towels, washcloths, soap, or toilet paper. Clean and sanitize patient rooms, bathrooms, examination rooms, or other patient areas. Assist nurses or physicians in the operation of medical equipment or provision of patient care. Record height or weight of patients. Transport patients to treatment units, testing units, operating rooms, or other areas, using wheelchairs, stretchers, or moveable beds. Collect specimens, such as urine, feces, or sputum. Provide information, such as directions, visiting hours, or patient status information to visitors or callers.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>Experienced</td>
<td>$15.21</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Birth Attendant
- Certified Medication Aide (CMA)
- Certified Nurse Aide (CNA)
- Certified Nursing Assistant (CNA)
- Certified Residential Medication Aide (CRMA)
- Clinical Assistant
- First Aid Attendant
- Geriatric Nursing Assistant (GNA)
- Gericare Aide
- Health Aide
- Health Care Aide
- Hospice Aide
- Hospital Aide
- Hospital Attendant
- Hospital Corpsman

Post-Secondary Institutions with Programs
- Gadsden State Community College
- George C Wallace State Community College-Hanceville
- George C Wallace State Community College-Selma
- Jefferson Davis Community College
- Selma University
- Shelton State Community College
- Snead State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Nurse, Anesthetists

Administer anesthesia, monitor patient's vital signs, and oversee patient recovery from anesthesia. May assist anesthesiologists, surgeons, other physicians, or dentists. Must be registered nurses who have specialized graduate education.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Manage patients' airway or pulmonary status, using techniques such as endotracheal intubation, mechanical ventilation, pharmacological support, respiratory therapy, and extubation. Select, prepare, or use equipment, monitors, supplies, or drugs for the administration of anesthetics. Select, order, or administer anesthetics, adjuvant drugs, accessory drugs, fluids or blood products as necessary. Monitor patients' responses, including skin color, pupil dilation, pulse, heart rate, blood pressure, respiration, ventilation, or urine output, using invasive and noninvasive techniques. Perform pre-anesthetic screenings, including physical evaluations and patient interviews, and document results. Respond to emergency situations by providing airway management, administering emergency fluids or drugs, or using basic or advanced cardiac life support techniques. Develop anesthesia care plans. Obtain informed consent from patients for anesthesia procedures. Assess patients' medical histories to predict anesthesia response. Select, order, or administer pre-anesthetic medications. Perform or evaluate the results of diagnostic tests, such as radiographs (x-rays) and electrocardiograms (EKGs). Perform or manage regional anesthetic techniques, such as local, spinal, epidural, caudal, nerve blocks and intravenous blocks. Prepare prescribed solutions and administer local, intravenous, spinal, or other anesthetics, following specified methods and procedures. Administer post-anesthesia medications or fluids to support patients' cardiovascular systems. Calibrate and test anesthesia equipment. Evaluate patients' post-surgical or post-anesthesia responses, taking appropriate corrective actions or requesting consultation if complications occur. Select and prescribe post-anesthesia medications or treatments to patients. Insert peripheral or central intravenous catheters. Discharge patients from post-anesthesia care. Read current literature, talk with colleagues, and participate in professional organizations or conferences to keep abreast of developments in nursing. Request anesthesia equipment repairs, adjustments, or safety tests. Insert arterial catheters or perform arterial punctures to obtain arterial blood samples. Instruct nurses, residents, interns, students, or other staff on topics such as anesthetic techniques, pain management and emergency responses. Disassemble and clean anesthesia equipment.

License: Initial Application Fee for CRNA: $175.00

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
<th>Average Total Openings:</th>
<th>Annual Growth Rate:</th>
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</thead>
<tbody>
<tr>
<td>Entry</td>
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<td>$***</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Clinical Nurse Specialists
Physician Assistants
Nurse Practitioners
Nurse Midwives
Physical Therapists
Medical & Clinical Laboratory Technologists
Certified Registered Nurse Anesthetist (CRNA)
Chief Certified Registered Nurse Anesthetist (Chief CRNA)
Chief Nurse Anesthetist
Nurse Anesthetist
Professor/Nurse Anesthetist
Senior Certified Registered Nurse Anesthetist (Senior CRNA)
Staff Certified Registered Nurse Anesthetist (Staff CRNA)
Staff Certified Registered Nurse Anesthetist

Post-Secondary Institutions with Programs
Samford University
University of Alabama at Birmingham

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Nurse, Licensed Practical and Licensed Vocational
Care for ill, injured, or convalescing patients or persons with disabilities in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. May work under the supervision of a registered nurse. Licensing required.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Administer prescribed medications or start intravenous fluids, noting times and amounts on patients' charts. Observe patients, charting and reporting changes in patients' conditions, such as adverse reactions to medication or treatment, and taking any necessary action. Answer patients' calls and determine how to assist them. Measure and record patients' vital signs, such as height, weight, temperature, blood pressure, pulse, or respiration. Provide basic patient care or treatments, such as taking temperatures or blood pressures, dressing wounds, treating bedsores, giving enemas or douches, rubbing with alcohol, massaging, or performing catheterizations. Work as part of a healthcare team to assess patient needs, plan and modify care, and implement interventions. Supervise nurses' aides or assistants. Evaluate nursing intervention outcomes, conferring with other healthcare team members as necessary. Assemble and use equipment, such as catheters, tracheotomy tubes, or oxygen suppliers. Record food and fluid intake and output. Collect samples, such as blood, urine, or sputum from patients, and perform routine laboratory tests on samples. Prepare patients for examinations, tests, or treatments and explain procedures. Help patients with bathing, dressing, maintaining personal hygiene, moving in bed, or standing and walking. Apply compresses, ice bags, or hot water bottles.

License: Initial Application Fee for LPN: $100.00

Outlook: Satisfactory

Alabama Employment Outlook

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<td>$24.09 Experienced</td>
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2018 Estimated Employment: 12,900
2028 Projected Employment: 13,360
Average Total Openings: 1,060
Annual Growth Rate: 0.52%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Physical Therapist Assistants
Psychiatric Technicians
Acute Care Nurses
Medical Assistants
Cardiovascular Technologists & Technicians
Occupational Therapy Assistants
Social & Human Service Assistants
Radiologic Technologists & Technicians
Dental Assistants

Post-Secondary Institutions with Programs
Alabama Southern Community College
Bevill State Community College
Bishop State Community College
Central Alabama Community College
Chattahoochee Valley Community College
Coastal Alabama Community College
Gadsden State Community College
George C Wallace Community College-Dothan
George C Wallace State Community College-Hanceville
George C Wallace State Community College-Selma
H Councill Trenholm State Community College
Herzing University-Birmingham
J. F. Drake State Community and Technical College
James H Faulkner State Community College
John C Calhoun State Community College
Lawson State Community College
Lawson State Community College-Birmingham Campus
Lurleen B Wallace Community College
Northeast Alabama Community College
Northwest-Shoals Community College
Reid State Technical College
Shelton State Community College
Southern Union State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Diagnose and treat acute, episodic, or chronic illness, independently or as part of a healthcare team. May focus on health promotion and disease prevention. May order, perform, or interpret diagnostic tests such as lab work and x-rays. May prescribe medication. Must be registered nurses who have specialized graduate education.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Analyze and interpret patients' histories, symptoms, physical findings, or diagnostic information to develop appropriate diagnoses. Diagnose or treat acute health care problems, such as illnesses, infections, or injuries. Recommend diagnostic or therapeutic interventions with attention to safety, cost, invasiveness, simplicity, acceptability, adherence, and efficacy. Prescribe medications based on efficacy, safety, and cost as legally authorized. Educate patients about self-management of acute or chronic illnesses, tailoring instructions to patients' individual circumstances. Prescribe medication dosages, routes, and frequencies, based on such patient characteristics as age and gender. Order, perform, or interpret the results of diagnostic tests, such as complete blood counts (CBCs), electrocardiograms (EKGs), and radiographs (x-rays). Maintain complete and detailed records of patients' health care plans and prognoses. Recommend interventions to modify behavior associated with health risks. Develop treatment plans, based on scientific rationale, standards of care, and professional practice guidelines. Detect and respond to adverse drug reactions, with special attention to vulnerable populations such as infants, children, pregnant and lactating women, or older adults. Read current literature, talk with colleagues, or participate in professional organizations or conferences to keep abreast of developments in nursing. Counsel patients about drug regimens and possible side effects or interactions with other substances, such as food supplements, over-the-counter (OTC) medications, or herbal remedies. Diagnose or treat chronic health care problems, such as high blood pressure and diabetes. Provide patients with information needed to promote health, reduce risk factors, or prevent disease or disability. Treat or refer patients for primary care conditions, such as headaches, hypertension, urinary tract infections, upper respiratory infections, and dermatological conditions. Consult with, or refer patients to, appropriate specialists when conditions exceed the scope of practice or expertise. Diagnose or treat complex, unstable, comorbid, episodic, or emergency conditions in collaboration with other health care providers as necessary.

**License:** Initial Application Fee for CNS: $175.00

**Outlook:** Very Good

### Alabama Employment Outlook

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<th>Alabama Projections</th>
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<tbody>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
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<td>Experienced</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Clinical Nurse Specialists
- Nurse Midwives
- Physician Assistants
- Nursing Instructors & Teachers, Postsecondary
- Occupational Therapists
- Physical Therapists
- Dietitians & Nutritionists
- Advanced Practice Psychiatric Nurses
- Naturopathic Physicians

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Nurse, Registered

Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Maintain accurate, detailed reports and records. Administer medications to patients and monitor patients for reactions or side effects. Record patients’ medical information and vital signs. Monitor, record, and report symptoms or changes in patients’ conditions. Consult and coordinate with healthcare team members to assess, plan, implement, or evaluate patient care plans. Modify patient treatment plans as indicated by patients’ responses and conditions. Monitor all aspects of patient care, including diet and physical activity. Direct or supervise less-skilled nursing or healthcare personnel or supervise a particular unit. Prepare patients for and assist with examinations or treatments. Instruct individuals, families, or other groups on topics such as health education, disease prevention, or childbirth and develop health improvement programs. Assess the needs of individuals, families, or communities, including assessment of individuals’ home or work environments, to identify potential health or safety problems. Prepare rooms, sterile instruments, equipment, or supplies and ensure that stock of supplies is maintained. Refer students or patients to specialized health resources or community agencies furnishing assistance. Consult with institutions or associations regarding issues or concerns relevant to the practice and profession of nursing.

**License:** Initial Application Fee for RN: $75.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>Experienced</td>
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**2018 Estimated Employment:** 52,690

**2028 Projected Employment:** 58,070

**Average Total Openings:** 3,495

**Annual Growth Rate:** 0.98%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Licensed Practical & Licensed Vocational Nurses
- Critical Care Nurses
- Acute Care Nurses
- Respiratory Therapists
- Cardiovascular Technologists & Technicians
- Psychiatric Technicians
- First-Line Supervisors of Personal Service Workers
- Medical Assistants

### Post-Secondary Institutions with Programs

- Auburn University
- Auburn University at Montgomery
- Bevill State Community College
- Bishop State Community College
- Central Alabama Community College
- Coastal Alabama Community College
- Gadsden State Community College
- George C Wallace Community College
- Jacksonville State University
- John C Calhoun State Community College
- Lawson State Community College
- Lurleen B Wallace Community College
- Northeast Alabama Community College
- Samford University
- Shelton State Community College
- Snead State Community College
- Southern Union State Community College
- Troy University
- Tuskegee University
- University of Alabama at Birmingham
- University of South Alabama
- University of West Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Occupational Therapists

Assess, plan, and organize rehabilitative programs that help build or restore vocational, homemaking, and daily living skills, as well as general independence, to persons with disabilities or developmental delays. Use therapeutic techniques, adapt the individual's environment, teach skills, and modify specific tasks that present barriers to the individual.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:**
- Complete and maintain necessary records.
- Test and evaluate patients' physical and mental abilities and analyze medical data to determine realistic rehabilitation goals for patients.
- Train caregivers in providing for the needs of a patient during and after therapy.
- Evaluate patients' progress and prepare reports that detail progress.
- Plan, organize, and conduct occupational therapy programs in hospital, institutional, or community settings to help rehabilitate those impaired because of illness, injury or psychological or developmental problems.
- Select activities that will help individuals learn work and life-management skills within limits of their mental or physical capabilities.
- Recommend changes in patients' work or living environments, consistent with their needs and capabilities.
- Design and create, or requisition, special supplies and equipment, such as splints, braces, and computer-aided adaptive equipment.
- Develop and participate in health promotion programs, group activities, or discussions to promote client health, facilitate social adjustment, alleviate stress, and prevent physical or mental disability.
- Consult with rehabilitation team to select activity programs or coordinate occupational therapy with other therapeutic activities.
- Lay out materials such as puzzles, scissors and eating utensils for use in therapy, and clean and repair these tools after therapy sessions.
- Plan and implement programs and social activities to help patients learn work or school skills and adjust to handicaps.
- Help clients improve decision making, abstract reasoning, memory, sequencing, coordination, and perceptual skills, using computer programs.
- Provide training and supervision in therapy techniques and objectives for students or nurses and other medical staff.
- Conduct research in occupational therapy.
- Advise on health risks in the workplace or on health-related transition to retirement.

**License:** Initial License Fee: $140.00

**Outlook:** Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
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<td>$27.53</td>
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<tr>
<td>Median</td>
<td>$40.82</td>
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<tr>
<td>Experienced</td>
<td>$58.19</td>
</tr>
</tbody>
</table>

**2018 Estimated Employment:** 1,340

**2028 Projected Employment:** 1,600

**Average Total Openings:** 110

**Annual Growth Rate:** 1.76%

For an explanation on omitted data, see the Missing Data section in the introduction.

#### Related Occupations
- Physical Therapists
- Nursing Instructors & Teachers, Postsecondary
- Recreational Therapists
- Recreation & Fitness Studies Teachers, Postsecondary
- Health Specialties Teachers, Postsecondary
- Healthcare Social Workers
- Athletic Trainers

#### Post-Secondary Institutions with Programs

**2020 Career Exploration Guide**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Occupational Therapy Assistants

Assist occupational therapists in providing occupational therapy treatments and procedures. May, in accordance with state laws, assist in development of treatment plans, carry out routine functions, direct activity programs, and document the progress of treatments. Generally requires formal training.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Select therapy activities to fit patients' needs and capabilities. Monitor patients' performance in therapy activities, providing encouragement. Instruct, or assist in instructing, patients and families in home programs, basic living skills, or the care and use of adaptive equipment. Maintain and promote a positive attitude toward clients and their treatment programs. Observe and record patients' progress, attitudes, and behavior and maintain this information in client records. Aid patients in dressing and grooming themselves. Implement, or assist occupational therapists with implementing, treatment plans designed to help clients function independently. Communicate and collaborate with other healthcare professionals involved with the care of a patient. Evaluate the daily living skills or capacities of physically, developmentally, or emotionally disabled clients. Attend continuing education classes. Report to supervisors, verbally or in writing, on patients' progress, attitudes, and behavior. Alter treatment programs to obtain better results if treatment is not having the intended effect. Work under the direction of occupational therapists to plan, implement, or administer educational, vocational, or recreational programs that restore or enhance performance in individuals with functional impairments. Teach patients how to deal constructively with their emotions. Demonstrate therapy techniques, such as manual or creative arts or games. Perform clerical duties, such as scheduling appointments, collecting data, or documenting health insurance billings. Assemble, clean, or maintain equipment or materials for patient use. Attend care plan meetings to review patient progress and update care plans. Order any needed educational or treatment supplies. Transport patients to and from the occupational therapy work area. Design, fabricate, or repair assistive devices or make adaptive changes to equipment or environments.

License: Initial License Fee: $115.00; Limited Permit Fee: $25.00; License Renewal Fee: $115.00; Late Fee: $50.00

Outlook: Excellent

Alabama Employment Outlook

<table>
<thead>
<tr>
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<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$21.68</td>
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<tr>
<td>Median</td>
<td>$30.22</td>
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<tr>
<td>Experienced</td>
<td>$37.88</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Physical Therapist Assistants
Licensed Practical & Licensed Vocational Nurses
Registered Nurses
Acute Care Occupational Therapy Assistant
Certified Occupational Therapist Assistant (COTA)
Certified Occupational Therapist Assistant/Licensed (COTA/L)
Certified Occupational Therapy Assistant (COTA)
Certified Occupational Therapy Assistant-Licensed (COTA-L)
Licensed Occupational Therapy Assistant
Occupational Therapist Assistant (OTA)
Occupational Therapy Assistant (OTA)
School Based Certified Occupational Therapy Assistant
Staff Certified Occupational Therapist Assistant/Licensed (Staff COTA/L)

Post-Secondary Institutions with Programs
George C Wallace State Community College-Hanceville

2020 Career Exploration Guide
182

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Operating Engineers and Other Construction Equipment Operators

Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Learn and follow safety regulations. Take actions to avoid potential hazards or obstructions, such as utility lines, other equipment, other workers, or falling objects. Start engines, move throttles, switches, or levers, or depress pedals to operate machines, such as bulldozers, trench excavators, road graders, or backhoes. Coordinate machine actions with other activities, positioning or moving loads in response to hand or audio signals from crew members. Align machines, cutterheads, or depth gauge makers with reference stakes and guidelines or ground or position equipment, following hand signals of other workers. Locate underground services, such as pipes or wires, prior to beginning work. Signal operators to guide movement of tractor-drawn machines. Repair and maintain equipment, making emergency adjustments or assisting with major repairs as necessary. Load and move dirt, rocks, equipment, or other materials, using trucks, crawler tractors, power cranes, shovels, graders, or related equipment. Drive and maneuver equipment equipped with blades in successive passes over working areas to remove topsoil, vegetation, or rocks or to distribute and level earth or terrain. Operate tractors or bulldozers to perform such tasks as clearing land, mixing sludge, trimming backfills, or building roadways or parking lots. Monitor operations to ensure that health and safety standards are met. Connect hydraulic hoses, belts, mechanical linkages, or power takeoff shafts to tractors. Select and fasten bulldozer blades or other attachments to tractors, using hitches. Operate loaders to pull out stumps, rip asphalt or concrete, rough-grade properties, bury refuse, or perform general cleanup. Operate equipment to demolish or remove debris or to remove snow from streets, roads, or parking lots. Keep records of material or equipment usage or problems encountered. Adjust handwheels and depress pedals to control attachments, such as blades, buckets, scrapers, or swing booms.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td>Hourly Wage</td>
<td>2018 Estimated Employment: 6,320</td>
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<tr>
<td>Entry</td>
<td>$13.17 Entry $27,383.00</td>
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<tr>
<td>Median</td>
<td>$18.36 Median $38,183.00</td>
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<tr>
<td>Experienced</td>
<td>$28.67 Experienced $59,621.00</td>
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</tbody>
</table>

Average Total Openings: 800
Annual Growth Rate: 0.70%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Crane & Tower Operators
- Excavating & Loading Machine & Dragline Operators,
- Surface Mining
- Paving, Surfacing, & Tamping Equipment Operators
- Pile Driver Operators
- Highway Maintenance Workers
- Loading & Moving Machine Operators, Underground Mining
- Control & Valve Installers & Repairers, Except Mechanical Door
- Rail-Track Laying & Maintenance Equipment Operators
- Drilling & Boring Machine Tool Setters, Operators, & Tenders
- Pipelayers

2020 Career Exploration Guide 183

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Design, measure, fit, and adapt lenses and frames for client according to written optical prescription or specification. Assist client with inserting, removing, and caring for contact lenses. Assist client with selecting frames. Measure customer for size of eyeglasses and coordinate frames with facial and eye measurements and optical prescription. Prepare work order for optical laboratory containing instructions for grinding and mounting lenses in frames. Verify exactness of finished lens spectacles. Adjust frame and lens position to fit client. May shape or reshape frames. Includes contact lens opticians.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks:
Evaluate prescriptions in conjunction with clients' vocational and avocational visual requirements. Recommend specific lenses, lens coatings, and frames to suit client needs. Verify that finished lenses are ground to specifications. Measure clients' bridge and eye size, temple length, vertex distance, pupillary distance, and optical centers of eyes, using measuring devices. Sell goods such as contact lenses, spectacles, sunglasses, and goods related to eyes, in general. Assist clients in selecting frames according to style and color, and ensure that frames are coordinated with facial and eye measurements and optical prescriptions. Heat, shape, or bend plastic or metal frames to adjust eyeglasses to fit clients, using pliers and hands. Show customers how to insert, remove, and care for their contact lenses. Determine clients' current lens prescriptions, when necessary, using lensometers or lens analyzers and clients' eyeglasses. Maintain records of customer prescriptions, work orders, and payments. Fabricate lenses to meet prescription specifications. Instruct clients in how to wear and care for eyeglasses. Prepare work orders and instructions for grinding lenses and fabricating eyeglasses. Assemble eyeglasses by cutting and edging lenses, and fitting the lenses into frames. Obtain a customer's previous record, or verify a prescription with the examining optometrist or ophthalmologist. Order and purchase frames and lenses. Repair damaged frames. Perform administrative duties, such as tracking inventory and sales, submitting patient insurance information, and performing simple bookkeeping. Supervise the training of student opticians. Arrange and maintain displays of optical merchandise.

License: Examination Fee: $500.00; Renewal Fee: $160.00; Therapeutic Fee: $100.00; Alabama Drug Data Base Fee: $10.00

Outlook: Good

Alabama Wage Data

<table>
<thead>
<tr>
<th>Entry</th>
<th>Median</th>
<th>Experienced</th>
<th>Hourly Wage</th>
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<tr>
<td>$10.38</td>
<td>$14.49</td>
<td>$22.38</td>
<td>$10.38</td>
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</table>

Alabama Projections

| 2018 Estimated Employment: | 1,010 |
| 2028 Projected Employment: | 1,120 |
| Average Total Openings:    | 95    |
| Annual Growth Rate:        | 1.04% |

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Pharmacy Technicians
Wholesale & Retail Buyers, Except Farm Products
Medical Assistants
Social & Human Service Assistants
Physical Therapist Assistants
Certified Optician
Dispensing Optician
Licensed Dispensing Optician (LDO)
Licensed Optician
Ophthalmic Dispenser
Optician

Post-Secondary Institutions with Programs
University of Alabama at Birmingham

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Order Clerks

Receive and process incoming orders for materials, merchandise, classified ads, or services such as repairs, installations, or rental of facilities. Generally receives orders via mail, phone, fax, or other electronic means. Duties include informing customers of receipt, prices, shipping dates, and delays; preparing contracts; and handling complaints.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Verify customer and order information for correctness, checking it against previously obtained information as necessary. Receive and respond to customer complaints. Review orders for completeness according to reporting procedures and forward incomplete orders for further processing. Inform customers by mail or telephone of order information, such as unit prices, shipping dates, and any anticipated delays. Obtain customers' names, addresses, and billing information, product numbers, and specifications of items to be purchased, and enter this information on order forms. Recommend merchandise or services that will meet customers' needs. Prepare invoices, shipping documents, and contracts. Confer with production, sales, shipping, warehouse, or common carrier personnel to expedite or trace shipments. Compute total charges for merchandise or services and shipping charges. Direct specified departments or units to prepare and ship orders to designated locations. Inspect outgoing work for compliance with customers' specifications. Check inventory records to determine availability of requested merchandise. Collect payment for merchandise, record transactions, and send items, such as checks or money orders for further processing. Attempt to sell additional merchandise or services to prospective or current customers by telephone or through visits. File copies of orders received, or post orders on records. Notify departments when supplies of specific items are low, or when orders would deplete available supplies.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2018 Estimated Employment: 850</td>
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<tr>
<td></td>
<td>2028 Projected Employment: 950</td>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
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<tr>
<td></td>
<td>$28,085.00</td>
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<tr>
<td></td>
<td>$43,524.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Parts Salespersons
Weighers, Measurers, Checkers, & Samplers,
Recordkeeping
Receptionists & Information Clerks
Hotel, Motel, & Resort Desk Clerks
Tellers
Postal Service Clerks
Cargo & Freight Agents
Switchboard Operators, Including Answering Service
Production, Planning, & Expediting Clerks
Office Clerks, General

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Diagnose, adjust, repair, or overhaul small engines used to power lawn mowers, chain saws, recreational sporting equipment, and related equipment.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Record repairs made, time spent, and parts used. Test and inspect engines to determine malfunctions, to locate missing and broken parts, and to verify repairs, using diagnostic instruments. Dismantle engines, using hand tools, and examine parts for defects. Repair and maintain gasoline engines used to power equipment such as portable saws, lawn mowers, generators, and compressors. Adjust points, valves, carburetors, distributors, and spark plug gaps, using feeler gauges. Repair or replace defective parts such as magnetos, water pumps, gears, pistons, and carburetors, using hand tools. Perform routine maintenance such as cleaning and oiling parts, honing cylinders, and tuning ignition systems. Reassemble engines after repair or maintenance work is complete. Replace motors. Obtain problem descriptions from customers, and prepare cost estimates for repairs. Show customers how to maintain equipment. Remove engines from equipment, and position and bolt engines to repair stands. Sell parts and equipment. Grind, ream, rebore, and re-tap parts to obtain specified clearances, using grinders, lathes, taps, reamers, boring machines, and micrometers.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
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<tr>
<td>Experienced</td>
<td>$23.37</td>
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</tbody>
</table>

**Average Total Openings:** 85

**Annual Growth Rate:** 0.58%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Motorcycle Mechanics
- Bicycle Repairers
- Locksmiths & Safe Repairers
- Motorboat Mechanics & Service Technicians
- Gas Compressor & Gas Pumping Station Operators
- Recreational Vehicle Service Technicians
- Crushing, Grinding, & Polishing Machine Setters, Operators, & Tenders
- Home Appliance Repairers
- Boilermakers
- Automotive Body & Related Repairers
- Chain Saw Technician
- Golf Cart Mechanic
- Lawnmower Repair Mechanic
- Mechanic
- Outdoor Power Equipment Service Technician
- Service Technician (Service Tech)
- Shop Mechanic
- Small Engine Mechanic
- Small Engine Technician (Small Engine Tech)

**Post-Secondary Institutions with Programs**

- George C Wallace Community College-Dothan
- Jefferson Davis Community College
- Coastal Alabama Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
## Education
These occupations typically require less than a high school diploma - or the equivalent.

### OJT
Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

### Tasks
Attach identification labels to finished packaged items, or cut stencils and stencil information on containers, such as lot numbers or shipping destinations. Sort, grade, weigh, and inspect products, verifying and adjusting product weight or measurement to meet specifications. Stop or reset machines when malfunctions occur, clear machine jams, and report malfunctions to a supervisor. Observe machine operations to ensure quality and conformity of filled or packaged products to standards. Remove finished packaged items from machine and separate rejected items. Monitor the production line, watching for problems such as pile-ups, jams, or glue that isn’t sticking properly. Inspect and remove defective products and packaging material. Start machine by engaging controls. Tend or operate machine that packages product. Clean, oil, and make minor adjustments or repairs to machinery and equipment, such as opening valves or setting guides. Regulate machine flow, speed, or temperature. Adjust machine components and machine tension and pressure according to size or processing angle of product. Supply materials to spindles, conveyors, hoppers, or other feeding devices and unload packaged product. Stack finished packaged items, or wrap protective material around each item, and pack the items in cartons or containers. Package the product in the form in which it will be sent out, for example, filling bags with flour from a chute or spout. Stock and sort product for packaging or filling machine operation, and replenish packaging supplies, such as wrapping paper, plastic sheet, boxes, cartons, glue, ink, or labels. Count and record finished and rejected packaged items. Clean packaging containers, line and pad crates, or assemble cartons to prepare for product packing. Secure finished packaged items by hand tying, sewing, gluing, stapling, or attaching fastener. Clean and remove damaged or otherwise inferior materials to prepare raw products for processing.

### License
No License Required.

### Outlook
Satisfactory

### Alabama Employment Outlook

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<td>Hourly Wage</td>
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<td>$13.77</td>
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<tr>
<td>$21.92</td>
<td>$45,594.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
Cutting, Punching, & Press Machine Setters, Operators, & Tenders
Adhesive Bonding Machine Operators & Tenders
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
Molders, Shapers, & Casters, Except Metal & Plastic
Sawing Machine Setters, Operators, & Tenders, Wood
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Molding, Coremaking, & Casting Machine Setters, Operators, & Tenders
Textile Winding, Twisting, & Drawing Out Machine Setters, Operators, & Tenders
Forging Machine Setters, Operators, & Tenders
Print Binding & Finishing Workers

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Painters, Construction and Maintenance

Paint walls, equipment, buildings, bridges, and other structural surfaces, using brushes, rollers, and spray guns. May remove old paint to prepare surface prior to painting. May mix colors or oils to obtain desired color or consistency.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Fill cracks, holes, or joints with caulk, putty, plaster, or other fillers, using caulking guns or putty knives. Cover surfaces with dropcloths or masking tape and paper to protect surfaces during painting. Smooth surfaces, using sandpaper, scrapers, brushes, steel wool, or sanding machines. Read work orders or receive instructions from supervisors or homeowners to determine work requirements. Apply primers or sealers to prepare new surfaces, such as bare wood or metal, for finish coats. Apply paint, stain, varnish, enamel, or other finishes to equipment, buildings, bridges, or other structures, using brushes, spray guns, or rollers. Erect scaffolding or swing gates, or set up ladders, to work above ground level. Mix and match colors of paint, stain, or varnish with oil or thinning and drying additives to obtain desired colors and consistencies. Calculate amounts of required materials and estimate costs, based on surface measurements or work orders. Polish final coats to specified finishes. Wash and treat surfaces with oil, turpentine, mildew remover, or other preparations, and sand rough spots to ensure that finishes will adhere properly. Select and purchase tools or finishes for surfaces to be covered, considering durability, ease of handling, methods of application, and customers’ wishes. Remove old finishes by stripping, sanding, wire brushing, burning, or using water or abrasive blasting. Remove fixtures such as pictures, door knobs, lamps, or electric switch covers prior to painting. Use special finishing techniques such as sponging, ragging, layering, or faux finishing. Cut stencils and brush or spray lettering or decorations on surfaces.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<td></td>
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<tr>
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<tr>
<td>Entry</td>
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<tr>
<td></td>
<td>$26,014.00</td>
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<tr>
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<td>$17.37</td>
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<tr>
<td></td>
<td>$36,126.00</td>
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<tr>
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<tr>
<td></td>
<td>$49,735.00</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>2018 Estimated Employment:</td>
<td>4,240</td>
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<tr>
<td>2028 Projected Employment:</td>
<td>4,510</td>
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<tr>
<td>Average Total Openings:</td>
<td>470</td>
</tr>
<tr>
<td>Annual Growth Rate:</td>
<td>0.61%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Paperhangers
Glaziers
Insulation Workers, Floor, Ceiling, & Wall
Insulation Workers, Mechanical
Terrazzo Workers & Finishers
Roofers
Helpers--Carpenters
Tapers
Laundry & Dry-Cleaning Workers
Stone Cutters & Carvers, Manufacturing

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Paralegals and Legal Assistants

Assist lawyers by investigating facts, preparing legal documents, or researching legal precedent. Conduct research to support a legal proceeding, to formulate a defense, or to initiate legal action.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Prepare affidavits or other documents, such as legal correspondence, and organize and maintain documents in paper or electronic filing system. Prepare legal documents, including briefs, pleadings, appeals, wills, contracts, and real estate closing statements. Prepare for trial by performing tasks such as organizing exhibits. Investigate facts and law of cases and search pertinent sources, such as public records and internet sources, to determine causes of action and to prepare cases. Meet with clients and other professionals to discuss details of case. File pleadings with court clerk. Gather and analyze research data, such as statutes, decisions, and legal articles, codes, and documents. Direct and coordinate law office activity, including delivery of subpoenas.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

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<tr>
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<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry</td>
<td>Entry $14.09</td>
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<tr>
<td></td>
<td>Average $29,297.00</td>
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<tr>
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<td>Average $45,214.00</td>
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<tr>
<td>Experienced</td>
<td>Experienced $33.26</td>
</tr>
<tr>
<td></td>
<td>Average $69,173.00</td>
</tr>
</tbody>
</table>

**2018 Estimated Employment:** 3,130

**2028 Projected Employment:** 3,540

**Average Total Openings:** 395

**Annual Growth Rate:** 1.23%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Legal Secretaries & Administrative Assistants
- Brokerage Clerks
- Billing & Posting Clerks
- Executive Secretaries & Executive Administrative Assistants
- Bookkeeping, Accounting, & Auditing Clerks
- Eligibility Interviewers, Government Programs
- Title Examiners, Abstractors, & Searchers
- Tax Examiners & Collectors, & Revenue Agents
- Court, Municipal, & License Clerks
- Tax Preparers

### Post-Secondary Institutions with Programs

- Coastal Alabama Community College
- Enterprise State Community College
- Gadsden State Community College
- George C Wallace State Community College-Hanceville
- Herzing University-Birmingham
- Samford University
- Shelton State Community College
- South University-Montgomery

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Paramedics

Administer basic or advanced emergency medical care and assess injuries and illnesses. May administer medication intravenously, use equipment such as EKGs, or administer advanced life support to sick or injured individuals.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

Tasks: Observe, record, and report to physician the patient's condition or injury, the treatment provided, and reactions to drugs or treatment. Immobilize patient for placement on stretcher and ambulance transport, using backboard or other spinal immobilization device. Administer first aid treatment or life support care to sick or injured persons in prehospital settings. Administer drugs, orally or by injection, or perform intravenous procedures under a physician's direction. Comfort and reassure patients. Assess nature and extent of illness or injury to establish and prioritize medical procedures. Operate equipment, such as electrocardiograms (EKGs), external defibrillators, or bag valve mask resuscitators, in advanced life support environments. Coordinate work with other emergency medical team members or police or fire department personnel. Maintain vehicles and medical and communication equipment and replenish first aid equipment and supplies. Perform emergency diagnostic and treatment procedures, such as stomach suction, airway management, or heart monitoring, during ambulance ride. Communicate with dispatchers or treatment center personnel to provide information about situation, to arrange reception of victims, or to receive instructions for further treatment. Coordinate with treatment center personnel to obtain patients' vital statistics and medical history, to determine the circumstances of the emergency, and to administer emergency treatment. Drive mobile intensive care unit to specified location, following instructions from emergency medical dispatcher. Decontaminate ambulance interior following treatment of patient with infectious disease and report case to proper authorities. Attend training classes to maintain certification licensure, keep abreast of new developments in the field, or maintain existing knowledge.

License: License Fee: $12.00; Renewal Fee: $12.00; Renewal Expired: $62.00

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>2018 Estimated Employment: 3,820</td>
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<tr>
<td>Entry</td>
<td>$9.29</td>
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<td>Median</td>
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<td>$29,571.00</td>
</tr>
<tr>
<td>Experienced</td>
<td>$40,370.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations:
First Responder
Flight Paramedic
Paramedic

Post-Secondary Institutions with Programs:
John C Calhoun State Community College
Chattahoochee Valley Community College
George C Wallace Community College-Dothan
Southern Union State Community College
University of South Alabama
Columbia Southern University
Northeast Alabama Community College
Northwest-Shoals Community College
H Councill Trenholm State Community College
George C Wallace State Community College-Hanceville
Gadsden State Community College
Lurleen B Wallace Community College
Coastal Alabama Community College
Herzing University-Birmingham
Bevill State Community College
Lawson State Community College
Enterprise State Community College
Jefferson State Community College
Shelton State Community College

2020 Career Exploration Guide
190

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Parts Salespersons

Sell spare and replacement parts and equipment in repair shop or parts store.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:**
- Receive and fill telephone orders for parts. Fill customer orders from stock and place orders when requested items are out of stock. Receive payment or obtain credit authorization. Read catalogs, microfiche viewers, or computer displays to determine replacement part stock numbers and prices. Prepare sales slips or sales contracts. Determine replacement parts required, according to inspections of old parts, customer requests, or customers' descriptions of malfunctions. Assist customers, such as responding to customer complaints and updating them about back-ordered parts. Locate and label parts and maintain inventory of stock. Mark and store parts in stockrooms according to prearranged systems. Pick up and deliver parts. Discuss use and features of various parts, based on knowledge of machines or equipment. Examine returned parts for defects, and exchange defective parts or refund money. Maintain and clean work and inventory areas. Manage shipments by researching shipping methods or costs and tracking packages. Advise customers on substitution or modification of parts when identical replacements are not available. Place new merchandise on display.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
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<td>$14.81</td>
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<tr>
<td>Experienced</td>
<td>$25.50</td>
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</table>

2018 Estimated Employment: 4,150
2028 Projected Employment: 4,340
Average Total Openings: 530
Annual Growth Rate: 0.45%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
Retail Salespersons
Order Clerks
Postal Service Clerks
Hotel, Motel, & Resort Desk Clerks
Tellers
Counter & Rental Clerks
Weighers, Measurers, Checkers, & Samplers, Recordkeeping
Gambling Change Persons & Booth Cashiers
Production, Planning, & Expediting Clerks
Receptionists & Information Clerks

### Post-Secondary Institutions with Programs

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Paving, Surfacing, and Tamping Equipment Operators

Operate equipment used for applying concrete, asphalt, or other materials to road beds, parking lots, or airport runways and taxiways or for tamping gravel, dirt, or other materials. Includes concrete and asphalt paving machine operators, form tampers, tamping machine operators, and stone spreader operators.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks: Start machine, engage clutch, and push and move levers to guide machine along forms or guidelines and to control the operation of machine attachments. Fill tanks, hoppers, or machines with paving materials. Control paving machines to push dump trucks and to maintain a constant flow of asphalt or other material into hoppers or screeds. Observe distribution of paving material to adjust machine settings or material flow, and indicate low spots for workers to add material. Coordinate truck dumping. Drive machines onto truck trailers, and drive trucks to transport machines and material to and from job sites. Inspect, clean, maintain, and repair equipment, using mechanics' hand tools, or report malfunctions to supervisors. Set up and tear down equipment. Operate machines to spread, smooth, level, or steel-reinforce stone, concrete, or asphalt on road beds. Light burners or start heating units of machines, and regulate screed temperatures and asphalt flow rates. Control traffic. Shovel blacktop. Operate tamping machines or manually roll surfaces to compact earth fills, foundation forms, and finished road materials, according to grade specifications. Operate oil distributors, loaders, chip spreaders, dump trucks, and snow plows.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$11.87</td>
<td>$24,698.00</td>
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<tr>
<td>Median</td>
<td>Median</td>
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<tr>
<td>$15.85</td>
<td>$32,967.00</td>
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<td>Experienced</td>
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<tr>
<td>$24.57</td>
<td>$51,103.00</td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

- Excavating & Loading Machine & Dragline Operators, Surface Mining
- Rail-Track Laying & Maintenance Equipment Operators
- Highway Maintenance Workers
- Pile Driver Operators
- Cement Masons & Concrete Finishers
- Operating Engineers & Other Construction Equipment Operators
- Pipelayers
- Fence Erectors
- Helpers--Extraction Workers
- Helpers--Brickmasons, Blockmasons, Stonemasons, & Tile & Marble Setters

Post-Secondary Institutions with Programs

- See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Personal Care Aides

Provide personalized assistance to individuals with disabilities or illness who require help with personal care and activities of daily living support (e.g., feeding, bathing, dressing, grooming, toileting, and ambulation). May also provide help with tasks such as preparing meals, doing light housekeeping, and doing laundry. Work is performed in various settings depending on the needs of the care recipient and may include locations such as their home, place of work, out in the community, or at a daytime nonresidential facility.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Plan, shop for, or prepare nutritious meals or assist families in planning, shopping for, or preparing nutritious meals. Perform housekeeping duties, such as cooking, cleaning, washing clothes or dishes, or running errands. Provide clients with communication assistance, typing their correspondence or obtaining information for them. Prepare and maintain records of client progress and services performed, reporting changes in client condition to manager or supervisor. Instruct or advise clients on issues such as household cleanliness, utilities, hygiene, nutrition, or infant care. Care for individuals or families during periods of incapacitation, family disruption, or convalescence, providing companionship, personal care, or help in adjusting to new lifestyles. Perform healthcare-related tasks, such as monitoring vital signs and medication, under the direction of registered nurses or physiotherapists. Train family members to provide bedside care. Administer bedside or personal care, such as ambulation or personal hygiene assistance. Transport clients to locations outside the home, such as to physicians' offices or on outings, using a motor vehicle. Participate in case reviews, consulting with the team caring for the client, to evaluate the client's needs and plan for continuing services.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
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<td><strong>Alabama Wage Data</strong></td>
<td><strong>Alabama Projections</strong></td>
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<td><strong>Hourly Wage</strong></td>
<td><strong>2018 Estimated Employment:</strong> 15,970</td>
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<td><strong>Annual Wage</strong></td>
<td><strong>2028 Projected Employment:</strong> 19,270</td>
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<td>Experienced</td>
<td>$24,836.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Home Health Aides
Physical Therapist Aides
Childcare Workers
Passenger Attendants
Funeral Attendants
Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers
Occupational Therapy Aides
Ambulance Drivers & Attendants, Except Emergency Medical Technicians
Gambling Change Persons & Booth Cashiers
Bakers
Aide
Blind Aide
Blind Escort
Care Provider
Caregiver
Companion
Convalescent Sitter
Direct Care Staffer
Direct Support Professional (DSP)
Direct Support Staff Member
Family Member Caretaker
Geriatric Aide
Guardian Family Member
Live-In Caregiver

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Personal Financial Advisors

Advise clients on financial plans using knowledge of tax and investment strategies, securities, insurance, pension plans, and real estate. Duties include assessing clients' assets, liabilities, cash flow, insurance coverage, tax status, and financial objectives. May also buy and sell financial assets for clients.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 year, up to and including 2 years

Tasks:
- Interview clients to determine their current income, expenses, insurance coverage, tax status, financial objectives, risk tolerance, or other information needed to develop a financial plan. Recommend to clients strategies in cash management, insurance coverage, investment planning, or other areas to help them achieve their financial goals. Manage client portfolios, keeping client plans up-to-date. Implement financial planning recommendations or refer clients to someone who can assist them with plan implementation. Analyze financial information obtained from clients to determine strategies for meeting clients' financial objectives. Answer clients' questions about the purposes and details of financial plans and strategies. Review clients' accounts and plans regularly to determine whether life changes, economic changes, environmental concerns, or financial performance indicate a need for plan reassessment. Contact clients periodically to determine any changes in their financial status. Investigate available investment opportunities to determine compatibility with client financial plans. Explain to clients the personal financial advisor's responsibilities and the types of services to be provided. Recommend financial products, such as stocks, bonds, mutual funds, or insurance. Prepare or interpret for clients information, such as investment performance reports, financial document summaries, or income projections. Monitor financial market trends to ensure that client plans are responsive. Guide clients in the gathering of information, such as bank account records, income tax returns, life and disability insurance records, pension plans, or wills. Recruit and maintain client bases. Meet with clients' other advisors, such as attorneys, accountants, trust officers, or investment bankers, to fully understand clients' financial goals and circumstances. Devise debt liquidation plans that include payoff priorities and timelines.

License: Filing Fee: $250.00; Application Fee: $70.00

Outlook: Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
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<tbody>
<tr>
<td>Entry</td>
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<td>Median</td>
<td>$39.21</td>
<td>2,028 Projected Employment:</td>
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<tr>
<td>Experienced</td>
<td>$***</td>
<td>Average Total Openings:</td>
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<tr>
<td>Experienced</td>
<td>$***</td>
<td>240</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Securities, Commodities, & Financial Services Sales Agents
- Insurance Sales Agents
- Credit Analysts
- Loan Officers
- Market Research Analysts & Marketing Specialists
- Budget Analysts
- Compensation, Benefits, & Job Analysis Specialists
- Financial Managers

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Pest Control Workers**

Apply or release chemical solutions or toxic gases and set traps to kill or remove pests and vermin that infest buildings and surrounding areas.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Record work activities performed. Inspect premises to identify infestation source and extent of damage to property, wall, or roof porosity and access to infested locations. Recommend treatment and prevention methods for pest problems to clients. Spray or dust chemical solutions, powders, or gases into rooms, onto clothing, furnishings, or wood, or over marshlands, ditches, or catch basins. Clean work site after completion of job. Drive truck equipped with power spraying equipment. Measure area dimensions requiring treatment, calculate fumigant requirements, and estimate cost for service. Study preliminary reports or diagrams of infested area and determine treatment type required to eliminate and prevent recurrence of infestation. Direct or assist other workers in treatment or extermination processes to eliminate or control rodents, insects, or weeds.

**License:** Exam Fee: Paper $75.00; Permit/License Fee: $175.00; (plus $100.00 per category of work performed)

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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</table>

2018 Estimated Employment: ***
2028 Projected Employment: ***
Average Total Openings: 320
Annual Growth Rate: 0.68%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers
Explosives Workers, Ordnance Handling Experts, & Blasters
Automotive Glass Installers & Repairers
Locksmiths & Safe Repairers
Animal Control Workers
Hazardous Materials Removal Workers
Non-Destructive Testing Specialists
Tree Trimmers & Pruners
Pesticide Handlers, Sprayers, & Applicators, Vegetation
Forest & Conservation Workers

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Pesticide Handlers, Sprayers, and Applicators, Vegetation

Mix or apply pesticides, herbicides, fungicides, or insecticides through sprays, dusts, vapors, soil incorporation, or chemical application on trees, shrubs, lawns, or crops. Usually requires specific training and state or federal certification.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Mix pesticides, herbicides, or fungicides for application to trees, shrubs, lawns, or botanical crops. Fill sprayer tanks with water and chemicals, according to formulas. Lift, push, and swing nozzles, hoses, and tubes to direct spray over designated areas. Identify lawn or plant diseases to determine the appropriate course of treatment. Cover areas to specified depths with pesticides, applying knowledge of weather conditions, droplet sizes, elevation-to-distance ratios, and obstructions. Start motors and engage machinery, such as sprayer agitators or pumps or portable spray equipment. Connect hoses and nozzles selected according to terrain, distribution pattern requirements, types of infestations, and velocities. Clean or service machinery to ensure operating efficiency, using water, gasoline, lubricants, or hand tools.

**License:** Exam Fee: Paper $75.00; Permit/License Fee: $175.00; (plus $100.00 per category of work performed)

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>$22.70</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Control & Valve Installers & Repairers, Except Mechanical
- Door
- Forest & Conservation Workers
- Transportation Vehicle, Equipment & Systems Inspectors, Except Aviation
- Stationary Engineers & Boiler Operators
- Heavy & Tractor-Trailer Truck Drivers
- Agricultural Technicians
- Log Graders & Scalers
- Maintenance & Repair Workers, General
- Tree Trimmers & Pruners
- Forest & Conservation Technicians
- Chemical Applicator
- Integrated Pest Management Technician (IPM Technician)
- Lawn Specialist
- Lawn Technician
- Licensed Pesticide Applicator
- Pest Control Technician
- Pesticide Applicator
- Spray Applicator
- Spray Technician
- Tree & Shrub Technician

### Post-Secondary Institutions with Programs

- Coastal Alabama Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Pharmacy Technicians

Prepare medications under the direction of a pharmacist. May measure, mix, count out, label, and record amounts and dosages of medications according to prescription orders.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Receive written prescription or refill requests and verify that information is complete and accurate. Prepack bulk medicines, fill bottles with prescribed medications, and type and affix labels. Answer telephones, responding to questions or requests. Maintain proper storage and security conditions for drugs. Assist customers by answering simple questions, locating items, or referring them to the pharmacist for medication information. Price and file prescriptions that have been filled. Establish or maintain patient profiles, including lists of medications taken by individual patients. Order, label, and count stock of medications, chemicals, or supplies and enter inventory data into computer. Receive and store incoming supplies, verify quantities against invoices, check for outdated medications in current inventory, and inform supervisors of stock needs and shortages. Mix pharmaceutical preparations, according to written prescriptions. Operate cash registers to accept payment from customers. Clean and help maintain equipment or work areas and sterilize glassware, according to prescribed methods.

**License:** Application for Examination Fee: $60.00; Background Fee: $40.00; Transaction Fee: $3.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$10.49</td>
<td>$21,817.00</td>
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<tr>
<td>Median</td>
<td>Median</td>
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<tr>
<td>$14.36</td>
<td>$29,874.00</td>
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<tr>
<td>$19.38</td>
<td>$40,306.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Medical Assistants
- Pharmacy Aides
- Dental Assistants
- Opticians, Dispensing
- Physical Therapist Assistants
- Licensed Practical & Licensed Vocational Nurses
- Endoscopy Technicians
- Veterinary Assistants & Laboratory Animal Caretakers
- Occupational Therapy Assistants
- Physical Therapist Aides

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Phlebotomists

Draw blood for tests, transfusions, donations, or research. May explain the procedure to patients and assist in the recovery of patients with adverse reactions.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Dispose of contaminated sharps, in accordance with applicable laws, standards, and policies. Organize or clean blood-drawing trays, ensuring that all instruments are sterile and all needles, syringes, or related items are of first-time use. Draw blood from veins by vacuum tube, syringe, or butterfly venipuncture methods. Match laboratory requisition forms to specimen tubes. Dispose of blood or other biohazard fluids or tissue, in accordance with applicable laws, standards, or policies. Conduct standards tests, such as blood alcohol, blood culture, oral glucose tolerance, glucose screening, blood smears, or peak and trough drug levels tests. Collect specimens at specific time intervals for tests, such as those assessing therapeutic drug levels. Process blood or other fluid samples for further analysis by other medical professionals. Provide sample analysis results to physicians to assist diagnosis. Enter patient, specimen, insurance, or billing information into computer. Document route of specimens from collection to laboratory analysis and diagnosis. Draw blood from capillaries by dermal puncture, such as heel or finger stick methods. Conduct hemoglobin tests to ensure donor iron levels are normal. Transport specimens or fluid samples from collection sites to laboratories. Collect fluid or tissue samples, using appropriate collection procedures. Explain fluid or tissue collection procedures to patients. Train other medical personnel in phlebotomy or laboratory techniques.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>Annual Wage</td>
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<tr>
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<tr>
<td>Experienced</td>
<td>$19.37</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Certified Phlebotomy Technician
Collections Technician
Phlebotomist
Phlebotomy Services Representative
Phlebotomy Technician

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Under close supervision of a physical therapist or physical therapy assistant, perform only delegated, selected, or routine tasks in specific situations. These duties include preparing the patient and the treatment area.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:**
- Clean and organize work area and disinfect equipment after treatment. Instruct, motivate, safeguard, or assist patients practicing exercises or functional activities, under direction of medical staff. Record treatment given and equipment used. Administer active or passive manual therapeutic exercises, therapeutic massage, or heat, light, sound, water, or electrical modality treatments, such as ultrasound. Transport patients to and from treatment areas, using wheelchairs or providing standing support. Change linens, such as bed sheets and pillow cases. Secure patients into or onto therapy equipment. Schedule patient appointments with physical therapists and coordinate therapists' schedules. Observe patients during treatment to compile and evaluate data on patients' responses and progress and report to physical therapist. Confer with physical therapy staff or others to discuss and evaluate patient information for planning, modifying, or coordinating treatment. Arrange treatment supplies to keep them in order. Perform clerical duties, such as taking inventory, ordering supplies, answering telephone, taking messages, or filling out forms. Maintain equipment or furniture to keep it in good working condition, including performing the assembly or disassembly of equipment or accessories. Assist patients to dress, undress, or put on and remove supportive devices, such as braces, splints, or slings.

**License:** No License Required.

**Outlook:** Very Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Personal Care Aides
- Home Health Aides
- Occupational Therapy Aides
- Childcare Workers
- Veterinary Assistants & Laboratory Animal Caretakers
- Pharmacy Aides
- Shampooers
- Gambling Change Persons & Booth Cashiers
- Bartenders
- Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers

**Post-Secondary Institutions with Programs**
Physical Therapist Assistants

Assist physical therapists in providing physical therapy treatments and procedures. May, in accordance with state laws, assist in the development of treatment plans, carry out routine functions, document the progress of treatment, and modify specific treatments in accordance with patient status and within the scope of treatment plans established by a physical therapist. Generally requires formal training.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Instruct, motivate, safeguard, and assist patients as they practice exercises or functional activities. Document patient information, such as notes on their progress. Observe patients during treatments to compile and evaluate data on their responses and progress and provide results to physical therapist in person or through progress notes. Instruct patients in proper body mechanics and in ways to improve functional mobility, such as aquatic exercise. Secure patients into or onto therapy equipment. Confer with physical therapy staff or others to discuss and evaluate patient information for planning, modifying, or coordinating treatment. Administer active or passive manual therapeutic exercises, therapeutic massage, aquatic physical therapy, or heat, light, sound, or electrical modality treatments, such as ultrasound. Transport patients to and from treatment areas, lifting and transferring them according to positioning requirements. Clean work area and check and store equipment after treatment. Communicate with or instruct caregivers or family members on patient therapeutic activities or treatment plans. Measure patients' range-of-joint motion, body parts, or vital signs to determine effects of treatments or for patient evaluations. Train patients in the use of orthopedic braces, prostheses, or supportive devices. Monitor operation of equipment and record use of equipment and administration of treatment. Assist patients to dress, undress, or put on and remove supportive devices, such as braces, splints, or slings. Attend or conduct continuing education courses, seminars, or in-service activities. Fit patients for orthopedic braces, prostheses, or supportive devices, such as crutches. Perform postural drainage, percussions, or vibrations or teach deep breathing exercises to treat respiratory conditions. Perform clerical duties, such as taking inventory, ordering supplies, answering telephone, taking messages, or filling out forms.

License: Application Fee: $100.00; Annual Renewal Fee: $93.00; Expired Renewal Fee: $50.00; Original License Reprint: $5.00; Directory of Licensees: $75.00

Outlook: Very Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
<th>Average Total Openings:</th>
<th>Annual Growth Rate:</th>
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<tbody>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Licensed Practical & Licensed Vocational Nurses
Occupational Therapy Assistants
Medical Assistants
Registered Nurses
Psychiatric Technicians
Preschool Teachers, Except Special Education
Social & Human Service Assistants
Athletic Trainers
Career/Technical Education Teachers, Postsecondary

Post-Secondary Institutions with Programs
Bishop State Community College
George C Wallace Community College-Dothan
George C Wallace State Community College-Hanceville
Jefferson State Community College
John C Calhoun State Community College
South University-Montgomery

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and improve or correct disabling conditions resulting from disease or injury.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Plan, prepare, or carry out individually designed programs of physical treatment to maintain, improve, or restore physical functioning, alleviate pain, or prevent physical dysfunction in patients. Perform and document an initial exam, evaluating data to identify problems and determine a diagnosis prior to intervention. Record prognosis, treatment, response, and progress in patient's chart or enter information into computer. Instruct patient and family in treatment procedures to be continued at home. Evaluate effects of treatment at various stages and adjust treatments to achieve maximum benefit. Confer with the patient, medical practitioners, or appropriate others to plan, implement, or assess the intervention program. Administer manual exercises, massage, or traction to help relieve pain, increase patient strength, or decrease or prevent deformity or crippling. Obtain patients' informed consent to proposed interventions. Test and measure patient's strength, motor development and function, sensory perception, functional capacity, or respiratory or circulatory efficiency and record data. Direct, supervise, assess, and communicate with supportive personnel. Review physician's referral and patient's medical records to help determine diagnosis and physical therapy treatment required. Identify and document goals, anticipated progress, and plans for reevaluation. Provide information to the patient about the proposed intervention, its material risks and expected benefits, and any reasonable alternatives. Provide educational information about physical therapy or physical therapists, injury prevention, ergonomics, or ways to promote health. Inform patients and refer to appropriate practitioners when diagnosis reveals findings outside physical therapy. Discharge patient from physical therapy when goals or projected outcomes have been attained and provide for appropriate follow-up care or referrals. Administer treatment involving application of physical agents, using equipment, moist packs, ultraviolet or infrared lamps, or ultrasound machines. Refer clients to community resources or services. Construct, maintain, or repair medical supportive devices. Evaluate, fit, or adjust prosthetic or orthotic devices or recommend modification to orthotist. Teach physical therapy students or those in other health professions. Conduct or support research and apply research findings to practice. Participate in community or community agency activities or help to formulate public policy.

**License:**
- Application Fee: $100.00; Annual Renewal Fee: $130.00; Expired Renewal Fee: $230.00; Restoration Fee: $50.00; Original License Reprint: $5.00; Directory of Licensees: $75.00

**Outlook:** Good

### Alabama Employment Outlook

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<th></th>
<th>Annual Wage</th>
<th>2018 Estimated Employment: 3,010</th>
<th>2028 Projected Employment: 3,580</th>
<th>Average Total Openings: 195</th>
<th>Annual Growth Rate: 1.75%</th>
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<tr>
<td><strong>Hourly Wage</strong></td>
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<tr>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Occupational Therapists
- Nursing Instructors & Teachers, Postsecondary
- Health Specialties Teachers, Postsecondary

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Pipelayers

Lay pipe for storm or sanitation sewers, drains, and water mains. Perform any combination of the following tasks: grade trenches or culverts, position pipe, or seal joints.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Install or use instruments such as lasers, grade rods, or transit levels. Cut pipes to required lengths. Connect pipe pieces and seal joints, using welding equipment, cement, or glue. Cover pipes with earth or other materials. Install or repair sanitary or stormwater sewer structures or pipe systems. Align and position pipes to prepare them for welding or sealing. Check slopes for conformance to requirements, using levels or lasers. Lay out pipe routes, following written instructions or blueprints and coordinating layouts with supervisors. Operate mechanized equipment, such as pickup trucks, rollers, tandem dump trucks, front-end loaders, or backhoes. Grade or level trench bases, using tamping machines or hand tools. Dig trenches to desired or required depths, by hand or using trenching tools. Tap and drill holes into pipes to introduce auxiliary lines or devices. Locate existing pipes needing repair or replacement, using magnetic or radio indicators. Train or supervise others in laying pipe.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Experienced</td>
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**2018 Estimated Employment:** 2,700

**2028 Projected Employment:** 2,880

**Average Total Openings:** 325

**Annual Growth Rate:** 0.63%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Rail-Track Laying & Maintenance Equipment Operators
- Molders, Shapers, & Casters, Except Metal & Plastic
- Excavating & Loading Machine & Dragline Operators, Surface Mining
- Fence Erectors
- Helpers--Installation, Maintenance, & Repair Workers
- Helpers--Carpenters
- Landscaping & Groundskeeping Workers
- Sawing Machine Setters, Operators, & Tenders, Wood
- Refractory Materials Repairers, Except Brickmasons
- Rail Car Repairers

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Plumbers, Pipefitters, and Steamfitters

Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. Includes sprinkler fitters.

**Education:**
Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:**
Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

**Tasks:**
- Cut, thread, or hammer pipes to specifications, using tools such as saws, cutting torches, pipe threaders, or pipe benders. Lay out full scale drawings of pipe systems, supports, or related equipment, according to blueprints. Inspect, examine, or test installed systems or pipe lines, using pressure gauge, hydrostatic testing, observation, or other methods. Plan pipe system layout, installation, or repair, according to specifications. Attach pipes to walls, structures, or fixtures, such as radiators or tanks, using brackets, clamps, tools, or welding equipment. Modify, clean, or maintain pipe systems, units, fittings, or related machines or equipment, using hand or power tools. Select pipe sizes, types, or related materials, such as supports, hangers, or hydraulic cylinders, according to specifications. Assemble pipe sections, tubing, or fittings, using couplings, clamps, screws, bolts, cement, plastic solvent, caulking, or soldering, brazing, or welding equipment. Install pipe assemblies, fittings, valves, appliances such as dishwashers or water heaters, or fixtures such as sinks or toilets, using hand or power tools. Install automatic controls to regulate pipe systems. Shut off steam, water, or other gases or liquids from pipe sections, using valve keys or wrenches. Keep records of work assignments. Direct helpers engaged in pipe cutting, preassembly, or installation of plumbing systems or components. Fill pipes or plumbing fixtures with water or air and observe pressure gauges to detect and locate leaks. Maintain or repair plumbing by replacing defective washers, replacing or mending broken pipes, or opening clogged drains. Locate and mark the position of pipe installations, connections, passage holes, or fixtures in structures, using measuring instruments such as rulers or levels. Review blueprints, building codes, or specifications to determine work details or procedures. Anchor steel supports from ceiling joists to hold pipes in place.

**License:**
Apprentice Registration and Card Fee: $25.00 Annually; Journeyman Plumber Renewal Fee: $50.00; Journeyman Exam Fee: $110.00; Journeyman Gas Fitter Renewal Fee: $50.00; Journeyman Gas Fitter Exam Fee: $110.00; Master Plumber Renewal Fee: $150.00; Master Plumber Exam Fee: $160.00; Master Gas Fitter Renewal Fee: $150.00; Master Gas Fitter Exam Fee: $160.00; Medical Gas Renewal Fee: $25.00.

**Outlook:**
Good

### Alabama Employment Outlook

<table>
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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
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<tr>
<td>Median</td>
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<tr>
<td>Experienced</td>
<td>$30.91</td>
</tr>
</tbody>
</table>

2018 Estimated Employment: 7,130
2028 Projected Employment: 7,900
Average Total Openings: 910
Annual Growth Rate: 1.03%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Maintenance & Repair Workers, General
- Millwrights
- Heating, Air Conditioning, & Refrigeration Mechanics & Installers
- Sheet Metal Workers
- Boilermakers
- Carpenters
- Commercial Divers
- Electrical Power-Line Installers & Repairers
- Electricians
- Control & Valve Installers & Repairers, Except Mechanical Door

### Post-Secondary Institutions with Programs
- [Visit the 2020 Career Exploration Guide](#)

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Police and Sheriff’s Patrol Officers

Maintain order and protect life and property by enforcing local, tribal, state, or federal laws and ordinances. Perform a combination of the following duties: patrol a specific area; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts. Includes police officers working at educational institutions.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks: Identify, pursue, and arrest suspects and perpetrators of criminal acts. Provide for public safety by maintaining order, responding to emergencies, protecting people and property, enforcing motor vehicle and criminal laws, and promoting good community relations. Record facts to prepare reports that document incidents and activities. Render aid to accident victims and other persons requiring first aid for physical injuries. Investigate illegal or suspicious activities. Review facts of incidents to determine if criminal act or statute violations were involved. Monitor, note, report, and investigate suspicious persons and situations, safety hazards, and unusual or illegal activity in patrol area. Testify in court to present evidence or act as witness in traffic and criminal cases. Drive vehicles or patrol specific areas to detect law violators, issue citations, and make arrests. Monitor traffic to ensure motorists observe traffic regulations and exhibit safe driving procedures. Relay complaint and emergency-request information to appropriate agency dispatchers. Verify that the proper legal charges have been made against law offenders. Photograph or draw diagrams of crime or accident scenes and interview principals and eyewitnesses. Evaluate complaint and emergency-request information to determine response requirements. Execute arrest warrants, locating and taking persons into custody. Patrol specific area on foot, horseback, or motorized conveyance, responding promptly to calls for assistance. Investigate traffic accidents and other accidents to determine causes and to determine if a crime has been committed. Direct traffic flow and reroute traffic in case of emergencies. Notify patrol units to take violators into custody or to provide needed assistance or medical aid. Serve statements of claims, subpoenas, summonses, jury summonses, orders to pay alimony, and other court orders. Question individuals entering secured areas to determine their business, directing and rerouting individuals as necessary. Patrol and guard courthouses, grand jury rooms, or assigned areas to provide security, enforce laws, maintain order, and arrest violators. Transport or escort prisoners and defendants en route to courtrooms, prisons or jails, attorneys' offices, or medical facilities. Inform citizens of community services and recommend options to facilitate longer-term problem resolution. Locate and confiscate real or personal property, as directed by court order. Provide road information to assist motorists.

License: Exam Fee: Paper $75.00; Permit/License Fee: $175.00; (plus $100.00 per category of work performed)

Outlook: Satisfactory

### Alabama Employment Outlook

<table>
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<th>Alabama Wage Data</th>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Detectives & Criminal Investigators
- First-Line Supervisors of Police & Detectives
- Correctional Officers & Jailers
- First-Line Supervisors of Correctional Officers
- Transit & Railroad Police
- Animal Control Workers
- Police Identification & Records Officers
- Fire Inspectors & Investigators
- Customs & Border Protection Officers
- Airfield Operations Specialists

**Post-Secondary Institutions with Programs**

See the Missing Data section in the Introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Probation Officers and Correctional Treatment Specialists

Provide social services to assist in rehabilitation of law offenders in custody or on probation or parole. Make recommendations for actions involving formulation of rehabilitation plan and treatment of offender, including conditional release and education and employment stipulations.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Prepare and maintain case folder for each assigned inmate or offender. Gather information about offenders' backgrounds by talking to offenders, their families and friends, and other people who have relevant information. Interview probationers and parolees regularly to evaluate their progress in accomplishing goals and maintaining the terms specified in their probation contracts and rehabilitation plans. Discuss with offenders how such issues as drug and alcohol abuse and anger management problems might have played roles in their criminal behavior. Supervise people on community-based sentences, such as electronically monitored home detention, and provide field supervision of probationers by conducting curfew checks or visits to home, work, or school. Investigate alleged parole violations, using interviews, surveillance, and search and seizure. Recommend remedial action or initiate court action in response to noncompliance with terms of probation or parole. Arrange for medical, mental health, or substance abuse treatment services according to individual needs or court orders. Develop liaisons and networks with other parole officers, community agencies, correctional institutions, psychiatric facilities, and aftercare agencies to plan for helping offenders with life adjustments. Administer drug and alcohol tests, including random drug screens of offenders, to verify compliance with substance abuse treatment programs. Inform offenders or inmates of requirements of conditional release, such as office visits, restitution payments, or educational and employment stipulations. Participate in decisions about whether cases should go before courts and which court should hear them. Write reports describing offenders' progress. Conduct prehearing and presentencing investigations and testify in court regarding offenders' backgrounds and recommended sentences and sentencing conditions. Arrange for postrelease services, such as employment, housing, counseling, education, and social activities. Provide offenders or inmates with assistance in matters concerning detainers, sentences in other jurisdictions, writs, and applications for social assistance. Develop and prepare packets containing information about social service agencies, assistance organizations, and programs that might be useful for inmates or offenders.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Child, Family, & School Social Workers
Social & Human Service Assistants
Arbitrators, Mediators, & Conciliators
Educational, Guidance, & Career Counselors & Advisors
Secondary School Teachers, Except Special & Career/Technical Education
Fraud Examiners, Investigators & Analysts
Middle School Teachers, Except Special & Career/Technical Education
Psychiatric Technicians
Rehabilitation Counselors

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Producers and Directors
Produce or direct stage, television, radio, video, or film productions for entertainment, information, or instruction. Responsible for creative decisions, such as interpretation of script, choice of actors or guests, set design, sound, special effects, and choreography.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Tasks: Write and edit news stories from information collected by reporters and other sources. Plan details such as framing, composition, camera movement, sound, and actor movement for each shot or scene. Communicate to actors the approach, characterization, and movement needed for each scene in such a way that rehearsals and takes are minimized. Direct live broadcasts, films and recordings, or non-broadcast programming for public entertainment or education. Coordinate the activities of writers, directors, managers, and other personnel throughout the production process. Study and research scripts to determine how they should be directed. Supervise and coordinate the work of camera, lighting, design, and sound crew members. Confer with technical directors, managers, crew members, and writers to discuss details of production, such as photography, script, music, sets, and costumes. Research production topics using the internet, video archives, and other informational sources. Review film, recordings, or rehearsals to ensure conformance to production and broadcast standards. Consult with writers, producers, or actors about script changes or “workshop” scripts, through rehearsal with writers and actors to create final drafts. Identify and approve equipment and elements required for productions, such as scenery, lights, props, costumes, choreography, and music. Establish pace of programs and sequences of scenes according to time requirements and cast and set accessibility. Conduct meetings with staff to discuss production progress and to ensure production objectives are attained. Compile scripts, program notes, and other material related to productions. Perform administrative duties, such as preparing operational reports, distributing rehearsal call sheets and script copies, and arranging for rehearsal quarters. Resolve personnel problems that arise during the production process by acting as liaisons between dissenting parties when necessary.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

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<th></th>
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Alabama Projections

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<th>2028 Projected Employment:</th>
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<tr>
<td>Average Total Openings:</td>
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<tr>
<td>Annual Growth Rate:</td>
<td>0.24%</td>
<td>0.24%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Advertising & Promotions Managers
Media Technical Directors/Managers
Editors
Media Programming Directors
Art Directors
Marketing Managers
Purchasing Agents, Except Wholesale, Retail, & Farm Products
Talent Directors
Film & Video Editors
Public Relations Specialists

Post-Secondary Institutions with Programs

The University of Alabama
Troy University
University of Montevallo

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Production, Planning, and Expediting Clerks

Coordinate and expedite the flow of work and materials within or between departments of an establishment according to production schedule. Duties include reviewing and distributing production, work, and shipment schedules; conferring with department supervisors to determine progress of work and completion dates; and compiling reports on progress of work, inventory levels, costs, and production problems.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Distribute production schedules or work orders to departments. Review documents, such as production schedules, work orders, or staffing tables, to determine personnel or materials requirements or material priorities. Requisition and maintain inventories of materials or supplies necessary to meet production demands. Arrange for delivery, assembly, or distribution of supplies or parts to expedite flow of materials and meet production schedules. Confer with department supervisors or other personnel to assess progress and discuss needed changes. Revise production schedules when required due to design changes, labor or material shortages, backlogs, or other interruptions, collaborating with management, marketing, sales, production, or engineering. Confer with establishment personnel, vendors, or customers to coordinate production or shipping activities and to resolve complaints or eliminate delays. Examine documents, materials, or products and monitor work processes to assess completeness, accuracy, and conformance to standards and specifications. Record production data, including volume produced, consumption of raw materials, or quality control measures. Calculate figures, such as required amounts of labor or materials, manufacturing costs, or wages, using pricing schedules, adding machines, calculators, or computers. Compile information, such as production rates and progress, materials inventories, materials used, or customer information, so that status reports can be completed. Compile and prepare documentation related to production sequences, transportation, personnel schedules, or purchase, maintenance, or repair orders. Maintain files, such as maintenance records, bills of lading, or cost reports.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018 Estimated Employment: 3,310</td>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$10.69</td>
<td>$22,245.00</td>
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<tr>
<td>Median</td>
<td>Median</td>
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<tr>
<td>$20.81</td>
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<tr>
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<tr>
<td>$35.37</td>
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<td>2028 Projected Employment: 3,560</td>
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<td>Average Total Openings: 385</td>
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<tr>
<td></td>
<td>Annual Growth Rate: 0.75%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Dispatchers, Except Police, Fire, & Ambulance
- Procurement Clerks
- Secretaries & Administrative Assistants, Except Legal, Medical, & Executive
- Cargo & Freight Agents
- Weighers, Measurers, Checkers, & Samplers
- Recordkeeping
- Data Entry Keyers
- Shipping, Receiving, & Inventory Clerks
- Library Assistants, Clerical
- Interviewers, Except Eligibility & Loan
- Hotel, Motel, & Resort Desk Clerks

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Property, Real Estate, and Community Association Managers

Plan, direct, or coordinate the selling, buying, leasing, or governance activities of commercial, industrial, or residential real estate properties. Includes managers of homeowner and condominium associations, rented or leased housing units, buildings, or land (including rights-of-way).

Education: Most of these occupations typically require a four-year bachelor's degree.
OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Prepare detailed budgets and financial reports for properties. Manage and oversee operations, maintenance, administration, and improvement of commercial, industrial, or residential properties. Plan, schedule, and coordinate general maintenance, major repairs, and remodeling or construction projects for commercial or residential properties. Direct collection of monthly assessments, rental fees, and deposits and payment of insurance premiums, mortgage, taxes, and incurred operating expenses. Meet with clients to negotiate management and service contracts, determine priorities, and discuss the financial and operational status of properties. Direct and coordinate the activities of staff and contract personnel and evaluate their performance. Prepare and administer contracts for provision of property services, such as cleaning, maintenance, and security services. Market vacant space to prospective tenants through leasing agents, advertising, or other methods. Act as liaisons between on-site managers or tenants and owners. Investigate complaints, disturbances, and violations and resolve problems, following management rules and regulations. Inspect grounds, facilities, and equipment routinely to determine necessity of repairs or maintenance. Maintain records of sales, rental or usage activity, special permits issued, maintenance and operating costs, or property availability. Meet with boards of directors and committees to discuss and resolve legal and environmental issues or disputes between neighbors. Solicit and analyze bids from contractors for repairs, renovations, and maintenance. Maintain contact with insurance carriers, fire and police departments, and other agencies to ensure protection and compliance with codes and regulations. Confer with legal authorities to ensure that renting and advertising practices are not discriminatory and that properties comply with state and federal regulations. Purchase building and maintenance supplies, equipment, or furniture.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$15.72</td>
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<td>Median</td>
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<tr>
<td>$25.31</td>
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<tr>
<td>Experienced</td>
<td>Experienced</td>
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<tr>
<td>$47.70</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Administrative Services Managers
Real Estate Brokers
Wholesale & Retail Buyers, Except Farm Products
Loan Officers
Procurement Clerks
Real Estate Sales Agents
First-Line Supervisors of Office & Administrative Support Workers
Travel Guides
Advertising Sales Agents
Appraisers & Assessors of Real Estate

Post-Secondary Institutions with Programs
Coastal Alabama Community College
Lawson State Community College

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Psychiatric Aides

Assist mentally impaired or emotionally disturbed patients, working under direction of nursing and medical staff. May assist with daily living activities, lead patients in educational and recreational activities, or accompany patients to and from examinations and treatments. May restrain violent patients. Includes psychiatric orderlies.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Record and maintain patient information, such as vital signs, eating habits, behavior, progress notes, treatments, or discharge plans. Listen and provide emotional support and encouragement to psychiatric patients. Complete physical checks and monitor patients to detect unusual or harmful behavior and report observations to professional staff. Restrain or aid patients as necessary to prevent injury. Serve meals or feed patients needing assistance or persuasion. Work as part of a team that may include psychiatrists, psychologists, psychiatric nurses, or social workers. Clean and disinfect rooms and furnishings to maintain a safe and orderly environment. Provide mentally impaired or emotionally disturbed patients with routine physical, emotional, psychological, or rehabilitation care under the direction of nursing or medical staff. Maintain patients’ restrictions to assigned areas. Provide patients with assistance in bathing, dressing, or grooming, demonstrating these skills as necessary. Aid patients in becoming accustomed to hospital routine. Organize, supervise, or encourage patient participation in social, educational, or recreational activities. Perform nursing duties, such as administering medications, measuring vital signs, collecting specimens, or drawing blood samples. Accompany patients to and from wards for medical or dental treatments, shopping trips, or religious or recreational events. Participate in recreational activities with patients, including card games, sports, or television viewing.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>2018 Estimated Employment:</th>
<th>2028 Projected Employment:</th>
<th>Average Total Openings:</th>
<th>Annual Growth Rate:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>$10.15</td>
<td>$21,113.00</td>
<td>1,990</td>
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</tr>
<tr>
<td>Median</td>
<td>$11.69</td>
<td>$24,312.00</td>
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<tr>
<td>Experienced</td>
<td>$16.65</td>
<td>$34,624.00</td>
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</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Home Health Aides
- Psychiatric Technicians
- Childcare Workers
- Occupational Therapy Aides
- Correctional Officers & Jailers
- Physical Therapist Aides
- Personal Care Aides
- Occupational Therapy Assistants
- Social & Human Service Assistants
- Ambulance Drivers & Attendants, Except Emergency
- Medical Technicians

### Post-Secondary Institutions with Programs
Public Relations Specialists

Promote or create an intended public image for individuals, groups, or organizations. May write or select material for release to various communications media. May specialize in using social media.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Respond to requests for information from the media or designate an appropriate spokesperson or information source. Write press releases or other media communications to promote clients. Establish or maintain cooperative relationships with representatives of community, consumer, employee, or public interest groups. Plan or direct development or communication of programs to maintain favorable public or stockholder perceptions of an organization's accomplishments, agenda, or environmental responsibility. Study the objectives, promotional policies, or needs of organizations to develop public relations strategies that will influence public opinion or promote ideas, products, or services. Coach client representatives in effective communication with the public or with employees. Update and maintain content posted on the Web. Confer with other managers to identify trends or key group interests or concerns or to provide advice on business decisions. Prepare or edit organizational publications, such as employee newsletters or stockholders' reports, for internal or external audiences. Coordinate public responses to environmental management incidents or conflicts. Arrange public appearances, lectures, contests, or exhibits for clients to increase product or service awareness or to promote goodwill. Develop plans or materials to communicate organizational activities that are beneficial to the environment, public safety, or other important social issues. Prepare or deliver speeches to further public relations objectives. Confer with production or support personnel to produce or coordinate production of advertisements or promotions. Consult with advertising agencies or staff to arrange promotional campaigns in all types of media for products, organizations, or individuals.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2018 Estimated Employment: 2,250</td>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
</tr>
<tr>
<td>Entry</td>
<td>$15.76 Entry $32,783.00</td>
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<tr>
<td>Median</td>
<td>$25.31 Median $52,657.00</td>
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<tr>
<td>Experienced</td>
<td>$44.92 Experienced $93,438.00</td>
</tr>
</tbody>
</table>

Average Total Openings: 255

Annual Growth Rate: 0.65%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Writers & Authors
- Advertising & Promotions Managers
- Market Research Analysts & Marketing Specialists
- Insurance Sales Agents
- Meeting, Convention, & Event Planners
- Securities, Commodities, & Financial Services Sales Agents
- Arbitrators, Mediators, & Conciliators
- Advertising Sales Agents

**Post-Secondary Institutions with Programs**

- University of Alabama
- Auburn University
- Alabama State University
- University of Alabama at Birmingham
- University of Alabama at Huntsville

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2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Public Safety Telecommunicators

Operate telephone, radio, or other communication systems to receive and communicate requests for emergency assistance at 9-1-1 public safety answering points and emergency operations centers. Take information from the public and other sources regarding crimes, threats, disturbances, acts of terrorism, fires, medical emergencies, and other public safety matters. May coordinate and provide information to law enforcement and emergency response personnel. May access sensitive databases and other information sources as needed. May provide additional instructions to callers based on knowledge of and certification in law enforcement, fire, or emergency medical procedures.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:** Question callers to determine their locations, and the nature of their problems to determine type of response needed. Determine response requirements and relative priorities of situations, and dispatch units in accordance with established procedures. Record details of calls, dispatches, and messages. Scan status charts and computer screens, and contact emergency response field units to determine emergency units available for dispatch. Receive incoming telephone or alarm system calls regarding emergency and non-emergency police and fire service, emergency ambulance service, information, and after-hours calls for departments within a city. Enter, update, and retrieve information from teletype networks and computerized data systems regarding such things as wanted persons, stolen property, vehicle registration, and stolen vehicles. Relay information and messages to and from emergency sites, to law enforcement agencies, and to all other individuals or groups requiring notification. Observe alarm registers and scan maps to determine whether a specific emergency is in the dispatch service area. Maintain access to, and security of, highly sensitive materials. Monitor various radio frequencies such as those used by public works departments, school security, and civil defense to keep apprised of developing situations. Read and effectively interpret small-scale maps and information from a computer screen to determine locations and provide directions. Maintain files of information relating to emergency calls, such as personnel rosters, and emergency call-out and pager files. Learn material and pass required tests for certification. Answer routine inquiries, and refer calls not requiring dispatches to appropriate departments and agencies.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
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<td><strong>Hourly Wage</strong></td>
<td><strong>2018 Estimated Employment:</strong> 2,740</td>
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<tr>
<td><strong>Annual Wage</strong></td>
<td><strong>2028 Projected Employment:</strong> 2,850</td>
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<tr>
<td>Entry</td>
<td>$20,867.00</td>
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<tr>
<td>Median</td>
<td>$31,298.00</td>
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<tr>
<td>Experienced</td>
<td>$47,776.00</td>
</tr>
<tr>
<td><strong>Average Total Openings:</strong> 275</td>
<td><strong>Annual Growth Rate:</strong> 0.41%</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Compliance Officers
- Interviewers, Except Eligibility & Loan
- Gambling Surveillance Officers & Gambling Investigators
- Dispatchers, Except Police, Fire, & Ambulance
- Reservation & Transportation Ticket Agents & Travel Clerks
- Secretaries & Administrative Assistants, Except Legal, Medical, & Executive
- Customer Service Representatives
- Airfield Operations Specialists

**Post-Secondary Institutions with Programs**

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Radiologic Technologists

Take x-rays and CAT scans or administer nonradioactive materials into patient’s bloodstream for diagnostic or research purposes. Includes radiologic technologists and technicians who specialize in other scanning modalities.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks: Review and evaluate developed x-rays, video tape, or computer-generated information to determine if images are satisfactory for diagnostic purposes. Operate or oversee operation of radiologic or magnetic imaging equipment to produce images of the body for diagnostic purposes. Position patient on examining table and set up and adjust equipment to obtain optimum view of specific body area as requested by physician. Process exposed radiographs using film processors or computer generated methods. Use radiation safety measures and protection devices to comply with government regulations and to ensure safety of patients and staff. Position imaging equipment and adjust controls to set exposure time and distance, according to specification of examination. Explain procedures and observe patients to ensure safety and comfort during scan. Determine patients' x-ray needs by reading requests or instructions from physicians. Key commands and data into computer to document and specify scan sequences, adjust transmitters and receivers, or photograph certain images. Take thorough and accurate patient medical histories. Make exposures necessary for the requested procedures, rejecting and repeating work that does not meet established standards. Set up examination rooms, ensuring that all necessary equipment is ready. Operate digital picture archiving communications systems. Transport patients to or from exam rooms. Monitor patients' conditions and reactions, reporting abnormal signs to physician. Provide assistance to physicians or other technologists in the performance of more complex procedures. Operate mobile x-ray equipment in operating room, emergency room, or at patient's bedside. Record, process, and maintain patient data or treatment records and prepare reports. Perform procedures, such as linear tomography, mammography, sonograms, joint and cyst aspirations, routine contrast studies, routine fluoroscopy, or examinations of the head, trunk, or extremities under supervision of physician. Provide assistance in dressing or changing seriously ill, injured, or disabled patients. Complete quality control activities, monitor equipment operation, and report malfunctioning equipment to supervisor. Maintain a current file of examination protocols. Perform general administrative tasks, such as answering phones, scheduling patient appointments, or pulling and filing films. Assist with on-the-job training of new employees or students or provide input to supervisors regarding training performance.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>$15.29</td>
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<td>Median</td>
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<tr>
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<td>Experienced</td>
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<tr>
<td>$31.17</td>
<td>$64,829.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Nuclear Medicine Technologists
Cardiovascular Technologists & Technicians
Diagnostic Medical Sonographers
Endoscopy Technicians
Radiation Therapists
Dental Assistants
Licensed Practical & Licensed Vocational Nurses
Surgical Technologists
Neurodiagnostic Technologists
Dental Hygienists

Post-Secondary Institutions with Programs
George C Wallace Community College-Dothan
George C Wallace State Community College-Hanceville
Jacksonville State University
Oakwood University
Samford University
Shelton State Community College
The University of Alabama
Troy University
University of Alabama at Birmingham
University of Mobile
University of South Alabama
University of West Alabama

2020 Career Exploration Guide
212

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Real Estate Brokers

Operate real estate office, or work for commercial real estate firm, overseeing real estate transactions. Other duties usually include selling real estate or renting properties and arranging loans.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Sell, for a fee, real estate owned by others. Obtain agreements from property owners to place properties for sale with real estate firms. Act as an intermediary in negotiations between buyers and sellers over property prices and settlement details and during the closing of sales. Generate lists of properties for sale, their locations, descriptions, and available financing options, using computers. Manage or operate real estate offices, handling associated business details. Compare a property with similar properties that have recently sold to determine its competitive market price. Maintain knowledge of real estate law, local economies, fair housing laws, types of available mortgages, financing options, and government programs. Monitor fulfillment of purchase contract terms to ensure that they are handled in a timely manner. Check work completed by loan officers, attorneys, or other professionals to ensure that it is performed properly. Rent properties or manage rental properties. Maintain awareness of current income tax regulations, local zoning, building and tax laws, and growth possibilities of the area where a property is located. Arrange for title searches of properties being sold. Appraise property values, assessing income potential when relevant.

License: License Fee: $150.00; Research and Education Fee: $30.00; Recovery Fund Fee: $30.00

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>Average Total Openings: 100</td>
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<td>Annual Growth Rate: 0.51%</td>
</tr>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Real Estate Sales Agents
Loan Officers
Appraisers & Assessors of Real Estate
Property, Real Estate, & Community Association Managers
Advertising Sales Agents
Sales Representatives, Wholesale & Manufacturing, Except
Technical & Scientific Products
Administrative Services Managers
Private Detectives & Investigators
Wholesale & Retail Buyers, Except Farm Products
Tax Examiners & Collectors, & Revenue Agents
Broker
Broker Associate
Designated Broker
Managing Broker
Real Estate Associate
Real Estate Broker
Real Estate Sales Associate
Realtor
Supervising Broker

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Real Estate Sales Agents

Rent, buy, or sell property for clients. Perform duties such as study property listings, interview prospective clients, accompany clients to property site, discuss conditions of sale, and draw up real estate contracts. Includes agents who represent buyer.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Prepare documents such as representation contracts, purchase agreements, closing statements, deeds, and leases. Present purchase offers to sellers for consideration. Act as an intermediary in negotiations between buyers and sellers, generally representing one or the other. Generate lists of properties that are compatible with buyers' needs and financial resources. Confer with escrow companies, lenders, home inspectors, and pest control operators to ensure that terms and conditions of purchase agreements are met before closing dates. Promote sales of properties through advertisements, open houses, and participation in multiple listing services. Compare a property with similar properties that have recently sold to determine its competitive market price. Coordinate property closings, overseeing signing of documents and disbursement of funds. Interview clients to determine what kinds of properties they are seeking. Contact previous clients for prospecting of referral business. Review property listings, trade journals, and relevant literature, and attend conventions, seminars, and staff and association meetings, to remain knowledgeable about real estate markets. Answer clients’ questions regarding construction work, financing, maintenance, repairs, and appraisals. Coordinate appointments to show homes to prospective buyers. Contact property owners and advertise services to solicit property sales listings. Advise sellers on how to make homes more appealing to potential buyers. Advise clients on market conditions, prices, mortgages, legal requirements, and related matters. Display commercial, industrial, agricultural, and residential properties to clients and explain their features. Accompany buyers during visits to and inspections of property, advising them on the suitability and value of the homes they are visiting. Arrange for title searches to determine whether clients have clear property titles. Develop networks of attorneys, mortgage lenders, and contractors to whom clients may be referred. Review plans for new construction with clients, enumerating and recommending available options and features. Inspect condition of premises, and arrange for necessary maintenance or notify owners of maintenance needs. Visit properties to assess them before showing them to clients.

License: License Fee: $150.00; Research and Education Fee: $30.00; Recovery Fund Fee: $30.00

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<tr>
<td></td>
<td>2028 Projected Employment: 4,440</td>
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<tr>
<td></td>
<td>Average Total Openings: 435</td>
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<td></td>
<td>Annual Growth Rate: 0.51%</td>
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</table>

<table>
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<tr>
<th>Entry</th>
<th>Median</th>
<th>Experienced</th>
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<tbody>
<tr>
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<tr>
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<td>$50,307.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Real Estate Brokers
Advertising Sales Agents
Loan Officers
Appraisers & Assessors of Real Estate
Administrative Services Managers
Insurance Sales Agents
Property, Real Estate, & Community Association Managers
Travel Guides
Travel Agents
First-Line Supervisors of Office & Administrative Support Workers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Receptionists and Information Clerks

Answer inquiries and provide information to the general public, customers, visitors, and other interested parties regarding activities conducted at establishment and location of departments, offices, and employees within the organization.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month.

Tasks: Operate telephone switchboard to answer, screen, or forward calls, providing information, taking messages, or scheduling appointments. Greet persons entering establishment, determine nature and purpose of visit, and direct or escort them to specific destinations. Schedule appointments and maintain and update appointment calendars. Hear and resolve complaints from customers or the public. File and maintain records. Receive payment and record receipts for services. Perform administrative support tasks, such as proofreading, transcribing handwritten information, or operating calculators or computers to work with pay records, invoices, balance sheets, or other documents. Transmit information or documents to customers, using computer, mail, or facsimile machine. Analyze data to determine answers to questions from customers or members of the public. Collect, sort, distribute, or prepare mail, messages, or courier deliveries. Provide information about establishment, such as location of departments or offices, employees within the organization, or services provided.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
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<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$8.71</td>
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<tr>
<td><strong>Median</strong></td>
<td><strong>Median</strong></td>
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<tr>
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<td><strong>Experienced</strong></td>
<td><strong>Experienced</strong></td>
</tr>
<tr>
<td>$17.84</td>
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</tr>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Switchboard Operators, Including Answering Service
Office Clerks, General
Medical Secretaries & Administrative Assistants
Court, Municipal, & License Clerks
Interviewers, Except Eligibility & Loan
Hotel, Motel, & Resort Desk Clerks
Customer Service Representatives
Insurance Claims & Policy Processing Clerks
Bill & Account Collectors

Post-Secondary Institutions with Programs
Alabama State University
Fortis Institute-Birmingham
Herzing University-Birmingham
Ross Medical Education Center-Huntsville

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Recreation Workers

Conduct recreation activities with groups in public, private, or volunteer agencies or recreation facilities. Organize and promote activities, such as arts and crafts, sports, games, music, dramatics, social recreation, camping, and hobbies, taking into account the needs and interests of individual members.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Enforce rules and regulations of recreational facilities to maintain discipline and ensure safety. Organize, lead, and promote interest in recreational activities, such as arts, crafts, sports, games, camping, and hobbies. Assess the needs and interests of individuals and groups and plan activities accordingly, given the available equipment or facilities. Manage the daily operations of recreational facilities. Administer first aid according to prescribed procedures and notify emergency medical personnel when necessary. Complete and maintain time and attendance forms and inventory lists. Explain principles, techniques, and safety procedures to participants in recreational activities and demonstrate use of materials and equipment. Direct special activities or events, such as aquatics, gymnastics, or performing arts. Supervise and coordinate the work activities of personnel, such as training staff members and assigning work duties. Evaluate recreation areas, facilities, and services to determine if they are producing desired results. Document individuals' progress toward meeting their treatment goals. Greet new arrivals to activities, introducing them to other participants, explaining facility rules, and encouraging participation. Confer with management to discuss and resolve participant complaints. Meet with staff to discuss rules, regulations, and work-related problems. Oversee the purchase, planning, design, construction, and upkeep of recreation facilities and areas. Encourage participants to develop their own activities and leadership skills through group discussions. Meet and collaborate with agency personnel, community organizations, and other professional personnel to plan balanced recreational programs for participants. Provide for entertainment and set up related decorations and equipment.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
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<td>$8.12</td>
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<td><strong>Experienced</strong></td>
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<tr>
<td><strong>Annual Wage</strong></td>
<td>$16,896.00</td>
</tr>
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</table>
| **Entry**               | **2018 Estimated Employment**:    | 6,460
| **Median**              | **2028 Projected Employment**:    | 6,940
| **Experienced**         | **Average Total Openings**:       | 1,160
| **Annual Wage**         | **Annual Growth Rate**:           | 0.72%
| **Experienced**         | $37,560.00                        |

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Coaches & Scouts
Directors, Religious Activities & Education
Recreational Therapists
Residential Advisors
Preschool Teachers, Except Special Education
Career/Technical Education Teachers, Middle School
Education & Childcare Administrators, Preschool & Daycare
Social & Human Service Assistants
Secondary School Teachers, Except Special & Career/Technical Education
First-Line Supervisors of Personal Service Workers

Post-Secondary Institutions with Programs

Alabama State University
Auburn University
Birmingham-Southern College
Coastal Alabama Community College
Faulkner University
Samford University
Spring Hill College
The University of Alabama
United States Sports Academy
University of Alabama at Birmingham
University of Alabama in Huntsville
University of Mobile
University of North Alabama
University of South Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Collect and dump refuse or recyclable materials from containers into truck. May drive truck.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Operate automated or semi-automated hoisting devices that raise refuse bins and dump contents into openings in truck bodies. Inspect trucks prior to beginning routes to ensure safe operating condition. Drive trucks, following established routes, through residential streets or alleys or through business or industrial areas. Operate equipment that compresses collected refuse. Dump refuse or recyclable materials at disposal sites. Dismount garbage trucks to collect garbage and remount trucks to ride to the next collection point. Refuel trucks or add other fluids, such as oil or brake fluid. Fill out defective equipment reports. Communicate with dispatchers concerning delays, unsafe sites, accidents, equipment breakdowns, or other maintenance problems. Check road or weather conditions to determine how routes will be affected. Clean trucks or compactor bodies after routes have been completed. Tag garbage or recycling containers to inform customers of problems, such as excess garbage or inclusion of items that are not permitted.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td><strong>Entry</strong></td>
<td><strong>Entry</strong></td>
</tr>
<tr>
<td>$10.30</td>
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<tr>
<td><strong>Median</strong></td>
<td><strong>Median</strong></td>
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<td>$14.95</td>
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<tr>
<td>$22.53</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Light Truck Drivers
Industrial Truck & Tractor Operators
Postal Service Mail Carriers
Landscaping & Groundskeeping Workers
Fence Erectors
Pipe layers
Excavating & Loading Machine & Dragline Operators,
Surface Mining
Coating, Painting, & Spraying Machine Setters, Operators,
& Tenders
Dredge Operators

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
217

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Rehabilitation Counselors

Counsel individuals to maximize the independence and employability of persons coping with personal, social, and vocational difficulties that result from birth defects, illness, disease, accidents, aging, or the stress of daily life. Coordinate activities for residents of care and treatment facilities. Assess client needs and design and implement rehabilitation programs that may include personal and vocational counseling, training, and job placement.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Prepare and maintain records and case files, including documentation, such as clients' personal and eligibility information, services provided, narratives of client contacts, or relevant correspondence. Confer with clients to discuss their options and goals so that rehabilitation programs and plans for accessing needed services can be developed. Develop rehabilitation plans that fit clients' aptitudes, education levels, physical abilities, and career goals. Locate barriers to client employment, such as inaccessible work sites, inflexible schedules, or transportation problems, and work with clients to develop strategies for overcoming these barriers. Monitor and record clients' progress to ensure that goals and objectives are met. Participate in job development and placement programs, contacting prospective employers, placing clients in jobs, and evaluating the success of placements. Analyze information from interviews, educational and medical records, consultation with other professionals, and diagnostic evaluations to assess clients' abilities, needs, and eligibility for services. Collaborate with clients' families to implement rehabilitation plans, such as behavioral, residential, social, or employment goals. Develop and maintain relationships with community referral sources, such as schools or community groups. Maintain close contact with clients during job training and placements to resolve problems and evaluate placement adequacy. Arrange for on-site job coaching or assistive devices, such as specially equipped wheelchairs, to help clients adapt to work or school environments. Arrange for physical, mental, academic, vocational, and other evaluations to obtain information for assessing clients' needs and developing rehabilitation plans. Confer with physicians, psychologists, occupational therapists, and other professionals to develop and implement client rehabilitation programs. Collaborate with community agencies to establish facilities and programs for persons with disabilities.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
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<td>Hourly Wage</td>
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<td>$21.71</td>
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<td>Experienced</td>
<td>$32.09</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Child, Family, & School Social Workers
Substance Abuse & Behavioral Disorder Counselors
Recreation Workers
Recreational Therapists
Probation Officers & Correctional Treatment Specialists
Directors, Religious Activities & Education
Social & Human Service Assistants
Health Education Specialists
Mental Health & Substance Abuse Social Workers
Healthcare Social Workers

Post-Secondary Institutions with Programs
Alabama State University
The University of Alabama
Residential Advisors

Coordinate activities in resident facilities in secondary school and college dormitories, group homes, or similar establishments. Order supplies and determine need for maintenance, repairs, and furnishings. May maintain household records and assign rooms. May assist residents with problem solving or refer them to counseling resources.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Communicate with other staff to resolve problems with individual students. Observe students to detect and report unusual behavior. Supervise, train, and evaluate residence hall staff, including resident assistants, participants in work-study programs, and other student workers. Provide emergency first aid and summon medical assistance when necessary. Make regular rounds to ensure that residents and areas are safe and secure. Mediate interpersonal problems between residents. Enforce rules and regulations to ensure the smooth and orderly operation of dormitory programs. Determine the need for facility maintenance and repair, and notify appropriate personnel. Collaborate with counselors to develop counseling programs that address the needs of individual students. Develop and coordinate educational programs for residents. Develop program plans for individuals or assist in plan development. Provide requested information on students' progress and the development of case plans. Confer with medical personnel to better understand the backgrounds and needs of individual residents. Administer, coordinate, or recommend disciplinary and corrective actions. Answer telephones, and route calls or deliver messages. Counsel students in the handling of issues such as family, financial, and educational problems. Hold regular meetings with each assigned unit. Compile information such as residents' daily activities and the quantities of supplies used to prepare required reports. Chaperone group-sponsored trips and social functions. Order supplies for facilities.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
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<tr>
<td><strong>Entry</strong></td>
<td><strong>2018 Estimated Employment:</strong> 2,850</td>
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<tr>
<td>Hourly Wage: $8.29</td>
<td><strong>2028 Projected Employment:</strong> 3,100</td>
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<tr>
<td>Median Hourly Wage: $11.35</td>
<td><strong>Average Total Openings:</strong> 475</td>
</tr>
<tr>
<td>Experienced Hourly Wage: $18.01</td>
<td><strong>Annual Growth Rate:</strong> 0.82%</td>
</tr>
<tr>
<td>Annual Wage: $17,232.00</td>
<td></td>
</tr>
<tr>
<td>Median Annual Wage: $23,614.00</td>
<td></td>
</tr>
<tr>
<td>Experienced Annual Wage: $37,460.00</td>
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</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Social & Human Service Assistants  
First-Line Supervisors of Personal Service Workers  
Recreational Therapists  
Preschool Teachers, Except Special Education  
Recreation Workers  
First-Line Supervisors of Correctional Officers  
Psychiatric Technicians  
First-Line Supervisors of Office & Administrative Support Workers  
Career/Technical Education Teachers, Postsecondary  
Occupational Therapy Assistants

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide
Respiratory Therapists
Assess, treat, and care for patients with breathing disorders. Assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Provide emergency care, such as artificial respiration, external cardiac massage, or assistance with cardiopulmonary resuscitation. Monitor patient's physiological responses to therapy, such as vital signs, arterial blood gases, or blood chemistry changes, and consult with physician if adverse reactions occur. Set up and operate devices, such as mechanical ventilators, therapeutic gas administration apparatus, environmental control systems, or aerosol generators, following specified parameters of treatment. Work as part of a team of physicians, nurses, or other healthcare professionals to manage patient care by assisting with medical procedures or related duties. Maintain charts that contain patients’ pertinent identification and therapy information. Read prescription, measure arterial blood gases, and review patient information to assess patient condition. Relay blood analysis results to a physician. Inspect, clean, test, and maintain respiratory therapy equipment to ensure equipment is functioning safely and efficiently, ordering repairs when necessary. Explain treatment procedures to patients to gain cooperation and allay fears. Make emergency visits to resolve equipment problems. Determine requirements for treatment, such as type, method and duration of therapy, precautions to be taken, or medication and dosages, compatible with physicians' orders. Enforce safety rules and ensure careful adherence to physicians' orders. Educate patients and their families about their conditions and teach appropriate disease management techniques, such as breathing exercises or the use of medications or respiratory equipment. Perform bronchopulmonary drainage and assist or instruct patients in performance of breathing exercises. Conduct tests, such as electrocardiograms (EKGs), stress testing, or lung capacity tests, to evaluate patients' cardiopulmonary functions. Perform pulmonary function and adjust equipment to obtain optimum results in therapy. Demonstrate respiratory care procedures to trainees or other healthcare personnel. Use a variety of testing techniques to assist doctors in cardiac or pulmonary research or to diagnose disorders. Transport patients to the hospital or within the hospital. Teach, train, supervise, or use the assistance of students, respiratory therapy technicians, or assistants.

License: Application Fee: $25.00; License Fee: $100.00; Renewal Fee: $100.00; Temporary License Fee: $50.00; Background Check $45.00; Reinstatement Fee: $200.00

Outlook: Good

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>Hourly Wage</td>
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<td>Annual Wage</td>
<td>2028 Projected Employment: 3,120</td>
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<tr>
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<td>Median</td>
<td>$50,550.00</td>
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<td>$68,988.00</td>
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<tr>
<td>Average Total Openings: 200</td>
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</tr>
<tr>
<td>Annual Growth Rate: 1.71%</td>
<td></td>
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</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Cardiovascular Technologists & Technicians
Radiation Therapists
Diagnostic Medical Sonographers
Licensed Practical & Licensed Vocational Nurses
Surgical Technologists
Neurodiagnostic Technologists
Radiologic Technologists & Technicians
Medical Appliance Technicians

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
220

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Retail Salespersons

Sell merchandise, such as furniture, motor vehicles, appliances, or apparel to consumers.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Greet customers and ascertain what each customer wants or needs. Recommend, select, and help locate or obtain merchandise based on customer needs and desires. Compute sales prices, total purchases, and receive and process cash or credit payment. Prepare merchandise for purchase or rental. Answer questions regarding the store and its merchandise. Maintain knowledge of current sales and promotions, policies regarding payment and exchanges, and security practices. Demonstrate use or operation of merchandise. Describe merchandise and explain use, operation, and care of merchandise to customers. Ticket, arrange, and display merchandise to promote sales. Inventory stock and requisition new stock. Exchange merchandise for customers and accept returns. Watch for and recognize security risks and thefts and know how to prevent or handle these situations. Place special orders or call other stores to find desired items. Clean shelves, counters, and tables.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry $17,013.00</td>
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<tr>
<td>Median</td>
<td>Median $22,854.00</td>
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<tr>
<td>Experienced</td>
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<tr>
<td>$8.18</td>
<td>$10.99</td>
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<tr>
<td>$19.26</td>
<td>$22,854.00</td>
</tr>
</tbody>
</table>

**Average Total Openings:** 9,500

**Annual Growth Rate:** 0.16%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

Hotel, Motel, & Resort Desk Clerks
Counter & Rental Clerks
Concierges
Parts Salespersons
First-Line Supervisors of Retail Sales Workers
Floral Designers
Bartenders
Tellers
Pharmacy Aides

**Post-Secondary Institutions with Programs**

221

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Rolling Machine Setters, Operators, and Tenders
Set up, operate, or tend machines to roll steel or plastic forming bends, beads, knurls, rolls, or plate, or to flatten, temper, or reduce gauge of material.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Monitor machine cycles and mill operation to detect jamming and to ensure that products conform to specifications. Adjust and correct machine set-ups to reduce thicknesses, reshape products, and eliminate product defects. Start operation of rolling and milling machines to flatten, temper, form, and reduce sheet metal sections and to produce steel strips. Examine, inspect, and measure raw materials and finished products to verify conformance to specifications. Read rolling orders, blueprints, and mill schedules to determine setup specifications, work sequences, product dimensions, and installation procedures. Manipulate controls and observe dial indicators to monitor, adjust, and regulate speeds of machine mechanisms. Set distance points between rolls, guides, meters, and stops, according to specifications. Calculate draft space and roll speed for each mill stand to plan rolling sequences and specified dimensions and tempers. Install equipment such as guides, guards, gears, cooling equipment, and rolls, using hand tools. Position, align, and secure arbors, spindles, coils, mandrels, dies, and slitting knives. Fill oil cups, adjust valves, and observe gauges to control flow of metal coolants and lubricants onto workpieces. Activate shears and grinders to trim workpieces. Signal and assist other workers to remove and position equipment, fill hoppers, and feed materials into machines. Record mill production on schedule sheets. Direct and train other workers to change rolls, operate mill equipment, remove coils and cobbles, and band and load material.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<td>Entry</td>
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<tr>
<td>$10.58</td>
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<tr>
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<tr>
<td>$15.76</td>
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<tr>
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<tr>
<td>$28.67</td>
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2018 Estimated Employment: 1,340
2028 Projected Employment: 1,370
Average Total Openings: 130
Annual Growth Rate: 0.24%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
- Multiple Machine Tool Setters, Operators, & Tenders
- Computer Numerically Controlled Tool Operators
- Cutting & Slicing Machine Setters, Operators, & Tenders
- Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders
- Heat Treating Equipment Setters, Operators, & Tenders
- Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
- Paper Goods Machine Setters, Operators, & Tenders
- Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders
- Extruding & Forming Machine Setters, Operators, & Tenders, Synthetic & Glass Fibers

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Roofers

Cover roofs of structures with shingles, slate, asphalt, aluminum, wood, or related materials. May spray roofs, sidings, and walls with material to bind, seal, insulate, or soundproof sections of structures.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 2 years, up to and including 4 years prior to applying roofing materials. Set up scaffolding to provide safe access to roofs. Estimate materials and labor required to complete roofing jobs. Cement or nail flashing strips of metal or shingle over joints to make them watertight. Install partially overlapping layers of material over roof insulation surfaces, using chalk lines, gauges on shingling hatchets, or lines on shingles. Cut felt, shingles, or strips of flashing to fit angles formed by walls, vents, or intersecting roof surfaces. Apply plastic coatings, membranes, fiberglass, or felt over sloped roofs before applying shingles. Install, repair, or replace single-ply roofing systems, using waterproof sheet materials such as modified plastics, elastomeric, or other asphaltic compositions. Attach roofing paper to roofs in overlapping strips to form bases for other materials. Cover roofs or exterior walls of structures with slate, asphalt, aluminum, wood, gravel, gypsum, or related materials, using brushes, knives, punches, hammers, or other tools. Waterproof or damp-proof walls, floors, roofs, foundations, or basements by painting or spraying surfaces with waterproof coatings or by attaching waterproofing membranes to surfaces. Apply reflective roof coatings, such as special paints or single-ply roofing sheets, to existing roofs to reduce solar heat absorption. Apply alternate layers of hot asphalt or tar and roofing paper to roofs. Install vapor barriers or layers of insulation on flat roofs. Cover exposed nailheads with roofing cement or caulking to prevent water leakage or rust. Smooth rough spots to prepare surfaces for waterproofing, using hammers, chisels, or rubbing bricks. Glaze top layers to make a smooth finish or embed gravel in the bitumen for rough surfaces. Mop or pour hot asphalt or tar onto roof bases. Install attic ventilation systems, such as turbine vents, gable or ridge vents, or conventional or solar-powered exhaust fans. Install skylights on roofs to increase natural light inside structures or to reduce energy costs. Apply gravel or pebbles over top layers of roofs, using rakes or stiff-bristled brooms.

**License:** License Fee: $150.00; New License Application Fee: $100.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$12.74</td>
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<td>$16.76</td>
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<tr>
<td>$22.77</td>
<td>$47,358.00</td>
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</tbody>
</table>

**2018 Estimated Employment:** 1,370  
**2028 Projected Employment:** 1,490  
**Average Total Openings:** 160  
**Annual Growth Rate:** 0.85%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Insulation Workers, Mechanical
- Cement Masons & Concrete Finishers
- Plasterers & Stucco Masons
- Terrazzo Workers & Finishers
- Glaziers
- Reinforcing Iron & Rebar Workers
- Helpers--Carpenters
- Tile & Stone Setters
- Paperhangers
- Fence Erectors

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Sales Managers

Plan, direct, or coordinate the actual distribution or movement of a product or service to the customer. Coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. Analyze sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.

Education: Most of these occupations typically require a four-year bachelor’s degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Direct and coordinate activities involving sales of manufactured products, services, commodities, real estate or other subjects of sale. Resolve customer complaints regarding sales and service. Review operational records and reports to project sales and determine profitability. Oversee regional and local sales managers and their staffs. Determine price schedules and discount rates. Prepare budgets and approve budget expenditures. Monitor customer preferences to determine sales potential and inventory requirements and monitor the preferences of customers.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Projections</th>
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Average Total Openings: 270
Annual Growth Rate: 0.61%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Marketing Managers
First-Line Supervisors of Non-Retail Sales Workers
Training & Development Managers
Human Resources Managers
Transportation, Storage, & Distribution Managers
Financial Managers
Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products
Advertising & Promotions Managers

Post-Secondary Institutions with Programs
Strayer University-Alabama
Sales Reps, Wholesale and Manufacturing, Except Technical and Scientific Products

Sell goods for wholesalers or manufacturers to businesses or groups of individuals. Work requires substantial knowledge of items sold.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Answer customers' questions about products, prices, availability, product uses, and credit terms. Recommend products to customers, based on customers' needs and interests. Estimate or quote prices, credit or contract terms, warranties, and delivery dates. Consult with clients after sales or contract signings to resolve problems and to provide ongoing support. Prepare sales contracts and order forms. Provide customers with product samples and catalogs. Monitor market conditions, product innovations, and competitors' products, prices, and sales. Perform administrative duties, such as preparing sales budgets and reports, keeping sales records, and filing expense account reports. Contact regular and prospective customers to demonstrate products, explain product features, and solicit orders. Identify prospective customers by using business directories, following leads from existing clients, participating in organizations and clubs, and attending trade shows and conferences.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry $14.73</td>
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<tr>
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<td>Median $26.96</td>
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<tr>
<td>Experienced</td>
<td>Experienced $54.88</td>
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<tr>
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<td>$30,633.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Real Estate Brokers
Advertising Sales Agents
Private Detectives & Investigators
Retail Salespersons
Real Estate Sales Agents
Wholesale & Retail Buyers, Except Farm Products
Insurance Appraisers, Auto Damage
Buyers & Purchasing Agents, Farm Products
Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products
Property, Real Estate, & Community Association Managers

Post-Secondary Institutions with Programs
225

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Sales Reps, Wholesale and Manufacturing, Technical and Scientific Products

Sell goods for wholesalers or manufacturers where technical or scientific knowledge is required in such areas as biology, engineering, chemistry, and electronics, normally obtained from at least 2 years of postsecondary education.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months.

Tasks: Negotiate prices or terms of sales or service agreements. Prepare and submit sales contracts for orders. Visit establishments to evaluate needs or to promote product or service sales. Maintain customer records, using automated systems. Answer customers' questions about products, prices, availability, or credit terms. Quote prices, credit terms, or other bid specifications. Contact new or existing customers to discuss how specific products or services can meet their needs. Emphasize product features, based on analyses of customers' needs and on technical knowledge of product capabilities and limitations. Compute customer's installation or production costs and estimate savings from new services, products, or equipment. Select or assist customers in selecting products based on customer needs, product specifications, and applicable regulations. Prepare sales presentations or proposals to explain product specifications or applications. Complete expense reports, sales reports, or other paperwork. Verify that delivery schedules meet project deadlines. Identify prospective customers, using business directories, leads from existing clients, participation in organizations, or trade show or conference attendance. Inform customers of estimated delivery schedules, service contracts, warranties, or other information pertaining to purchased products. Collaborate with colleagues to exchange information, such as selling strategies or marketing information. Provide customers with ongoing technical support. Advise customers on product usage to improve production. Study documentation or other information for new scientific or technical products. Stock or distribute resources, such as samples or promotional or educational materials. Attend sales or trade meetings or read related publications to obtain information about market conditions, business trends, environmental regulations, or industry developments.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th></th>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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<tr>
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Alabama Projections

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<tr>
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<th>2018 Estimated Employment: 1,960</th>
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<tbody>
<tr>
<td></td>
<td>2028 Projected Employment: 2,170</td>
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<tr>
<td>Average Total Openings:</td>
<td>240</td>
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<td>Annual Growth Rate:</td>
<td>1.01%</td>
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Related Occupations

Insurance Sales Agents
Agents & Business Managers of Artists, Performers, & Athletes
Writers & Authors
Advertising Sales Agents
Public Relations Specialists
Personal Financial Advisors
Sales Managers
Marketing Managers
Securities, Commodities, & Financial Services Sales Agents
Market Research Analysts & Marketing Specialists

2020 Career Exploration Guide
226

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Sawing Machine Setters, Operators, and Tenders

Set up, operate, or tend wood sawing machines. May operate computer numerically controlled (CNC) equipment. Includes lead sawyers.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Inspect and measure workpieces to mark for cuts and to verify the accuracy of cuts, using rulers, squares, or caliper rules. Adjust saw blades, using wrenches and rulers, or by turning handwheels or pressing pedals, levers, or panel buttons. Mount and bolt sawing blades or attachments to machine shafts. Set up, operate, or tend saws or machines that cut or trim wood to specified dimensions, such as circular saws, band saws, multiple-blade sawing machines, scroll saws, ripsaws, or crozer machines. Inspect stock for imperfections or to estimate grades or qualities of stock or workpieces. Monitor sawing machines, adjusting speed and tension and clearing jams to ensure proper operation. Sharpen blades or replace defective or worn blades or bands, using hand tools. Guide workpieces against saws, saw over workpieces by hand, or operate automatic feeding devices to guide cuts. Clear machine jams, using hand tools. Lubricate or clean machines, using wrenches, grease guns, or solvents.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
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<td>Experienced</td>
<td>$21.45</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations:
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Woodworking Machine Setters, Operators, & Tenders, Except Sawing
- Engine & Other Machine Assemblers
- Lathe & Turning Machine Tool Setters, Operators, & Tenders
- Molders, Shapers, & Casters, Except Metal & Plastic
- Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders
- Machine Feeders & Offbearers
- Print Binding & Finishing Workers
- Welders, Cutters, Solderers, & Brazers
- Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders

Post-Secondary Institutions with Programs:

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Securities, Commodities, and Financial Services Sales Agents

Buy and sell securities or commodities in investment and trading firms, or provide financial services to businesses and individuals. May advise customers about stocks, bonds, mutual funds, commodities, and market conditions.

**Education:** Most of these occupations require a four-year bachelor's degree, but some do not.

**OJT:** Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

**Tasks:** Make bids or offers to buy or sell securities. Monitor markets or positions. Agree on buying or selling prices at optimal levels for clients. Keep accurate records of transactions. Buy or sell stocks, bonds, commodity futures, foreign currencies, or other securities on behalf of investment dealers. Complete sales order tickets and submit for processing of client-requested transactions. Report all positions or trading results. Interview clients to determine clients’ assets, liabilities, cash flow, insurance coverage, tax status, or financial objectives. Discuss financial options with clients and keep them informed about transactions. Determine customers' financial services needs and prepare proposals to sell services that address these needs. Sell services or equipment, such as trusts, investments, or check processing services. Identify opportunities or develop channels for purchase or sale of securities or commodities. Develop financial plans, based on analysis of clients' financial status. Review all securities transactions to ensure accuracy of information and conformance to governing agency regulations. Contact prospective customers to present information and explain available services. Devise trading, option, or hedge strategies. Track and analyze factors that affect price movement, such as trade policies, weather conditions, political developments, or supply and demand changes. Inform other traders, managers, or customers of market conditions, including volume, price, competition, or dynamics. Offer advice on the purchase or sale of particular securities. Evaluate costs and revenue of agreements to determine continued profitability. Explain stock market terms or trading practices to clients. Calculate costs for billings or commissions. Prepare financial reports to monitor client or corporate finances. Supply the latest price quotes on any security, as well as information on the activities or financial positions of the corporations issuing these securities.

**License:** Filing Fee: $250.00; Application Fee: $70.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
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<td>Entry</td>
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<th>2018 Estimated Employment:</th>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Personal Financial Advisors
- Insurance Sales Agents
- Financial Managers
- Loan Officers
- Agents & Business Managers of Artists, Performers, & Athletes
- Human Resources Specialists
- Public Relations Specialists
- Market Research Analysts & Marketing Specialists
- Accountants & Auditors

**Post-Secondary Institutions with Programs**
- Jefferson Davis Community College

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2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Security and Fire Alarm Systems Installers

Install, program, maintain, and repair security and fire alarm wiring and equipment. Ensure that work is in accordance with relevant codes.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need over 2 years, up to and including 4 years

**Tasks:** Install, maintain, or repair security systems, alarm devices, or related equipment, following blueprints of electrical layouts and building plans. Mount and fasten control panels, door and window contacts, sensors, or video cameras, and attach electrical and telephone wiring to connect components. Demonstrate systems for customers and explain details, such as the causes and consequences of false alarms. Test and repair circuits and sensors, following wiring and system specifications. Feed cables through access holes, roof spaces, or cavity walls to reach fixture outlets, positioning and terminating cables, wires, or strapping. Examine systems to locate problems, such as loose connections or broken insulation. Test backup batteries, keypad programming, sirens, or other security features to ensure proper functioning or to diagnose malfunctions. Drill holes for wiring in wall studs, joists, ceilings, or floors. Inspect installation sites and study work orders, building plans, and installation manuals to determine materials requirements and installation procedures. Consult with clients to assess risks and to determine security requirements. Mount raceways and conduits and fasten wires to wood framing, using staplers. Adjust sensitivity of units, based on room structures and manufacturers' recommendations, using programming keypads. Keep informed of new products and developments. Order replacement parts.

**License:** Individual Licensing Fee: $50.00; Renewal Fee: $45.00

**Outlook:** Satisfactory

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**Alabama Employment Outlook**

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<thead>
<tr>
<th>Hourly Wage</th>
<th>Annual Wage</th>
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**Alabama Projections**

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<thead>
<tr>
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<td>Annual Growth Rate:</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Telecommunications Equipment Installers & Repairers, Except Line Installers
- Control & Valve Installers & Repairers, Except Mechanical Door
- Radio, Cellular, & Tower Equipment Installers & Repairers
- Maintenance & Repair Workers, General
- Telecommunications Line Installers & Repairers
- Electronic Equipment Installers & Repairers, Motor Vehicles
- Plumbers, Pipefitters, & Steamfitters
- Audiovisual Equipment Installers & Repairers
- Heating, Air Conditioning, & Refrigeration Mechanics & Installers
- Signal & Track Switch Repairers

**Post-Secondary Institutions with Programs**

- Fortis College
- Fortis College-Dothan
- Fortis College-Foley
- Fortis College-Montgomery
- Fortis Institute-Birmingham
- George C Wallace State Community College-Hanceville
- J F Ingram State Technical College
- Northeast Alabama Community College
- Remington College-Mobile Campus
- Southern Union State Community College

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2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
### Security Guards

Guard, patrol, or monitor premises to prevent theft, violence, or infractions of rules. May operate x-ray and metal detector equipment.

| Education: | These occupations typically require less than a high school diploma - or the equivalent. |
| OJT: | Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month |
| Tasks: | Lock doors and gates of entrances and exits to secure buildings. Answer alarms and investigate disturbances. Monitor and authorize entrance and departure of employees, visitors, and other persons to guard against theft and maintain security of premises. Write reports of daily activities and irregularities, such as equipment or property damage, theft, presence of unauthorized persons, or unusual occurrences. Patrol industrial or commercial premises to prevent and detect signs of intrusion and ensure security of doors, windows, and gates. Call police or fire departments in cases of emergency, such as fire or presence of unauthorized persons. Respond to medical emergencies by administering basic first aid or by obtaining assistance from paramedics. Circulate among visitors, patrons, or employees to preserve order and protect property. Warn persons of rule infractions or violations, and apprehend or evict violators from premises, using force when necessary. Answer telephone calls to take messages, answer questions, and provide information during non-business hours or when switchboard is closed. |
| License: | License Fee: $88.25; Late Fee: $25.00; Replacement Fee: $10.00 |
| Outlook: | Satisfactory |

### Alabama Employment Outlook

<table>
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<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$8.45</td>
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<td>Median</td>
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<tr>
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<td>Experienced</td>
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<tr>
<td>$21.68</td>
<td>$45,087.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Bailiffs
- Baggage Porters & Bellhops
- Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers
- Machine Operators
- Couriers & Messengers
- Parking Enforcement Workers
- Mail Clerks & Mail Machine Operators, Except Postal Service
- Postal Service Mail Carriers
- Shipping, Receiving, & Inventory Clerks
- Childcare Workers

**Post-Secondary Institutions with Programs**

- Country Colleges
- Dan River Community College
- Fayetteville State University
- Mount Olive College
- University of North Carolina Wilmington
- William Peace University

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Sheet Metal Workers

Fabricate, assemble, install, and repair sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings. Work may involve any of the following: setting up and operating fabricating machines to cut, bend, and straighten sheet metal; shaping metal over anvils, blocks, or forms using hammer; operating soldering and welding equipment to join sheet metal parts; or inspecting, assembling, and smoothing seams and joints of burred surfaces. Includes sheet metal duct installers who install prefabricated sheet metal ducts used for heating, air conditioning, or other purposes.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 2 years, up to and including 4 years

Tasks: Convert blueprints into shop drawings to be followed in the construction or assembly of sheet metal products. Determine project requirements, such as scope, assembly sequences, or required methods or materials, using blueprints, drawings, or written or verbal instructions. Lay out, measure, and mark dimensions and reference lines on material, such as roofing panels, using calculators, scribes, dividers, squares, or rulers. Fasten seams or joints together with welds, bolts, cement, rivets, solder, caulks, metal drive clips, or bonds to assemble components into products or to repair sheet metal items. Trim, file, grind, deburr, buff, or smooth surfaces, seams, or joints of assembled parts, using hand tools or portable power tools. Fabricate ducts for high efficiency heating, ventilating, and air conditioning (HVAC) systems to maximize efficiency of systems. Select gauges or types of sheet metal or nonmetallic material, according to product specifications. Finish parts, using hacksaws or hand, rotary, or squaring shears. Shape metal material over anvils, blocks, or other forms, using hand tools. Fabricate or alter parts at construction sites, using shears, hammers, punches, or drills. Transport prefabricated parts to construction sites for assembly and installation. Install assemblies, such as flashing, pipes, tubes, heating and air conditioning ducts, furnace casings, rain gutters, or downspouts in supportive frameworks. Hire, train, or supervise new employees or apprentices. Maintain equipment, making repairs or modifications when necessary.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tr>
<td>Hourly Wage</td>
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<td>Entry</td>
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<tr>
<td>$12.81</td>
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<td>Median</td>
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<tr>
<td>$28.77</td>
<td>$59,835.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Boilermakers
Carpenters
Structural Iron & Steel Workers
Layout Workers
 Plumbers, Pipefitters, & Steamfitters
Drywall & Ceiling Tile Installers
Brickmasons & Blockmasons
Cement Masons & Concrete Finishers
Crushing, Grinding, & Polishing Machine Setters,
Operators, & Tenders

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
231

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Verify and maintain records on incoming and outgoing shipments involving inventory. Duties include verifying and recording incoming merchandise or material and arranging for the transportation of products. May prepare items for shipment.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Examine shipment contents and compare with records, such as manifests, invoices, or orders, to verify accuracy. Requisition and store shipping materials and supplies to maintain inventory of stock. Prepare documents, such as work orders, bills of lading, or shipping orders, to route materials. Pack, seal, label, or affix postage to prepare materials for shipping, using hand tools, power tools, or postage meter. Record shipment data, such as weight, charges, space availability, damages, or discrepancies, for reporting, accounting, or recordkeeping purposes. Confer or correspond with establishment representatives to rectify problems, such as damages, shortages, or nonconformance to specifications. Deliver or route materials to departments using handtruck, conveyor, or sorting bins. Contact carrier representatives to make arrangements or to issue instructions for shipping and delivery of materials. Determine shipping methods, routes, or rates for materials to be shipped. Compute amounts, such as space available, shipping, storage, or demurrage charges, using computer or price list.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

**Alabama Wage Data**

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<th>Entry</th>
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<th>Experienced</th>
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**Alabama Projections**

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<tr>
<th>Employment</th>
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<th>2028 Projected Employment:</th>
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<tr>
<td>Average Total Openings:</td>
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<td>0.23%</td>
<td>0.23%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

Inspectors, Testers, Sorters, Samplers, & Weighers
Couriers & Messengers
Weighers, Measurers, Checkers, & Samplers, Recordkeeping
Print Binding & Finishing Workers
Mail Clerks & Mail Machine Operators, Except Postal Service
Postal Service Clerks
Industrial Truck & Tractor Operators
Laborers & Freight, Stock, & Material Movers, Hand
Postal Service Mail Sorters, Processors, & Processing Machine Operators
Stockers & Order Fillers

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Shuttle Drivers and Chauffeurs

Drive a motor vehicle to transport passengers on a planned or scheduled basis. May collect a fare. Includes nonemergency medical transporters and hearse drivers.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

Tasks: Perform routine vehicle maintenance, such as regulating tire pressure and adding gasoline, oil, and water. Report to taxicab services or garages to receive vehicle assignments. Test vehicle equipment, such as lights, brakes, horns, or windshield wipers, to ensure proper operation. Drive taxicabs, limousines, company cars, or privately owned vehicles to transport passengers. Record name, date, and taxi identification information on trip sheets, along with trip information, such as time and place of pickup and drop-off, and total fee. Vacuum and clean interiors and wash and polish exteriors of automobiles. Determine fares based on trip distances and times, using taximeters and fee schedules, and announce fares to passengers. Arrange to pick up particular customers or groups on a regular schedule. Communicate with dispatchers by radio, telephone, or computer to exchange information and receive requests for passenger service. Pick up or meet employers according to requests, appointments, or schedules. Follow relevant safety regulations and state laws governing vehicle operation and ensure that passengers follow safety regulations. Operate vehicles with specialized equipment, such as wheelchair lifts, to transport and secure passengers with special needs. Provide passengers with assistance entering and exiting vehicles and help them with any luggage. Perform errands for customers or employers, such as delivering or picking up mail and packages. Notify dispatchers or company mechanics of vehicle problems. Provide passengers with information about the local area and points of interest or give advice on hotels and restaurants. Pick up passengers at prearranged locations, at taxi stands, or by cruising streets in high traffic areas. Turn the taximeter on when passengers enter the cab and turn it off when they reach the final destination. Collect fares or vouchers from passengers and make change or issue receipts as necessary. Perform minor vehicle repairs, such as cleaning spark plugs, or take vehicles to mechanics for servicing. Complete accident reports when necessary.

License: Testing Fee: $25.00; Commercial Learner License: $36.25; Skills Test Fee: $20.00; Class "A" License: $66.25; Class "B" License: $56.25; Class "C" License: $36.25

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
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<td>$11.69</td>
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</tbody>
</table>

2018 Estimated Employment: 2,460
2028 Projected Employment: 2,840
Average Total Openings: 325
Annual Growth Rate: 1.46%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Airport Shuttle Driver
Chauffeur
Corporate Driver
Courtesy Car Driver
Courtesy Van Driver
Crew Car Driver
Delivery Driver
Drive Away Driver
Driver
Escort Car Driver
Flag Car Driver
Funeral Car Chauffeur
Funeral Car Driver
Hearse Driver
Limo Driver (Limousine Driver)

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Skincare Specialists

Provide skincare treatments to face and body to enhance an individual's appearance. Includes electrologists and laser hair removal specialists.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Sterilize equipment and clean work areas. Examine clients' skin, using magnifying lamps or visors when necessary, to evaluate skin condition and appearance. Cleanse clients' skin with water, creams, or lotions. Demonstrate how to clean and care for skin properly and recommend skin-care regimens. Select and apply cosmetic products, such as creams, lotions, and tonics. Perform simple extractions to remove blackheads. Stay abreast of latest industry trends, products, research, and treatments. Determine which products or colors will improve clients' skin quality and appearance. Treat the facial skin to maintain and improve its appearance, using specialized techniques and products, such as peels and masks. Refer clients to medical personnel for treatment of serious skin problems. Remove body and facial hair by applying wax. Provide facial and body massages. Keep records of client needs and preferences and the services provided. Apply chemical peels to reduce fine lines and age spots. Advise clients about colors and types of makeup and instruct them in makeup application techniques.

License: Original License Fee: $50.00; Personal Renewal Fee: $100.00; Apprentice Fee: $75.00; Written Examination: $75.00; Practical Examination: $130.00

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>Entry</td>
<td>$9.66</td>
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<td>Average Total Openings: 70</td>
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<td>Annual Growth Rate: 0.83%</td>
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</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Hairdressers, Hairstylists, & Cosmetologists
Massage Therapists
Self-Enrichment Teachers
Manicurists & Pedicurists
Barbers
Dental Assistants
Exercise Trainers & Group Fitness Instructors
Shampooers
Preschool Teachers, Except Special Education
Medical Assistants
Aesthetician
Clinical Esthetician
Esthetician
Facialist
Lead Esthetician
Medical Esthetician
Skin Care Specialist
Skin Care Technician
Skin Care Therapist
Spa Technician

Post-Secondary Institutions with Programs
Blue Cliff Career College
Lurleen B Wallace Community College
Paul Mitchell the School-Birmingham

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Slaughterers and Meat Packers

Perform nonroutine or precision functions involving the preparation of large portions of meat. Work may include specialized slaughtering tasks, cutting standard or premium cuts of meat for marketing, making sausage, or wrapping meats. Work typically occurs in slaughtering, meat packing, or wholesale establishments.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Remove bones, and cut meat into standard cuts in preparation for marketing. Wrap dressed carcasses or meat cuts. Tend assembly lines, performing a few of the many cuts needed to process a carcass. Grind meat into hamburger, and into trimmings used to prepare sausages, luncheon meats, and other meat products. Slaughter animals in accordance with religious law, and determine that carcasses meet specified religious standards. Slit open, eviscerate, and trim carcasses of slaughtered animals. Trim, clean, or cure animal hides. Stun animals prior to slaughtering. Saw, split, or scribe carcasses into smaller portions to facilitate handling. Cut, trim, skin, sort, and wash viscera of slaughtered animals to separate edible portions from offal. Skin sections of animals or whole animals. Shackle hind legs of animals to raise them for slaughtering or skinning. Trim head meat, and sever or remove parts of animals' heads or skulls. Sever jugular veins to drain blood and facilitate slaughtering. Shave or singe and defeather carcasses, and wash them in preparation for further processing or packaging.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
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<td>$10.79</td>
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<td>Experienced</td>
<td>$13.93</td>
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</table>

| Entry | $17,405.00 |
| Median| $22,433.00 |
| Experienced | $28,973.00 |

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Helpers--Production Workers
- Food Preparation Workers
- Meat, Poultry, & Fish Cutters & Trimmers
- Dishwashers
- Food Servers, Nonrestaurant
- Janitors & Cleaners, Except Maids & Housekeeping
- Cleaners
- Farmworkers & Laborers, Crop, Nursery, & Greenhouse
- Cooks, Fast Food
- Cooks, Restaurant
- Pressers, Textile, Garment, & Related Materials

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Social and Community Service Managers

Plan, direct, or coordinate the activities of a social service program or community outreach organization. Oversee the program or organization's budget and policies regarding participant involvement, program requirements, and benefits. Work may involve directing social workers, counselors, or probation officers.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Establish and oversee administrative procedures to meet objectives set by boards of directors or senior management. Direct activities of professional and technical staff members and volunteers. Evaluate the work of staff and volunteers to ensure that programs are of appropriate quality and that resources are used effectively. Participate in the determination of organizational policies regarding such issues as participant eligibility, program requirements, and program benefits. Prepare and maintain records and reports, such as budgets, personnel records, or training manuals. Provide direct service and support to individuals or clients, such as handling a referral for child advocacy issues, conducting a needs evaluation, or resolving complaints. Establish and maintain relationships with other agencies and organizations in community to meet community needs and to ensure that services are not duplicated. Recruit, interview, and hire or sign up volunteers and staff. Research and analyze member or community needs to determine program directions and goals. Implement and evaluate staff, volunteer, or community training programs. Act as consultants to agency staff and other community programs regarding the interpretation of program-related federal, state, and county regulations and policies. Speak to community groups to explain and interpret agency purposes, programs, and policies.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
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<td><strong>Annual Wage</strong></td>
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<td>Entry</td>
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2018 Estimated Employment: 1,460
2028 Projected Employment: 1,590
Average Total Openings: 145
Annual Growth Rate: 0.80%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Human Resources Managers
- Medical & Health Services Managers
- Education Administrators, Kindergarten through Secondary
- Training & Development Managers
- Clergy
- Education Administrators, Postsecondary
- Education & Childcare Administrators, Preschool & Daycare
- Training & Development Specialists
- Emergency Management Directors
- Child, Family, & School Social Workers

Post-Secondary Institutions with Programs
- Oakwood University
- Talladega College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Social and Human Service Assistants

Assist other social and human service providers in providing client services in a wide variety of fields, such as psychology, rehabilitation, or social work, including support for families. May assist clients in identifying and obtaining available benefits and social and community services. May assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, or dependent care.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Assess clients’ cognitive abilities and physical and emotional needs to determine appropriate interventions. Develop and implement behavioral management and care plans for clients. Keep records or prepare reports for owner or management concerning visits with clients. Visit individuals in homes or attend group meetings to provide information on agency services, requirements, or procedures. Submit reports and review reports or problems with superior. Interview individuals or family members to compile information on social, educational, criminal, institutional, or drug history. Provide information or refer individuals to public or private agencies or community services for assistance. Advise clients regarding food stamps, child care, food, money management, sanitation, or housekeeping.

License: Application Review Fee: $25.00; License Fee: $100.00; Renewal Fee: $100.00; Temporary License Application Review Fee: $25.00; Temporary License Fee: $100.00; Late Fee: $50.00; Reinstatement Fee: $100.00

Outlook: Satisfactory

Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td><strong>Average Total Openings:</strong></td>
<td><strong>Annual Growth Rate:</strong></td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Residential Advisors
Psychiatric Technicians
Preschool Teachers, Except Special Education
Probation Officers & Correctional Treatment Specialists
Correctional Officers & Jailers
Recreation Workers
First-Line Supervisors of Office & Administrative Support Workers

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Software Developers

Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, and develop specifications and performance requirements. May maintain databases within an application area, working individually or coordinating database development as part of a team.

Education:  Most of these occupations require a four-year bachelor's degree, but some do not.

OJT:  Employees in these occupations usually need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Tasks:  Store, retrieve, and manipulate data for analysis of system capabilities and requirements. Analyze information to determine, recommend, and plan computer specifications and layouts, and peripheral equipment modifications. Develop and direct software system testing and validation procedures, programming, and documentation. Modify existing software to correct errors, allow it to adapt to new hardware, or to improve its performance. Confer with systems analysts, engineers, programmers and others to design system and to obtain information on project limitations and capabilities, performance requirements and interfaces. Design, develop and modify software systems, using scientific analysis and mathematical models to predict and measure outcome and consequences of design. Consult with customers about software system design and maintenance. Analyze user needs and software requirements to determine feasibility of design within time and cost constraints. Supervise the work of programmers, technologists and technicians and other engineering and scientific personnel. Determine system performance standards. Coordinate software system installation and monitor equipment functioning to ensure specifications are met. Obtain and evaluate information on factors such as reporting formats required, costs, and security needs to determine hardware configuration. Recommend purchase of equipment to control dust, temperature, and humidity in area of system installation. Train users to use new or modified equipment. Specify power supply requirements and configuration.

License:  No License Required.

Outlook:  Very Good

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<td>$26.75 Entry</td>
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<td>$156,572.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Application Developer
Application Integration Engineer
Developer
Infrastructure Engineer
Network Engineer
Software Architect
Software Developer
Software Development Engineer
Software Engineer
Systems Engineer

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
### Speech-Language Pathologists

Assess and treat persons with speech, language, voice, and fluency disorders. May select alternative communication systems and teach their use. May perform research related to speech and language problems.

**Education:** Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need over 3 months, up to and including 6 months

**Tasks:**
- Monitor patients' progress and adjust treatments accordingly. Develop or implement treatment plans for problems such as stuttering, delayed language, swallowing disorders, or inappropriate pitch or harsh voice problems, based on own assessments and recommendations of physicians, psychologists, or social workers.
- Write reports and maintain proper documentation of information, such as client Medicaid or billing records or caseload activities, including the initial evaluation, treatment, progress, and discharge of clients. Participate in and write reports for meetings regarding patients' progress, such as individualized educational planning (IEP) meetings, in-service meetings, or intervention assistance team meetings. Evaluate hearing or speech and language test results, barium swallow results, or medical or background information to diagnose and plan treatment for speech, language, fluency, voice, or swallowing disorders. Complete administrative responsibilities, such as coordinating paperwork, scheduling case management activities, or writing lesson plans. Develop individual or group activities or programs in schools to deal with behavior, speech, language, or swallowing problems. Instruct clients in techniques for more effective communication, such as sign language, lip reading, or voice improvement. Administer hearing or speech and language evaluations, tests, or examinations to patients to collect information on type and degree of impairments, using written or oral tests or special instruments. Educate patients and family members about various topics, such as communication techniques or strategies to cope with or to avoid personal misunderstandings. Supervise or collaborate with therapy team. Teach clients to control or strengthen tongue, jaw, face muscles, or breathing mechanisms. Participate in conferences, training, continuing education courses, or publish research results to share knowledge of new hearing or speech disorder treatment methods or technologies. Consult with and refer clients to additional medical or educational services. Communicate with non-speaking students, using sign language or computer technology. Consult with and advise educators or medical staff on speech or hearing topics, such as communication strategies or speech and language stimulation. Design, develop, or employ alternative diagnostic or communication devices or strategies. Develop speech exercise programs to reduce disabilities. Conduct lessons or direct educational or therapeutic games to assist teachers dealing with speech problems. Use computer applications to identify or assist with communication disabilities.

**License:** Application Fee: $200.00; Renewal Fee: $100.00

**Outlook:** Very Good

### Alabama Employment Outlook

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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
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<td>Entry</td>
<td>Entry</td>
</tr>
<tr>
<td>$21.61</td>
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<tr>
<td>$29.57</td>
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<tr>
<td>$49.26</td>
<td>$102,470.00</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Healthcare Social Workers
- Health Specialties Teachers, Postsecondary
- Family & Consumer Sciences Teachers, Postsecondary
- Nursing Instructors & Teachers, Postsecondary
- Educational, Guidance, & Career Counselors & Advisors
- Special Education Teachers, Secondary School
- Communications Teachers, Postsecondary
- Health Education Specialists

**Post-Secondary Institutions with Programs**
- 239

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Stockers and Order Fillers

Receive, store, and issue merchandise, materials, equipment, and other items from stockroom, warehouse, or storage yard to fill shelves, racks, tables, or customers' orders. May operate power equipment to fill orders. May mark prices on merchandise and set up sales displays.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

**Tasks:** Complete order receipts. Obtain merchandise from bins or shelves. Read orders to ascertain catalog numbers, sizes, colors, and quantities of merchandise. Pack and unpack items to be stocked on shelves in stockrooms, warehouses, or storage yards. Store items in an orderly and accessible manner in warehouses, tool rooms, supply rooms, or other areas. Examine and inspect stock items for wear or defects, reporting any damage to supervisors. Answer customers' questions about merchandise and advise customers on merchandise selection. Receive and count stock items, and record data manually or on computer. Stamp, attach, or change price tags on merchandise, referring to price list. Stock shelves, racks, cases, bins, and tables with new or transferred merchandise. Compare merchandise invoices to items actually received to ensure that shipments are correct. Itemize and total customer merchandise selection at checkout counter, using cash register, and accept cash or charge card for purchases. Transport packages to customers' vehicles. Mark stock items, using identification tags, stamps, electric marking tools, or other labeling equipment. Take inventory or examine merchandise to identify items to be reordered or replenished. Issue or distribute materials, products, parts, and supplies to customers or coworkers, based on information from incoming requisitions. Provide assistance or direction to other stockroom, warehouse, or storage yard workers. Clean display cases, shelves, and aisles. Design and set up advertising signs and displays of merchandise on shelves, counters, or tables to attract customers and promote sales. Pack customer purchases in bags or cartons. Dispose of damaged or defective items, or return them to vendors. Clean and maintain supplies, tools, equipment, and storage areas to ensure compliance with safety regulations. Recommend disposal of excess, defective, or obsolete stock. Keep records on the use or damage of stock or stock-handling equipment.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
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<tr>
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<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
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<tr>
<td>$18.71</td>
<td>$38,918.00</td>
</tr>
</tbody>
</table>

**2018 Estimated Employment:** 21,960

**2028 Projected Employment:** 23,020

**Average Total Openings:** 3,100

**Annual Growth Rate:** 0.48%

For an explanation on omitted data, see the Missing Data section in the introduction.

#### Related Occupations
- Cashiers
- Fast Food & Counter Workers
- Locker Room, Coatroom, & Dressing Room Attendants
- Dining Room & Cafeteria Attendants & Bartender Helpers
- Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
- Food Servers, Nonrestaurant
- Shoe & Leather Workers & Repairers
- Shipping, Receiving, & Inventory Clerks
- Weighers, Measurers, Checkers, & Samplers
- Recordkeeping
- Waiters & Waitresses

#### Post-Secondary Institutions with Programs

**2020 Career Exploration Guide**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Structural Iron and Steel Workers

Raise, place, and unite iron or steel girders, columns, and other structural members to form completed structures or structural frameworks. May erect metal storage tanks and assemble prefabricated metal buildings.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:**
- Read specifications or blueprints to determine the locations, quantities, or sizes of materials required.
- Connect columns, beams, and girders with bolts, following blueprints and instructions from supervisors. Bolt aligned structural steel members in position for permanent riveting, bolting, or welding into place. Fasten structural steel members to hoist cables, using chains, cables, or rope. Hoist steel beams, girders, or columns into place, using cranes or signaling hoisting equipment operators to lift and position structural steel members. Verify vertical and horizontal alignment of structural steel members, using plumb bobs, laser equipment, transits, or levels. Cut, bend, or weld steel pieces, using metal shears, torches, or welding equipment. Erect metal or precast concrete components for structures, such as buildings, bridges, dams, towers, storage tanks, fences, or highway guard rails. Force structural steel members into final positions, using turnbuckles, crowbars, jacks, or hand tools. Pull, push, or pry structural steel members into approximate positions for bolting into place. Unload and position prefabricated steel units for hoisting, as needed. Drive drift pins through rivet holes to align rivet holes in structural steel members with corresponding holes in previously placed members. Assemble hoisting equipment or rigging, such as cables, pulleys, or hooks, to move heavy equipment or materials. Fabricate metal parts, such as steel frames, columns, beams, or girders, according to blueprints or instructions from supervisors. Dismantle structures or equipment.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
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<td>$15.50</td>
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<td>$30.54</td>
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**2018 Estimated Employment:** 1,100

**2028 Projected Employment:** 1,200

**Average Total Openings:** 145

**Annual Growth Rate:** 0.87%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Carpenters
- Sheet Metal Workers
- Brickmasons & Blockmasons
- Boilermakers
- Pile Driver Operators
- Cement Masons & Concrete Finishers
- Drywall & Ceiling Tile Installers
- Rotary Drill Operators, Oil & Gas
- Insulation Workers, Mechanical

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

241

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Substance Abuse, Behavioral Disorder, and Mental Health Counselors

Counsel and advise individuals with alcohol, tobacco, drug, or other problems, such as gambling and eating disorders. May counsel individuals, families, or groups or engage in prevention programs.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Complete and maintain accurate records or reports regarding the patients' histories and progress, services provided, or other required information. Counsel clients or patients, individually or in group sessions, to assist in overcoming dependencies, adjusting to life, or making changes. Interview clients, review records, and confer with other professionals to evaluate individuals' mental and physical condition and to determine their suitability for participation in a specific program. Develop client treatment plans based on research, clinical experience, and client histories. Review and evaluate clients' progress in relation to measurable goals described in treatment and care plans. Intervene as an advocate for clients or patients to resolve emergency problems in crisis situations. Coordinate counseling efforts with mental health professionals or other health professionals, such as doctors, nurses, or social workers. Modify treatment plans to comply with changes in client status. Attend training sessions to increase knowledge and skills. Participate in case conferences or staff meetings. Provide clients or family members with information about addiction issues and about available services or programs, making appropriate referrals when necessary. Conduct chemical dependency program orientation sessions. Coordinate activities with courts, probation officers, community services, or other post-treatment agencies. Train or supervise student interns or new staff members. Act as liaisons between clients and medical staff. Plan or implement follow-up or aftercare programs for clients to be discharged from treatment programs. Assess individuals' degree of drug dependency by collecting and analyzing urine samples. Instruct others in program methods, procedures, or functions. Counsel family members to assist them in understanding, dealing with, and supporting clients or patients. Confer with family members or others close to clients to keep them informed of treatment planning and progress.

License: Counselor Certification Kit Fee: $95.00; Application Fee (Includes one year Membership): $250.00; Written Exam Fee: $350.00

Outlook: Good

Alabama Wage Data

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Alabama Projections

| 2018 Estimated Employment: | 2,110 |
| 2028 Projected Employment: | 2,380 |
| Average Total Openings:    | 260 |
| Annual Growth Rate:        | 1.24% |

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Child, Family, & School Social Workers
Probation Officers & Correctional Treatment Specialists
Educational, Guidance, & Career Counselors & Advisors
Social & Human Service Assistants
Mental Health Counselors
Health Education Specialists
Secondary School Teachers, Except Special & Career/Technical Education
Residential Advisors
Mental Health & Substance Abuse Social Workers
Directors, Religious Activities & Education
Addictions Counselor
Case Manager
Chemical Dependancy Counselor (CD Counselor)
Chemical Dependancy Professional
Clinical Counselor
Correctional Substance Abuse Counselor
Counselor
Drug & Alcohol Treatment Specialist (DATS)
Prevention Specialist
Substance Abuse Counselor (SA Counselor)

Post-Secondary Institutions with Programs

University of Alabama at Birmingham
Gadsden State Community College
George C Wallace State Community College-Hanceville

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Surgical Technologists

Assist in operations, under the supervision of surgeons, registered nurses, or other surgical personnel. May help set up operating room, prepare and transport patients for surgery, adjust lights and equipment, pass instruments and other supplies to surgeons and surgeons' assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks:

- Maintain a proper sterile field during surgical procedures. Count sponges, needles, and instruments before and after operation. Scrub arms and hands and assist the surgical team to scrub and put on gloves, masks, and surgical clothing. Provide technical assistance to surgeons, surgical nurses, or anesthesiologists. Prepare patients for surgery, including positioning patients on the operating table and covering them with sterile surgical drapes to prevent exposure. Hand instruments and supplies to surgeons and surgeons' assistants, hold retractors and cut sutures, and perform other tasks as directed by surgeon during operation.
- Prepare, care for, and dispose of tissue specimens taken for laboratory analysis. Wash and sterilize equipment, using germicides and sterilizers. Monitor and continually assess operating room conditions, including patient and surgical team needs. Operate, assemble, adjust, or monitor sterilizers, lights, suction machines, or diagnostic equipment to ensure proper operation. Prepare dressings or bandages and apply or assist with their application following surgery. Clean and restock operating room, gathering and placing equipment and supplies and arranging instruments according to instructions, such as a preference card.
- Order surgical supplies. Observe patients' vital signs to assess physical condition.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<tr>
<th>Alabama Wage Data</th>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

- Endoscopy Technicians
- Cardiovascular Technologists & Technicians
- Veterinary Technologists & Technicians
- Dental Assistants
- Nuclear Medicine Technologists
- Radiation Therapists
- Respiratory Therapists
- Diagnostic Medical Sonographers
- Radiologic Technologists & Technicians

Post-Secondary Institutions with Programs

- 243

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Perform surveying and mapping duties, usually under the direction of an engineer, surveyor, cartographer, or photogrammetrist, to obtain data used for construction, mapmaking, boundary location, mining, or other purposes. May calculate mapmaking information and create maps from source data, such as surveying notes, aerial photography, satellite data, or other maps to show topographical features, political boundaries, and other features. May verify accuracy and completeness of maps.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks: Position and hold the vertical rods, or targets, that theodolite operators use for sighting to measure angles, distances, and elevations. Check all layers of maps to ensure accuracy, identifying and marking errors and making corrections. Design or develop information databases that include geographic or topographic data. Monitor mapping work or the updating of maps to ensure accuracy, inclusion of new or changed information, or compliance with rules and regulations. Produce or update overlay maps to show information boundaries, water locations, or topographic features on various base maps or at different scales. Determine scales, line sizes, or colors to be used for hard copies of computerized maps, using plotters. Compile information necessary to stake projects for construction, using engineering plans. Identify and compile database information to create requested maps. Operate and manage land-information computer systems, performing tasks such as storing data, making inquiries, and producing plots and reports. Compare survey computations with applicable standards to determine adequacy of data. Analyze aerial photographs to detect and interpret significant military, industrial, resource, or topographical data.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Architectural & Civil Drafters
- Forest & Conservation Technicians
- Cartographers & Photogrammetrists
- Mechanical Engineering Technologists & Technicians
- Environmental Engineering Technologists & Technicians
- Civil Engineering Technologists & Technicians
- Geological Technicians, Except Hydrologic Technicians
- Mechanical Drafters
- Geographic Information Systems Technologists & Technicians
- Forest & Conservation Workers

### Post-Secondary Institutions with Programs

- Alabama A & M University
- Alabama State University
- Athens State University
- Auburn University
- Auburn University at Montgomery
- Birmingham-Southern College
- Huntington College
- Jacksonville State University
- Miles College
- Oakwood University
- Samford University
- Spring Hill College
- The University of Alabama
- Troy University
- Tuskegee University
- University of Alabama at Birmingham
- University of Alabama in Huntsville
- University of Mobile
- University of Montevallo
- University of North Alabama
- University of South Alabama
Tank Car, Truck, and Ship Loaders

Check conditions and weights of vessels to ensure cleanliness and compliance with loading procedures. Observe positions of cars passing loading spouts, and swing spouts into the correct positions at the appropriate times. Monitor product movement to and from storage tanks, coordinating activities with other workers to ensure constant product flow. Operate ship loading and unloading equipment, conveyors, hoists, and other specialized material handling equipment such as railroad tank car unloading equipment. Record operating data such as products and quantities pumped, gauge readings, and operating times, manually or using computers. Operate industrial trucks, tractors, loaders, and other equipment to transport materials to and from transportation vehicles and loading docks, and to store and retrieve materials in warehouses.

Education: These occupations typically require less than a high school diploma - or the equivalent.
OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Seal outlet valves on tank cars, barges, and trucks. Verify tank car, barge, or truck load numbers to ensure car placement accuracy based on written or verbal instructions. Start pumps and adjust valves or cables to regulate the flow of products to vessels, using knowledge of loading procedures. Check conditions and weights of vessels to ensure cleanliness and compliance with loading procedures. Observe positions of cars passing loading spouts, and swing spouts into the correct positions at the appropriate times. Monitor product movement to and from storage tanks, coordinating activities with other workers to ensure constant product flow. Operate ship loading and unloading equipment, conveyors, hoists, and other specialized material handling equipment such as railroad tank car unloading equipment. Record operating data such as products and quantities pumped, gauge readings, and operating times, manually or using computers. Operate industrial trucks, tractors, loaders, and other equipment to transport materials to and from transportation vehicles and loading docks, and to store and retrieve materials in warehouses.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

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**2018 Estimated Employment:** 830
**2028 Projected Employment:** 840
**Average Total Openings:** 105
**Annual Growth Rate:** 0.13%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Gas Compressor & Gas Pumping Station Operators
- Helpers--Extraction Workers
- Hazardous Materials Removal Workers
- Pump Operators, Except Wellhead Pumpers
- Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders
- Service Unit Operators, Oil & Gas
- Rail-Track Laying & Maintenance Equipment Operators
- Rotary Drill Operators, Oil & Gas
- Explosives Workers, Ordnance Handling Experts, & Blasters
- Petroleum Pump System Operators, Refinery Operators, & Gaugers

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Tax Examiners and Collectors, and Revenue Agents

Determine tax liability or collect taxes from individuals or business firms according to prescribed laws and regulations.

**Education:** Most of these occupations typically require a four-year bachelor’s degree.

**OJT:** Employees in these occupations usually need over 1 year, up to and including 2 years

**Tasks:** Collect taxes from individuals or businesses according to prescribed laws and regulations. Maintain knowledge of tax code changes, and of accounting procedures and theory to properly evaluate financial information. Maintain records for each case, including contacts, telephone numbers, and actions taken. Contact taxpayers by mail or telephone to address discrepancies and to request supporting documentation. Send notices to taxpayers when accounts are delinquent. Check tax forms to verify that names and taxpayer identification numbers are correct, that computations have been performed correctly, or that amounts match those on supporting documentation. Answer questions from taxpayers and assist them in completing tax forms. Impose payment deadlines on delinquent taxpayers and monitor payments to ensure that deadlines are met. Notify taxpayers of any overpayment or underpayment, and either issue a refund or request further payment.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

- Loan Officers
- Brokerage Clerks
- Loan Interviewers & Clerks
- Eligibility Interviewers, Government Programs
- Human Resources Assistants, Except Payroll & Timekeeping
- Tax Preparers
- Court, Municipal, & License Clerks
- Administrative Services Managers
- Procurement Clerks
- Bookkeeping, Accounting, & Auditing Clerks
- City Tax Auditor
- Revenue Agent
- Revenue Collector
- Revenue Officer
- Revenue Specialist
- Tax Collector
- Tax Compliance Officer
- Tax Examiner

**Post-Secondary Institutions with Programs**

The University of Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need over 1 month, up to and including 3 months

**Tasks:** Use all appropriate adjustments, deductions, and credits to keep clients' taxes to a minimum. Compute taxes owed or overpaid, using adding machines or personal computers, and complete entries on forms, following tax form instructions and tax tables. Interview clients to obtain additional information on taxable income and deductible expenses and allowances. Review financial records, such as income statements and documentation of expenditures to determine forms needed to prepare tax returns. Prepare or assist in preparing simple to complex tax returns for individuals or small businesses. Check data input or verify totals on forms prepared by others to detect errors in arithmetic, data entry, or procedures. Furnish taxpayers with sufficient information and advice to ensure correct tax form completion. Consult tax law handbooks or bulletins to determine procedures for preparation of atypical returns. Explain federal and state tax laws to individuals and companies. Answer questions and provide future tax planning to clients. Calculate form preparation fees according to return complexity and processing time required. Schedule appointments with clients.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Brokerage Clerks
- Bookkeeping, Accounting, & Auditing Clerks
- Loan Officers
- Tax Examiners & Collectors, & Revenue Agents
- Loan Interviewers & Clerks
- Billing & Posting Clerks
- Title Examiners, Abstractors, & Searchers
- Accountants & Auditors
- Credit Analysts
- Personal Financial Advisors

### Post-Secondary Institutions with Programs
- Bishop State Community College
- Gadsden State Community College
- George C Wallace State Community College-Hanceville
- H Councill Trenholm State Community College
- Herzing University-Birmingham
- Jefferson State Community College
- Lawson State Community College
- Northwest-Shoals Community College
- Snead State Community College
- Strayer University-Alabama
- The University of Alabama
- Troy University

**2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Taxi Drivers

Drive a motor vehicle to transport passengers on an unplanned basis and charge a fare, usually based on a meter.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

Tasks: Collect fares or vouchers from passengers and make change or issue receipts as necessary. Communicate with dispatchers by radio, telephone, or computer to exchange information and receive requests for passenger service. Complete accident reports when necessary. Determine fares based on trip distances and times, using taximeters and fee schedules, and announce fares to passengers. Drive taxicabs or privately owned vehicles to transport passengers. Follow relevant safety regulations and state laws governing vehicle operation and ensure that passengers follow safety regulations. Notify dispatchers or company mechanics of vehicle problems. Perform minor vehicle repairs, such as cleaning spark plugs, or take vehicles to mechanics for servicing. Perform routine vehicle maintenance, such as regulating tire pressure and adding gasoline, oil, and water. Pick up passengers at prearranged locations, at taxi stands, or by cruising streets in high traffic areas. Provide passengers with assistance entering and exiting vehicles and help them with any luggage. Provide passengers with information about the local area and points of interest or give advice on hotels and restaurants. Report to taxicab services or garages to receive vehicle assignments. Test vehicle equipment, such as lights, brakes, horns, or windshield wipers, to ensure proper operation. Turn the taximeter on when passengers enter the cab and turn it off when they reach the final destination. Vacuum and clean interiors and wash and polish exteriors of automobiles.

License: Class D license required.

Outlook: Good

Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Bicycle Taxi Driver
Cab Driver
Hack Driver
Hacker
Lyft Driver
Pedicab Driver
Rickshaw Driver
Taxi Cab Driver
Taxi Driver
Taxicab Driver

Post-Secondary Institutions with Programs

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Teacher Assistants

Assist a preschool, elementary, middle, or secondary school teacher with instructional duties. Serve in a position for which a teacher has primary responsibility for the design and implementation of educational programs and services.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Take class attendance and maintain attendance records. Assist in bus loading and unloading. Clean classrooms. Discuss assigned duties with classroom teachers to coordinate instructional efforts. Enforce administration policies and rules governing students. Present subject matter to students under the direction and guidance of teachers, using lectures, discussions, or supervised role-playing methods. Instruct and monitor students in the use and care of equipment and materials to prevent injuries and damage. Provide disabled students with assistive devices, supportive technology, and assistance accessing facilities, such as restrooms. Conduct demonstrations to teach skills, such as sports, dancing, and handicrafts. Organize and supervise games and other recreational activities to promote physical, mental, and social development. Teach social skills to students. Prepare lesson outlines and plans in assigned subject areas and submit outlines to teachers for review. Distribute teaching materials, such as textbooks, workbooks, papers, and pencils to students. Supervise students in classrooms, halls, cafeterias, school yards, and gymnasiums, or on field trips. Distribute tests and homework assignments and collect them when they are completed. Operate and maintain audio-visual equipment. Tutor and assist children individually or in small groups to help them master assignments and to reinforce learning concepts presented by teachers. Use computers, audio-visual aids, and other equipment and materials to supplement presentations. Provide extra assistance to students with special needs. Grade homework and tests, and compute and record results, using answer sheets or electronic marking devices. Observe students' performance, and record relevant data to assess progress. Carry out therapeutic regimens, such as behavior modification and personal development programs, under the supervision of special education instructors, psychologists, or speech-language pathologists.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Bilingual Teacher Aide
- Classroom Aide
- Early Childhood Teacher Assistant (EC Teacher Assistant)
- Education Paraprofessional
- Educational Assistant
- Educational Assistant Teacher
- Educational Technician
- Examination Grader
- Examination Proctor
- Examination Scorer
- Exceptional Student Education Aide (ESE Aide)
- Gifted & Talented Student Education Aide
- Grader
- Grading Clerk
- Helper Teacher

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Teachers, Elementary School

Teach academic and social skills to students at the elementary school level.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need none or short demonstration

Tasks: Establish and enforce rules for behavior and procedures for maintaining order among the students for whom they are responsible. Adapt teaching methods and instructional materials to meet students' varying needs and interests. Instruct students individually and in groups, using various teaching methods, such as lectures, discussions, and demonstrations. Confer with parents or guardians, teachers, counselors, and administrators to resolve students' behavioral and academic problems. Prepare students for later grades by encouraging them to explore learning opportunities and to persevere with challenging tasks. Prepare materials and classrooms for class activities. Provide a variety of materials and resources for children to explore, manipulate, and use, both in learning activities and in imaginative play. Establish clear objectives for all lessons, units, and projects and communicate those objectives to students. Guide and counsel students with adjustment or academic problems, or special academic interests. Observe and evaluate students' performance, behavior, social development, and physical health. Enforce administration policies and rules governing students. Read books to entire classes or small groups. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Meet with parents and guardians to discuss their children's progress and to determine priorities for their children and their resource needs.

License: Application Fee: $30.00

Outlook: Satisfactory

Alabama Employment Outlook

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2018 Estimated Employment: 24,200
2028 Projected Employment: 24,900
Average Total Openings: 1,880
Annual Growth Rate: 0.28%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Secondary School Teachers, Except Special & Career/Technical Education
Middle School Teachers, Except Special & Career/Technical Education
Adult Basic Education, Adult Secondary Education, & English as a Second Language Instructors
Career/Technical Education Teachers, Middle School
Kindergarten Teachers, Except Special Education
Directors, Religious Activities & Education
Preschool Teachers, Except Special Education
Educational, Guidance, & Career Counselors & Advisors
Recreation Workers

Post-Secondary Institutions with Programs
Alabama A & M University
Alabama State University
Athens State University
Auburn University
Auburn University at Montgomery
Birmingham Southern College
Birmingham-Southern College
Concordia College Alabama
Faulkner University
Huntingdon College
Jacksonville State University
Judson College
Miles College
Oakwood University
Samford University
Spring Hill College
Stillman College
The University of Alabama
Troy University
Tuskegee University
University of Alabama at Birmingham
University of Alabama in Huntsville
University of Mobile
University of Montevallo
University of North Alabama
University of South Alabama
University of West Alabama

2020 Career Exploration Guide 250

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Teachers, Kindergarten

Teach academic and social skills to kindergarten students.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 6 months, up to and including 1 year

Tasks: Establish and enforce rules for behavior and policies and procedures to maintain order among students. Prepare children for later grades by encouraging them to explore learning opportunities and to persevere with challenging tasks. Instruct students individually and in groups, adapting teaching methods to meet students' varying needs and interests. Teach basic skills, such as color, shape, number and letter recognition, personal hygiene, and social skills. Demonstrate activities to children. Read books to entire classes or to small groups. Guide and counsel students with adjustment or academic problems or special academic interests. Observe and evaluate children's performance, behavior, social development, and physical health. Provide a variety of materials and resources for children to explore, manipulate, and use, both in learning activities and in imaginative play. Prepare and implement remedial programs for students requiring extra help. Identify children showing signs of emotional, developmental, or health-related problems and discuss them with supervisors, parents or guardians, and child development specialists. Maintain accurate and complete student records and prepare reports on children and activities as required by laws, district policies, and administrative regulations. Establish clear objectives for all lessons, units, and projects and communicate those objectives to children. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Confer with parents or guardians, other teachers, counselors, and administrators to resolve students' behavioral and academic problems. Organize and lead activities designed to promote physical, mental, and social development, such as games, arts and crafts, music, and storytelling. Meet with parents and guardians to discuss their children's progress and to determine their priorities for their children and their resource needs. Use computers, audio-visual aids, and other equipment and materials to supplement presentations.

License: Application Fee: $30.00

Outlook: Satisfactory

Alabama Employment Outlook

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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Preschool Teachers, Except Special Education
Middle School Teachers, Except Special & Career/Technical Education
Elementary School Teachers, Except Special Education
Secondary School Teachers, Except Special & Career/Technical Education
Recreation Workers
Directors, Religious Activities & Education
Self-Enrichment Teachers
Nannies
Education & Childcare Administrators, Preschool & Daycare
Bilingual Kindergarten Teacher
Classroom Teacher
Educator
Instructor
Kindergarten Teacher
Kindergarten Classroom Teacher
Teacher
Title One Kindergarten Teacher
Transitional Kindergarten Teacher

Post-Secondary Institutions with Programs
Samford University
The University of Alabama
Troy University
University of Alabama at Birmingham
University of Alabama in Huntsville

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
**Teachers, Middle School**

Teach one or more subjects to students at the middle, intermediate, or junior high school level.

**Education:** Most of these occupations typically require a four-year bachelor's degree.

**OJT:** Employees in these occupations usually need none or short demonstration

**Tasks:** Prepare students for later grades by encouraging them to explore learning opportunities and to persevere with challenging tasks. Adapt teaching methods and instructional materials to meet students' varying needs and interests. Establish clear objectives for all lessons, units, and projects, and communicate these objectives to students. Establish and enforce rules for behavior and procedures for maintaining order among students. Prepare objectives and outlines for courses of study, following curriculum guidelines or requirements of states and schools. Prepare, administer, and grade tests and assignments to evaluate students' progress. Prepare materials and classrooms for class activities. Confer with parents or guardians, other teachers, counselors, and administrators to resolve students' behavioral and academic problems. Maintain accurate, complete, and correct student records as required by laws, district policies, and administrative regulations. Instruct through lectures, discussions, and demonstrations in one or more subjects, such as English, mathematics, or social studies. Use computers, audio-visual aids, and other equipment and materials to supplement presentations. Observe and evaluate students' performance, behavior, social development, and physical health. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Guide and counsel students with adjustment or academic problems, or special academic interests. Enforce all administration policies and rules governing students. Assign lessons and correct homework. Meet with other professionals to discuss individual students' needs and progress. Collaborate with other teachers and administrators in the development, evaluation, and revision of middle school programs. Assist students who need extra help, such as by tutoring and preparing and implementing remedial programs. Meet or correspond with parents or guardians to discuss children's progress and to determine priorities and resource needs. Provide disabled students with assistive devices, supportive technology, and assistance accessing facilities, such as restrooms. Prepare for assigned classes and show written evidence of preparation upon request of immediate supervisors. Confer with other staff members to plan and schedule lessons promoting learning, following approved curricula. Attend professional meetings, educational conferences, and teacher training workshops to maintain and improve professional competence.

**License:** Application Fee: $30.00

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$***</td>
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<tr>
<td>Median</td>
<td>$***</td>
</tr>
<tr>
<td>Experienced</td>
<td>$***</td>
</tr>
</tbody>
</table>

2018 Estimated Employment: 9,960
2028 Projected Employment: 10,260
Average Total Openings: 775
Annual Growth Rate: 0.30%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations

- Secondary School Teachers, Except Special & Career/Technical Education
- Elementary School Teachers, Except Special Education
- Adult Basic Education, Adult Secondary Education, & English as a Second Language Instructors
- Career/Technical Education Teachers, Middle School
- Kindergarten Teachers, Except Special Education
- Directors, Religious Activities & Education
- Librarians & Media Collections Specialists
- Educational, Guidance, & Career Counselors & Advisors

### Post-Secondary Institutions with Programs

- Alabama A & M University
- Alabama State University
- Auburn University
- Auburn University at Montgomery
- Jacksonville State University
- Samford University
- The University of Alabama
- Troy University
- University of Alabama at Birmingham
- University of Alabama in Huntsville
- University of Montevallo
- University of North Alabama
- University of South Alabama
- University of West Alabama

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Instruct students in a wide variety of academic, career, and technical areas beyond the high school level. May also conduct research and publish scholarly papers and books.

Education: Most of these occupations require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

OJT: Employees in these occupations usually need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Tasks: Observe and evaluate students' work to determine progress, provide feedback, and make suggestions for improvement. Present lectures and conduct discussions to increase students' knowledge and competence using visual aids, such as graphs, charts, videotapes, and slides. Supervise and monitor students' use of tools and equipment. Administer oral, written, or performance tests to measure progress and to evaluate training effectiveness. Provide individualized instruction and tutorial or remedial instruction. Prepare reports and maintain records, such as student grades, attendance rolls, and training activity details. Develop curricula and plan course content and methods of instruction. Determine training needs of students or workers. Supervise independent or group projects, field placements, laboratory work, or other training. Integrate academic and vocational curricula so that students can obtain a variety of skills. Select and assemble books, materials, supplies, and equipment for training, courses, or projects. Conduct on-the-job training classes or training sessions to teach and demonstrate principles, techniques, procedures, or methods of designated subjects. Acquire, maintain, and repair laboratory equipment and tools. Prepare outlines of instructional programs and training schedules and establish course goals. Advise students on course selection, career decisions, and other academic and vocational concerns. Participate in conferences, seminars, and training sessions to keep abreast of developments in the field and integrate relevant information into training programs. Develop teaching aids, such as instructional software, multimedia visual aids, or study materials. Serve on faculty and school committees concerned with budgeting, curriculum revision, and course and diploma requirements. Arrange for lectures by experts in designated fields. Review enrollment applications and correspond with applicants to obtain additional information.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td><strong>Entry</strong></td>
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<td>Experienced $89,025.00</td>
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#### Alabama Projections

- **2018 Estimated Employment:** 18,140
- **2028 Projected Employment:** 19,980
- **Average Total Openings:** 1,760
- **Annual Growth Rate:** 0.97%

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Adjunct Instructor
- Braille Teacher
- Faculty Member
- Flight Simulator Teacher
- Flight Teacher
- Foreign Student Adviser Teacher
- Instructor
- Interior Design Teacher
- Lecturer
- Medical Secretary Teacher
- Metal Crafts Teacher
- Military Science Teacher
- Weight Control Lecturer

### Post-Secondary Institutions with Programs
- Alabama A & M University
- Faulkner University
- Samford University
- Auburn University
- The University of Alabama
- Alabama State University
- Troy University
- University of Alabama at Birmingham
Teachers, Preschool

Instruct preschool-aged students, following curricula or lesson plans, in activities designed to promote social, physical, and intellectual growth.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Teach basic skills, such as color, shape, number and letter recognition, personal hygiene, and social skills. Establish and enforce rules for behavior and procedures for maintaining order. Adapt teaching methods and instructional materials to meet students' varying needs and interests. Provide a variety of materials and resources for children to explore, manipulate, and use, both in learning activities and in imaginative play. Serve meals and snacks in accordance with nutritional guidelines. Attend to children's basic needs by feeding them, dressing them, and changing their diapers. Meet with parents and guardians to discuss their children's progress and needs, determine their priorities for their children, and suggest ways that they can promote learning and development. Organize and lead activities designed to promote physical, mental, and social development, such as games, arts and crafts, music, storytelling, and field trips. Identify children showing signs of emotional, developmental, or health-related problems and discuss them with supervisors, parents or guardians, and child development specialists. Maintain accurate and complete student records as required by laws, district policies, and administrative regulations. Assimilate arriving children to the school environment by greeting them, helping them remove outerwear, and selecting activities of interest to them. Observe and evaluate children's performance, behavior, social development, and physical health. Prepare materials and classrooms for class activities. Read books to entire classes or to small groups. Establish clear objectives for all lessons, units, and projects and communicate those objectives to children. Arrange indoor and outdoor space to facilitate creative play, motor-skill activities, and safety. Teach proper eating habits and personal hygiene. Demonstrate activities to children. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Enforce all administration policies and rules governing students. Prepare and implement remedial programs for students requiring extra help.

License: Application Fee: $30.00

Outlook: Satisfactory

Alabama Employment Outlook

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<td>$37,675.00</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Self-Enrichment Teachers
Kindergarten Teachers, Except Special Education
Social & Human Service Assistants
Nannies
Residential Advisors
Recreation Workers
Childcare Workers
Elementary School Teachers, Except Special Education
Middle School Teachers, Except Special & Career/Technical Education

Post-Secondary Institutions with Programs
Alabama A & M University
Alabama State University
Athens State University
Auburn University
Concordia College Alabama
Jacksonville State University
Miles College
Spring Hill College
The University of Alabama
Troy University
University of Alabama at Birmingham
University of Mobile
University of North Alabama
University of South Alabama
University of West Alabama

2020 Career Exploration Guide

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Teachers, Secondary School

Teach one or more subjects to students at the secondary school level.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Prepare materials and classrooms for class activities. Instruct through lectures, discussions, and demonstrations in one or more subjects, such as English, mathematics, or social studies. Establish clear objectives for all lessons, units, and projects and communicate those objectives to students. Establish and enforce rules for behavior and procedures for maintaining order among students. Adapt teaching methods and instructional materials to meet students' varying needs and interests. Maintain accurate and complete student records as required by laws, district policies, and administrative regulations. Observe and evaluate students' performance, behavior, social development, and physical health. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Confer with parents or guardians, other teachers, counselors, and administrators to resolve students' behavioral and academic problems. Assign and grade class work and homework. Prepare, administer, and grade tests and assignments to evaluate students' progress. Prepare students for later grades by encouraging them to explore learning opportunities and to persevere with challenging tasks. Use computers, audio-visual aids, and other equipment and materials to supplement presentations. Instruct and monitor students in the use of equipment and materials to prevent injuries and damage. Enforce all administration policies and rules governing students. Guide and counsel students with adjustment or academic problems, or special academic interests. Meet with other professionals to discuss individual students' needs and progress. Prepare and implement remedial programs for students requiring extra help. Meet with parents and guardians to discuss their children's progress and to determine priorities for their children and their resource needs. Prepare objectives and outlines for courses of study, following curriculum guidelines or requirements of states and schools. Confer with other staff members to plan and schedule lessons promoting learning, following approved curricula. Collaborate with other teachers and administrators in the development, evaluation, and revision of secondary school programs. Prepare reports on students and activities as required by administration.

License: Application Fee: $30.00

Outlook: Satisfactory

### Alabama Employment Outlook

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<th>Hourly Wage</th>
<th>Annual Wage</th>
<th>Alabama Projections</th>
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2018 Estimated Employment: 16,530
2028 Projected Employment: 17,030
Average Total Openings: 1,225
Annual Growth Rate: 0.30%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Middle School Teachers, Except Special & Career/Technical Education
- Elementary School Teachers, Except Special Education
- Adult Basic Education, Adult Secondary Education, & English as a Second Language Instructors
- Career/Technical Education Teachers, Middle School
- Directors, Religious Activities & Education
- Training & Development Specialists
- Health Education Specialists
- Recreation Workers
- Librarians & Media Collections Specialists
- Instructional Coordinators

**Post-Secondary Institutions with Programs**
- Alabama A & M University
- Alabama State University
- Auburn University
- Auburn University at Montgomery
- Jacksonville State University
- Samford University
- The University of Alabama
- Troy University
- University of Alabama at Birmingham
- University of Alabama in Huntsville
- University of Montevallo
- University of North Alabama
- University of South Alabama
- University of West Alabama
Teachers, Self-Enrichment Education

Teach or instruct individuals or groups for the primary purpose of self-enrichment or recreation, rather than for an occupational objective, educational attainment, competition, or fitness.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Instruct students individually and in groups, using various teaching methods, such as lectures, discussions, and demonstrations. Adapt teaching methods and instructional materials to meet students' varying needs and interests. Prepare students for further development by encouraging them to explore learning opportunities and to persevere with challenging tasks. Observe students to determine qualifications, limitations, abilities, interests, and other individual characteristics. Maintain accurate and complete student records as required by administrative policy. Monitor students' performance to make suggestions for improvement and to ensure that they satisfy course standards, training requirements, and objectives. Prepare and administer written, oral, and performance tests, and issue grades in accordance with performance. Establish clear objectives for all lessons, units, and projects and communicate those objectives to students. Prepare instructional program objectives, outlines, and lesson plans. Confer with other teachers and professionals to plan and schedule lessons promoting learning and development. Prepare materials and classrooms for class activities. Enforce policies and rules governing students. Review instructional content, methods, and student evaluations to assess strengths and weaknesses, and to develop recommendations for course revision, development, or elimination. Meet with other instructors to discuss individual students and their progress. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Use computers, audio-visual aids, and other equipment and materials to supplement presentations. Attend professional meetings, conferences, and workshops to maintain and improve professional competence. Plan and supervise class projects, field trips, visits by guest speakers, contests, or other experiential activities, and guide students in learning from those activities. Attend staff meetings and serve on committees, as required. Select, order, and issue books, materials, and supplies for courses or projects.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td><strong>2018 Estimated Employment:</strong> 4,190</td>
<td><strong>2028 Projected Employment:</strong> 4,420</td>
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<tr>
<td><strong>Average Total Openings:</strong> 515</td>
<td><strong>Annual Growth Rate:</strong> 0.55%</td>
</tr>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Exercise Trainers & Group Fitness Instructors
Preschool Teachers, Except Special Education
Tour Guides & Escorts
Photographers
Retail Salespersons
Social & Human Service Assistants
Recreation Workers
Travel Guides
Hotel, Motel, & Resort Desk Clerks

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
256

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Team Assemblers

Work as part of a team having responsibility for assembling an entire product or component of a product. Team assemblers can perform all tasks conducted by the team in the assembly process and rotate through all or most of them, rather than being assigned to a specific task on a permanent basis. May participate in making management decisions affecting the work. Includes team leaders who work as part of the team.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Perform quality checks on products and parts. Review work orders and blueprints to ensure work is performed according to specifications. Rotate through all the tasks required in a particular production process. Determine work assignments and procedures. Supervise assemblers and train employees on job procedures. Shovel, sweep, or otherwise clean work areas.

License: No License Required.

Outlook: Satisfactory

### Alabama Employment Outlook

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<tr>
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<td></td>
<td>Experienced</td>
<td>Annual Growth Rate:</td>
</tr>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**
- Packaging & Filling Machine Operators & Tenders
- Welders, Cutters, Solderers, & Brazers
- Adhesive Bonding Machine Operators & Tenders
- Textile Winding, Twisting, & Drawing Out Machine Setters, Operators, & Tenders
- Molders, Shapers, & Casters, Except Metal & Plastic
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Upholsterers
- Forging Machine Setters, Operators, & Tenders
- Print Binding & Finishing Workers
- Sawing Machine Setters, Operators, & Tenders, Wood
- Assembler
- Assembly Associate
- Assembly Line Machine Operator
- Assembly Line Worker
- Assembly Operator
- Assembly Technician
- Certified Composites Technician (CCT)
- Manufacturing Associate
- Production Line Worker
- Team Assembler

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Tool and Die Makers

Analyze specifications, lay out metal stock, set up and operate machine tools, and fit and assemble parts to make and repair dies, cutting tools, jigs, fixtures, gauges, and machinists' hand tools.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Verify dimensions, alignments, and clearances of finished parts for conformance to specifications, using measuring instruments such as calipers, gauge blocks, micrometers, or dial indicators. Study blueprints, sketches, models, or specifications to plan sequences of operations for fabricating tools, dies, or assemblies. Set up and operate conventional or computer numerically controlled machine tools such as lathes, milling machines, or grinders to cut, bore, grind, or otherwise shape parts to prescribed dimensions and finishes. Visualize and compute dimensions, sizes, shapes, and tolerances of assemblies, based on specifications. Inspect finished dies for smoothness, contour conformity, and defects. Fit and assemble parts to make, repair, or modify dies, jigs, gauges, and tools, using machine tools and hand tools. Conduct test runs with completed tools or dies to ensure that parts meet specifications, making adjustments as necessary. Select metals to be used from a range of metals and alloys, based on properties such as hardness or heat tolerance. File, grind, shim, and adjust different parts to properly fit them together. Lift, position, and secure machined parts on surface plates or worktables, using hoists, vises, v-blocks, or angle plates. Smooth and polish flat and contoured surfaces of parts or tools, using scrapers, abrasive stones, files, emery cloths, or power grinders. Design jigs, fixtures, and templates for use as work aids in the fabrication of parts or products. Measure, mark, and scribe metal or plastic stock to lay out machining, using instruments such as protractors, micrometers, scribes, or rulers. Set up and operate drill presses to drill and tap holes in parts for assembly. Set pyrometer controls of heat-treating furnaces and feed or place parts, tools, or assemblies into furnaces to harden. Cut, shape, and trim blanks or blocks to specified lengths or shapes, using power saws, power shears, rules, and hand tools.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<th>Alabama Projections</th>
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<td><strong>Hourly Wage</strong></td>
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<td>$34.02</td>
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*For an explanation on omitted data, see the Missing Data section in the introduction.*

**Related Occupations**
- Patternmakers
- Machinists
- Model Makers
- Patternmakers, Wood
- Drilling & Boring Machine Tool Setters, Operators, & Tenders
- Milling & Planing Machine Setters, Operators, & Tenders
- Computer Numerically Controlled Tool Programmers
- Industrial Engineering Technologists & Technicians
- Glass Blowers, Molders, Benders, & Finishers
- Layout Workers

**Post-Secondary Institutions with Programs**
- Bevill State Community College
- Bishop State Community College
- Gadsden State Community College
- George C Wallace State Community College-Hanceville
- J. F. Drake State Community and Technical College
- Lawson State Community College
- Northeast Alabama Community College
- Shelton State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Training and Development Specialists

Design or conduct work-related training and development programs to improve individual skills or organizational performance. May analyze organizational training needs or evaluate training effectiveness.

Education: Most of these occupations typically require a four-year bachelor's degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Assess training needs through surveys, interviews with employees, focus groups, or consultation with managers, instructors, or customer representatives. Design, plan, organize, or direct orientation and training programs for employees or customers. Offer specific training programs to help workers maintain or improve job skills. Present information with a variety of instructional techniques or formats, such as role playing, simulations, team exercises, group discussions, videos, or lectures. Obtain, organize, or develop training procedure manuals, guides, or course materials, such as handouts or visual materials. Monitor, evaluate, or record training activities or program effectiveness. Develop alternative training methods if expected improvements are not seen. Evaluate training materials prepared by instructors, such as outlines, text, or handouts. Evaluate modes of training delivery, such as in-person or virtual, to optimize training effectiveness, training costs, or environmental impacts. Keep up with developments in area of expertise by reading current journals, books, or magazine articles. Negotiate contracts with clients for desired training outcomes, fees, or expenses. Attend meetings or seminars to obtain information for use in training programs or to inform management of training program status. Monitor training costs and prepare budget reports to justify expenditures. Select and assign instructors to conduct training. Schedule classes based on availability of classrooms, equipment, or instructors. Supervise, evaluate, or refer instructors to skill development classes. Devise programs to develop executive potential among employees in lower-level positions.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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<td>Annual Growth Rate:</td>
<td>1.00%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Training & Development Managers
Management Analysts
Human Resources Specialists
Human Resources Managers
Health Education Specialists
Marketing Managers
Communications Teachers, Postsecondary
Market Research Analysts & Marketing Specialists
Regulatory Affairs Managers

Post-Secondary Institutions with Programs
Samford University
Transportation, Storage, and Distribution Managers

Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. Includes logistics managers.

Education: Most of these occupations require a four-year bachelor's degree, but some do not.

OJT: Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Tasks: Supervise the activities of workers engaged in receiving, storing, testing, and shipping products or materials. Plan, develop, or implement warehouse safety and security programs and activities. Inspect physical conditions of warehouses, vehicle fleets, or equipment and order testing, maintenance, repairs, or replacements. Plan, organize, or manage the work of subordinate staff to ensure that the work is accomplished in a manner consistent with organizational requirements. Collaborate with other departments to integrate logistics with business systems or processes, such as customer sales, order management, accounting, or shipping. Analyze all aspects of corporate logistics to determine the most cost-effective or efficient means of transporting products or supplies. Resolve problems concerning transportation, logistics systems, imports or exports, or customer issues. Develop and document standard and emergency operating procedures for receiving, handling, storing, shipping, or salvaging products or materials. Monitor operations to ensure that staff members comply with administrative policies and procedures, safety rules, union contracts, environmental policies, or government regulations. Analyze the financial impact of proposed logistics changes, such as routing, shipping modes, product volumes or mixes, or carriers. Monitor inventory levels of products or materials in warehouses. Establish or monitor specific supply chain-based performance measurement systems. Prepare and manage departmental budgets. Monitor product import or export processes to ensure compliance with regulatory or legal requirements. Prepare management recommendations, such as proposed fee and tariff increases or schedule changes. Interview, select, and train warehouse and supervisory personnel.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<th>Alabama Wage Data</th>
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<td>2018 Estimated Employment: 1,070</td>
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<td>Hourly Wage</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
- Supply Chain Managers
- First-Line Supervisors of Helpers, Laborers, & Material Movers, Hand
- Purchasing Managers
- First-Line Supervisors of Material-Moving Machine & Vehicle Operators
- Purchasing Agents, Except Wholesale, Retail, & Farm Products
- Logisticians
- Logistics Analysts
- First-Line Supervisors of Non-Retail Sales Workers
- Transportation Planners
- General & Operations Managers
- Distribution Center Manager
- Distribution Manager
- Fleet Manager
- Global Transportation Manager
- Logistics Director
- Logistics Operations Manager
- Shipping Manager
- Supply Chain Logistics Manager
- Transportation Manager
- Warehouse Supervisor

Post-Secondary Institutions with Programs
- Alabama A & M University
- Athens State University
- Auburn University
- George C Wallace State Community College-Hanceville
- J F Ingram State Technical College
- Shelton State Community College
- Spring Hill College
- Tuskegee University
- University of Alabama in Huntsville
Ushers, Lobby Attendants, and Ticket Takers

Assist patrons at entertainment events by performing duties, such as collecting admission tickets and passes from patrons, assisting in finding seats, searching for lost articles, and helping patrons locate such facilities as restrooms and telephones.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need none or short demonstration

**Tasks:** Greet patrons attending entertainment events. Sell or collect admission tickets, passes, or facility memberships from patrons at entertainment events. Clean facilities. Settle seating disputes or help solve other customer concerns. Examine tickets or passes to verify authenticity, using criteria such as color or date issued. Provide assistance with patrons’ special needs, such as helping those with wheelchairs. Guide patrons to exits or provide other instructions or assistance in case of emergency. Refuse admittance to undesirable persons or persons without tickets or passes. Assist patrons by giving directions to points in or outside of the facility or providing information about local attractions. Assist patrons in finding seats, lighting the way with flashlights, if necessary. Maintain order and ensure adherence to safety rules. Search for lost articles or for parents of lost children.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>2018 Estimated Employment:</strong></td>
</tr>
<tr>
<td><strong>Entry</strong></td>
<td>460</td>
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<tr>
<td>$8.02</td>
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<tr>
<td><strong>Median</strong></td>
<td><strong>2028 Projected Employment:</strong></td>
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<tr>
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<td>510</td>
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<tr>
<td><strong>Experienced</strong></td>
<td><strong>Average Total Openings:</strong></td>
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<tr>
<td>$11.54</td>
<td>125</td>
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<tr>
<td><strong>Entry</strong></td>
<td><strong>Annual Growth Rate:</strong></td>
</tr>
<tr>
<td>$16,683.00</td>
<td>1.02%</td>
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<tr>
<td><strong>Median</strong></td>
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<tr>
<td>$18,883.00</td>
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<td><strong>Experienced</strong></td>
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</tr>
<tr>
<td>$24,005.00</td>
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</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
- Cashiers
- Waiters & Waitresses
- Fast Food & Counter Workers
- Dining Room & Cafeteria Attendants & Bartender Helpers
- Locker Room, Coatroom, & Dressing Room Attendants
- Food Servers, Nonrestaurant
- Stockers & Order Fillers
- Food Preparation Workers

### Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Diagnose, treat, or research diseases and injuries of animals. Includes veterinarians who conduct research and development, inspect livestock, or care for pets and companion animals.

**Education:** Most of these occupations require graduate school. For example, they may require a master’s degree, and some require a Ph.D., M.D., or J.D. (law degree).

**OJT:** Employees in these occupations usually need over 6 months, up to and including 1 year

**Tasks:** Treat sick or injured animals by prescribing medication, setting bones, dressing wounds, or performing surgery. Inoculate animals against various diseases, such as rabies or distemper. Examine animals to detect and determine the nature of diseases or injuries. Collect body tissue, feces, blood, urine, or other body fluids for examination and analysis. Operate diagnostic equipment, such as radiographic or ultrasound equipment, and interpret the resulting images. Educate the public about diseases that can be spread from animals to humans. Counsel clients about the deaths of their pets or about euthanasia decisions for their pets. Advise animal owners regarding sanitary measures, feeding, general care, medical conditions, or treatment options. Euthanize animals. Attend lectures, conferences, or continuing education courses. Train or supervise workers who handle or care for animals. Perform administrative or business management tasks, such as scheduling appointments, accepting payments from clients, budgeting, or maintaining business records. Plan or execute animal nutrition or reproduction programs. Conduct postmortem studies and analyses to determine the causes of animals’ deaths.

**License:** Application Fee: $250.00 plus the cost of national examination; Annual Renewal of Active License Fee: $200.00

**Outlook:** Good

### Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry $25.43</td>
<td>Entry $52,889.00</td>
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<tr>
<td>Median $43.51</td>
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<tr>
<td>Experienced $76.25</td>
<td>Experienced $158,609.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Health Specialties Teachers, Postsecondary
- Medical Scientists, Except Epidemiologists
- Companion Animal Practitioner
- Doctor of Veterinary Medicine (DVM)
- Emergency Veterinarian (Emergency Vet)
- Large Animal Veterinarian (Large Animal Vet)
- Mixed Animal Veterinarian (Mixed Animal Vet)
- Small Animal Veterinarian (Small Animal Vet)
- Veterinary Medicine Doctor (DVM)
- Veterinary Surgeon (Vet Surgeon)
- Veterinary Surgical Specialist (Vet Surgical Specialist)
- Zoo Veterinarian (Zoo Vet)

### Post-Secondary Institutions with Programs
- Tuskegee University
- Auburn University

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Veterinary Assistants and Laboratory Animal Caretakers

Feed, water, and examine pets and other nonfarm animals for signs of illness, disease, or injury in laboratories and animal hospitals and clinics. Clean and disinfect cages and work areas, and sterilize laboratory and surgical equipment. May provide routine postoperative care, administer medication orally or topically, or prepare samples for laboratory examination under the supervision of veterinary or laboratory animal technologists or technicians, veterinarians, or scientists.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Hold or restrain animals during veterinary procedures. Monitor animals recovering from surgery and notify veterinarians of any unusual changes or symptoms. Fill medication prescriptions. Clean and maintain kennels, animal holding areas, examination or operating rooms, or animal loading or unloading facilities to control the spread of disease. Examine animals to detect behavioral changes or clinical symptoms that could indicate illness or injury. Perform routine laboratory tests or diagnostic tests, such as taking or developing x-rays. Assist veterinarians in examining animals to determine the nature of illnesses or injuries. Administer medication, immunizations, or blood plasma to animals as prescribed by veterinarians. Collect laboratory specimens, such as blood, urine, or feces, for testing. Perform office reception duties, such as scheduling appointments or helping customers. Clean, maintain, and sterilize instruments or equipment. Record information relating to animal genealogy, feeding schedules, appearance, behavior, or breeding. Provide emergency first aid to sick or injured animals. Prepare surgical equipment and pass instruments or materials to veterinarians during surgical procedures. Educate or advise clients on animal health care, nutrition, or behavior problems. Prepare examination or treatment rooms by stocking them with appropriate supplies. Prepare feed for animals according to specific instructions, such as diet lists or schedules. Provide assistance with euthanasia of animals or disposal of corpses. Write reports, maintain research information, or perform clerical duties. Perform hygiene-related duties, such as clipping animals' claws or cleaning and polishing teeth. Perform enemas, catheterizations, ear flushes, intravenous feedings, or gavages. Perform accounting duties, such as bookkeeping, billing customers for services, or maintaining inventories. Exercise animals or provide them with companionship. Place orders to restock inventory of hospital or laboratory supplies. Sell pet food or supplies to customers. Dust, spray, or bathe animals to control insect pests.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

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</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<tr>
<td>Entry</td>
<td>Entry</td>
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<tr>
<td>$8.35</td>
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<td>Median</td>
<td>Median</td>
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<td>$10.88</td>
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<tr>
<td>$15.54</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations

Physical Therapist Aides
Occupational Therapy Aides
Pharmacy Aides
Dental Assistants
Home Health Aides
Dietetic Technicians
Veterinary Technologists & Technicians
Radiologic Technologists & Technicians
Personal Care Aides
Pharmacy Technicians

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Veterinary Technologists and Technicians

Perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals. Prepare vaccines and serums for prevention of diseases. Prepare tissue samples, take blood samples, and execute laboratory tests, such as urinalysis and blood counts. Clean and sterilize instruments and materials and maintain equipment and machines. May assist a veterinarian during surgery.

Education: Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate’s degree.

OJT: Employees in these occupations usually need over 1 month, up to and including 3 months

Tasks: Administer anesthesia to animals, under the direction of a veterinarian, and monitor animals’ responses to anesthetics so that dosages can be adjusted. Care for and monitor the condition of animals recovering from surgery. Maintain controlled drug inventory and related log books. Perform laboratory tests on blood, urine, or feces, such as urinalyses or blood counts, to assist in the diagnosis and treatment of animal health problems. Prepare and administer medications, vaccines, serums, or treatments, as prescribed by veterinarians. Restrain animals during exams or procedures. Administer emergency first aid, such as performing emergency resuscitation or other life saving procedures. Clean and sterilize instruments, equipment, or materials. Provide veterinarians with the correct equipment or instruments, as needed. Perform dental work, such as cleaning, polishing, or extracting teeth. Observe the behavior and condition of animals and monitor their clinical symptoms. Give enemas and perform catheterizations, ear flushes, intravenous feedings, or gavages. Fill prescriptions, measuring medications and labeling containers. Collect, prepare, and label samples for laboratory testing, culture, or microscopic examination. Prepare animals for surgery, performing such tasks as shaving surgical areas. Take and develop diagnostic radiographs, using x-ray equipment. Discuss medical health of pets with clients, such as post-operative status. Clean kennels, animal holding areas, surgery suites, examination rooms, or animal loading or unloading facilities to control the spread of disease. Take animals into treatment areas and assist with physical examinations by performing such duties as obtaining temperature, pulse, or respiration data. Prepare treatment rooms for surgery. Maintain laboratory, research, or treatment records, as well as inventories of pharmaceuticals, equipment, or supplies. Maintain instruments, equipment, or machinery to ensure proper working condition. Dress and suture wounds and apply splints or other protective devices. Provide assistance with animal euthanasia and the disposal of remains. Schedule appointments and procedures for animals. Provide information or counseling regarding issues such as animal health care, behavior problems, or nutrition. Monitor medical supplies and place orders when inventory is low. Supervise or train veterinary students or other staff members. Perform a variety of office, clerical, or accounting duties, such as reception, billing, bookkeeping, or selling products. Bathe animals, clip nails or claws, and brush or cut animals’ hair.

License: Application Fee: $100.00 plus the cost of national examination; License Renewal Fee: $75.00

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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<td>Hourly Wage</td>
<td>Annual Wage</td>
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<tr>
<td>2018 Estimated Employment:</td>
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<tr>
<td>2028 Projected Employment:</td>
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<tr>
<td>Average Total Openings:</td>
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<tr>
<td>Annual Growth Rate:</td>
<td>1.47%</td>
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For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Nuclear Medicine Technologists
Surgical Technologists
Dental Assistants
Respiratory Therapists
Diagnostic Medical Sonographers
Radiologic Technologists & Technicians
Veterinary Assistants & Laboratory Animal Caretakers
Pharmacy Technicians
Medical Assistants

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Waiters and Waitresses

Take orders and serve food and beverages to patrons at tables in dining establishment.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:**
- Take orders from patrons for food or beverages. Check with customers to ensure that they are enjoying their meals and take action to correct any problems. Check patrons' identification to ensure that they meet minimum age requirements for consumption of alcoholic beverages. Collect payments from customers. Write patrons' food orders on order slips, memorize orders, or enter orders into computers for transmittal to kitchen staff. Prepare checks that itemize and total meal costs and sales taxes. Present menus to patrons and answer questions about menu items, making recommendations upon request. Remove dishes and glasses from tables or counters and take them to kitchen for cleaning. Serve food or beverages to patrons, and prepare or serve specialty dishes at tables as required. Clean tables or counters after patrons have finished dining. Prepare tables for meals, including setting up items such as linens, silverware, and glassware. Explain how various menu items are prepared, describing ingredients and cooking methods. Assist host or hostess by answering phones to take reservations or to-go orders, and by greeting, seating, and thanking guests. Escort customers to their tables. Perform cleaning duties, such as sweeping and mopping floors, vacuuming carpet, tidying up server station, taking out trash, or checking and cleaning bathroom. Inform customers of daily specials. Prepare hot, cold, and mixed drinks for patrons, and chill bottles of wine. Roll silverware, set up food stations, or set up dining areas to prepare for the next shift or for large parties. Stock service areas with supplies such as coffee, food, tableware, and linens. Bring wine selections to tables with appropriate glasses, and pour the wines for customers. Fill salt, pepper, sugar, cream, condiment, and napkin containers. Describe and recommend wines to customers. Perform food preparation duties such as preparing salads, appetizers, and cold dishes, portioning desserts, and brewing coffee. Provide guests with information about local areas, including giving directions.

**License:** No License Required.

**Outlook:** Satisfactory

### Alabama Employment Outlook

<table>
<thead>
<tr>
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<th>Alabama Projections</th>
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<td><strong>Entry</strong></td>
<td>2018 Estimated Employment: 34,180</td>
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<tr>
<td>Hourly Wage</td>
<td>Annual Wage</td>
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<td>$7.86</td>
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<td><strong>Median</strong></td>
<td>Experienced</td>
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<tr>
<td>$8.90</td>
<td>$18,521.00</td>
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<tr>
<td><strong>Experienced</strong></td>
<td></td>
</tr>
<tr>
<td>$11.74</td>
<td>$24,416.00</td>
</tr>
</tbody>
</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
- Cashiers
- Cooks, Fast Food
- Fast Food & Counter Workers
- Dining Room & Cafeteria Attendants & Bartender Helpers
- Stockers & Order Fillers
- Ushers, Lobby Attendants, & Ticket Takers
- Food Servers, Nonrestaurant
- Food Preparation Workers

### Post-Secondary Institutions with Programs

2020 Career Exploration Guide

265

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Web Developers

Develop and implement websites, web applications, application databases, and interactive web interfaces. Evaluate code to ensure that it is properly structured, meets industry standards, and is compatible with browsers and devices. Optimize website performance, scalability, and server-side code and processes. May develop website infrastructure and integrate websites with other computer applications.

Education: Most of these occupations require a four-year bachelor’s degree, but some do not.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Write supporting code for Web applications or Web sites. Design, build, or maintain Web sites, using authoring or scripting languages, content creation tools, management tools, and digital media. Back up files from Web sites to local directories for instant recovery in case of problems. Select programming languages, design tools, or applications. Evaluate code to ensure that it is valid, is properly structured, meets industry standards, and is compatible with browsers, devices, or operating systems. Develop databases that support Web applications and Web sites. Perform Web site tests according to planned schedules, or after any Web site or product revision. Perform or direct Web site updates. Maintain understanding of current Web technologies or programming practices through continuing education, reading, or participation in professional conferences, workshops, or groups. Analyze user needs to determine technical requirements. Respond to user email inquiries, or set up automated systems to send responses. Renew domain name registrations. Confer with management or development teams to prioritize needs, resolve conflicts, develop content criteria, or choose solutions. Communicate with network personnel or Web site hosting agencies to address hardware or software issues affecting Web sites. Collaborate with management or users to develop e-commerce strategies and to integrate these strategies with Web sites. Document test plans, testing procedures, or test results. Establish appropriate server directory trees. Recommend and implement performance improvements. Document technical factors such as server load, bandwidth, database performance, and browser and device types. Develop or implement procedures for ongoing Web site revision. Create Web models or prototypes that include physical, interface, logical, or data models. Provide clear, detailed descriptions of Web site specifications, such as product features, activities, software, communication protocols, programming languages, and operating systems software and hardware. Evaluate or recommend server hardware or software.

License: No License Required.

Outlook: Good

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
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</thead>
<tbody>
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<td>Annual Wage</td>
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<td>Entry $38,906.00</td>
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<tr>
<td>Median $28.82</td>
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<tr>
<td>Experienced $53.35</td>
<td>Experienced $110,969.00</td>
</tr>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Web Administrators
Software Quality Assurance Analysts & Testers
Database Administrators
Computer Systems Analysts
Desktop Publishers
Computer Programmers
Computer User Support Specialists
Technology Applications Engineer
Web Architect
Web Design Specialist
Web Designer
Web Developer
Webmaster

Post-Secondary Institutions with Programs

2020 Career Exploration Guide
266

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Weighers, Measurers, Checkers, and Samplers, Recordkeeping

Weigh, measure, and check materials, supplies, and equipment for the purpose of keeping relevant records. Duties are primarily clerical by nature. Includes workers who collect and keep record of samples of products or materials.

**Education:** These occupations typically require less than a high school diploma - or the equivalent.

**OJT:** Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

**Tasks:** Document quantity, quality, type, weight, test result data, and value of materials or products to maintain shipping, receiving, and production records and files. Weigh or measure materials, equipment, or products to maintain relevant records, using volume meters, scales, rules, or calipers. Collect or prepare measurement, weight, or identification labels and attach them to products. Examine products or materials, parts, subassemblies, and packaging for damage, defects, or shortages, using specification sheets, gauges, and standards charts. Signal or instruct other workers to weigh, move, or check products. Collect product samples and prepare them for laboratory analysis or testing. Maintain, monitor, and clean work areas, such as recycling collection sites, drop boxes, counters and windows, and areas around scale houses.

**License:** License/Renewal Fee: $20.00

**Outlook:** Satisfactory

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**Alabama Employment Outlook**

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<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$9.71</td>
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<tr>
<td>Median</td>
<td>$14.15</td>
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<tr>
<td>Experienced</td>
<td>$24.39</td>
</tr>
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</table>

2018 Estimated Employment: 1,920

2028 Projected Employment: 2,030

Average Total Openings: 235

Annual Growth Rate: 0.57%

For an explanation on omitted data, see the Missing Data section in the introduction.

**Related Occupations**

Shipping, Receiving, & Inventory Clerks
Data Entry Keyers
Postal Service Clerks
Postal Service Mail Sorters, Processors, & Processing
Machine Operators
Receptionists & Information Clerks
Production, Planning, & Expediting Clerks
Interviewers, Except Eligibility & Loan
Order Clerks
Office Clerks, General

**Post-Secondary Institutions with Programs**

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

**Education:** Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.

**OJT:** Employees in these occupations usually need anywhere from a few months to one year of working with experienced employees.

**Tasks:**
- Examine workpieces for defects and measure workpieces with straightedges or templates to ensure conformance with specifications.
- Select and install torches, torch tips, filler rods, and flux, according to welding chart specifications or types and thicknesses of metals.
- Connect and turn regulator valves to activate and adjust gas flow and pressure so that desired flames are obtained.
- Monitor the fitting, burning, and welding processes to avoid overheating of parts or warping, shrinking, distortion, or expansion of material.
- Align and clamp workpieces together, using rules, squares, or hand tools, or position items in fixtures, jigs, or vises.
- Develop templates and models for welding projects, using mathematical calculations based on blueprint information.
- Guide and direct flames or electrodes on or across workpieces to straighten, bend, melt, or build up metal.
- Position and secure workpieces, using hoists, cranes, wire, and banding machines or hand tools.

**License:** No License Required.

**Outlook:** Good

### Alabama Employment Outlook

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td>Entry</td>
<td>$13.12</td>
</tr>
<tr>
<td>Median</td>
<td>$18.99</td>
</tr>
<tr>
<td>Experienced</td>
<td>$27.72</td>
</tr>
</tbody>
</table>

| 2018 Estimated Employment: | 10,010 |
| 2028 Projected Employment: | 11,100 |
| Average Total Openings:    | 1,265  |
| Annual Growth Rate:        | 1.03%  |

For an explanation on omitted data, see the Missing Data section in the introduction.

### Related Occupations
- Packaging & Filling Machine Operators & Tenders
- Sawing Machine Setters, Operators, & Tenders, Wood
- Print Binding & Finishing Workers
- Welding, Soldering, & Brazing Machine Sets, Operators, & Tenders
- Cutting, Punching, & Press Machine Setters, Operators, & Tenders
- Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
- Lathe & Turning Machine Tool Setters, Operators, & Tenders
- Molders, Shapers, & Casters, Except Metal & Plastic
- Molding, Coremaking, & Casting Machine Setters, Operators, & Tenders
- Semiconductor Processing Technicians

### Post-Secondary Institutions with Programs
- Bevill State Community College
- Bishop State Community College
- Central Alabama Community College
- Coastal Alabama Community College
- Gadsden State Community College
- George C Wallace Community College-Dothan
- George C Wallace State Community College-Hanceville
- George C Wallace State Community College-Selma
- H Councill Trenholm State Community College
- J F Ingram State Technical College
- J. F. Drake State Community and Technical College
- John C Calhoun State Community College
- Lawson State Community College
- Lurleen B Wallace Community College
- Northeast Alabama Community College
- Northwest-Shoals Community College
- Reid State Technical College
- Shelton State Community College
- Southern Union State Community College

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. Includes workers who operate laser cutters or laser-beam machines.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need over 3 months, up to and including 6 months

Tasks: Inspect, measure, or test completed metal workpieces to ensure conformance to specifications, using measuring and testing devices. Read blueprints, work orders, or production schedules to determine product or job instructions or specifications. Assemble, align, and clamp workpieces into holding fixtures to bond, heat-treat, or solder fabricated metal components. Set up, operate, or tend welding machines that join or bond components to fabricate metal products or assemblies. Lay out, fit, or connect parts to be bonded, calculating production measurements, as necessary. Correct problems by adjusting controls or by stopping machines and opening holding devices. Give directions to other workers regarding machine set-up and use. Select, position, align, and bolt jigs, holding fixtures, guides, or stops onto machines, using measuring instruments and hand tools. Mark weld points and positions of components on workpieces, using rules, squares, templates, or scribes. Transfer components, metal products, or assemblies, using moving equipment. Clean, lubricate, maintain, and adjust equipment to maintain efficient operation, using air hoses, cleaning fluids, and hand tools. Prepare metal surfaces or workpieces, using hand-operated equipment, such as grinders, cutters, or drills. Conduct trial runs before welding, soldering, or brazing, and make necessary adjustments to equipment. Remove completed workpieces or parts from machinery, using hand tools. Tend auxiliary equipment used in welding processes.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

<table>
<thead>
<tr>
<th>Alabama Wage Data</th>
<th>Alabama Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
</tr>
<tr>
<td><strong>Entry</strong></td>
<td><strong>Entry</strong></td>
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<tr>
<td>$12.19</td>
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<tr>
<td>$24.39</td>
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</tbody>
</table>

2018 Estimated Employment: 950
2028 Projected Employment: 950
Average Total Openings: 105
Annual Growth Rate: 0.04%

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Cutting, Punching, & Press Machine Setters, Operators, & Tenders
Sawing Machine Setters, Operators, & Tenders, Wood
Plating Machine Setters, Operators, & Tenders
Machine Feeders & Offbearers
Welders, Cutters, Solderers, & Brazers
Engine & Other Machine Assemblers
Print Binding & Finishing Workers
Woodworking Machine Setters, Operators, & Tenders, Except Sawing
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Lathe & Turning Machine Tool Setters, Operators, & Tenders

Post-Secondary Institutions with Programs
Central Alabama Community College
George C Wallace State Community College-Hanceville
Shelton State Community College

2020 Career Exploration Guide
269

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.
Woodworking Machine Setters, Operators, and Tenders

Set up, operate, or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood nailing machines. May operate computer numerically controlled (CNC) equipment.

Education: These occupations typically require less than a high school diploma - or the equivalent.

OJT: Employees in these occupations usually need anything beyond short demonstration, up to and including 1 month

Tasks: Set up, program, operate, or tend computerized or manual woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, or wood-nailing machines. Examine finished workpieces for smoothness, shape, angle, depth-of-cut, or conformity to specifications and verify dimensions, visually and using hands, rules, calipers, templates, or gauges. Start machines, adjust controls, and make trial cuts to ensure that machinery is operating properly. Monitor operation of machines and make adjustments to correct problems and ensure conformance to specifications. Examine raw woodstock for defects and to ensure conformity to size and other specification standards. Adjust machine tables or cutting devices and set controls on machines to produce specified cuts or operations. Install and adjust blades, cutterheads, boring-bits, or sanding-belts, using hand tools and rules. Change alignment and adjustment of sanding, cutting, or boring machine guides to prevent defects in finished products, using hand tools. Determine product specifications and materials, work methods, and machine setup requirements, according to blueprints, oral or written instructions, drawings, or work orders. Feed stock through feed mechanisms or conveyors into planing, shaping, boring, mortising, or sanding machines to produce desired components. Push or hold workpieces against, under, or through cutting, boring, or shaping mechanisms. Select knives, saws, blades, cutter heads, cams, bits, or belts, according to workpiece, machine functions, or product specifications. Remove and replace worn parts, bits, belts, sandpaper, or shaping tools. Secure woodstock against a guide or in a holding device, place woodstock on a conveyor, or dump woodstock in a hopper to feed woodstock into machines. Inspect and mark completed workpieces and stack them on pallets, in boxes, or on conveyors so that they can be moved to the next workstation. Inspect pulleys, drive belts, guards, or fences on machines to ensure that machines will operate safely. Clean or maintain products, machines, or work areas. Attach and adjust guides, stops, clamps, chucks, or feed mechanisms, using hand tools. Trim wood parts according to specifications, using planes, chisels, or wood files or sanders. Grease or oil woodworking machines.

License: No License Required.

Outlook: Satisfactory

Alabama Employment Outlook

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<td><strong>Hourly Wage</strong></td>
<td><strong>Annual Wage</strong></td>
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<td>$19.38</td>
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</table>

For an explanation on omitted data, see the Missing Data section in the introduction.

Related Occupations
Sawing Machine Setters, Operators, & Tenders, Wood
Cutting, Punching, & Press Machine Setters, Operators, & Tenders
Lathe & Turning Machine Tool Setters, Operators, & Tenders
Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders
Print Binding & Finishing Workers
Welders, Cutters, Solderers, & Brazers
Engine & Other Machine Assemblers
Molding, Coremaking, & Casting Machine Setters, Operators, & Tenders
Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders

Post-Secondary Institutions with Programs

See the Missing Data section in the introduction for information regarding omitted Post-Secondary Institutions and Related Occupations Data.