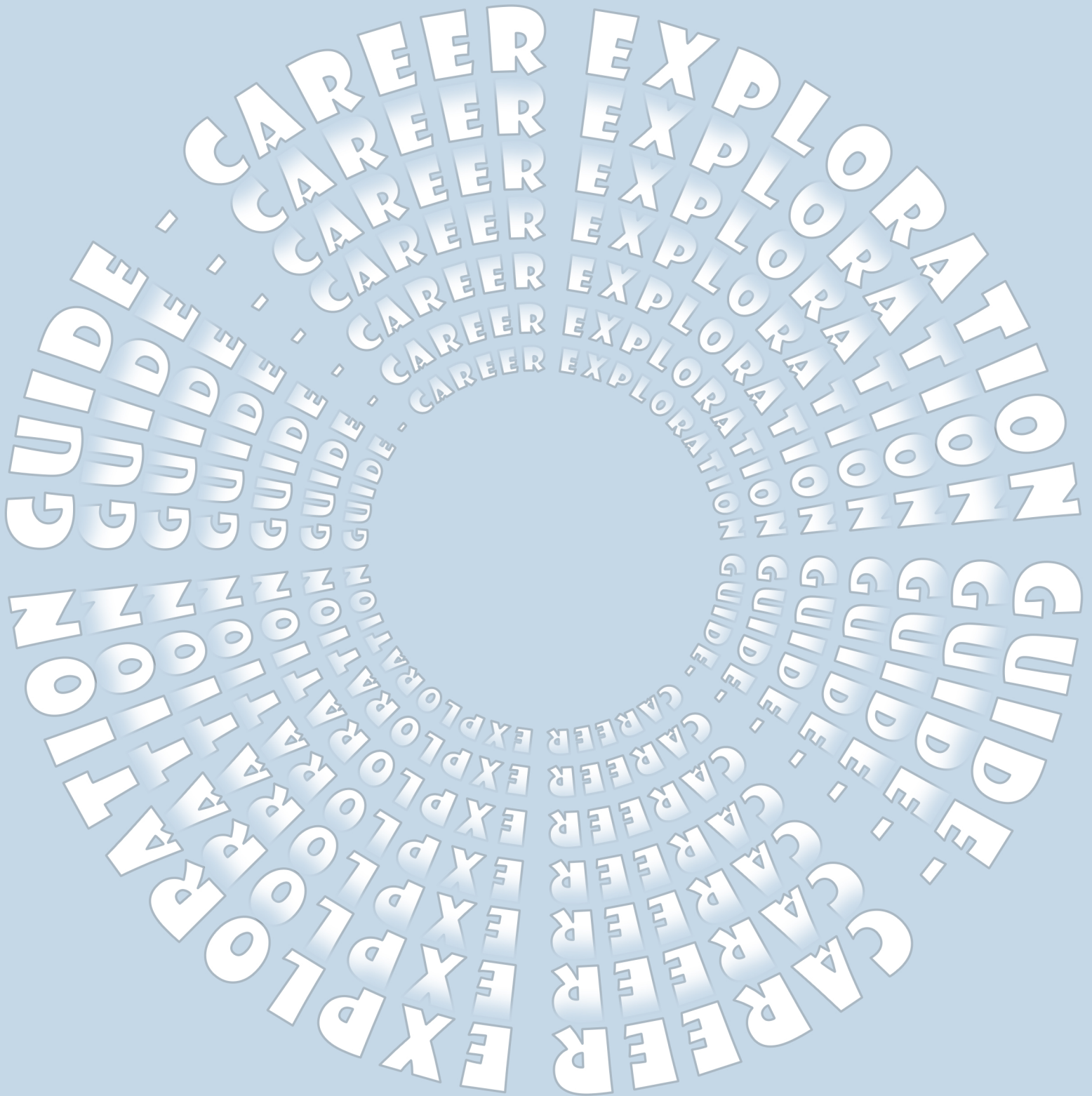


2024



Alabama
Department of Workforce
LABOR MARKET INFORMATION

INTRODUCTION

Welcome to Alabama's ***Career Exploration Guide 2024 Edition*** produced by the Alabama Department of Workforce, 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 entry, median and experienced 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 Workforce, Labor Market Information Division. Information regarding occupational descriptions, minimum qualifications, application procedures, fees, and agency contact information, was compiled from over 70 agencies, boards, or commissions. This publication is updated biennially and is available online, the downloadable PDF is available at <https://www2.labor.alabama.gov/WorkforceDev/LOG/LOG.pdf>.

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 Workforce. 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.

Postsecondary Institutions and ETPL Providers

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 public-school training sites in the State of Alabama. The list provided is obtained from the ACHE (Alabama Commission on Higher Education) database and is current as of the publication date. The ETPL (Eligible Training Provider List) contains information on training providers in Alabama. Due to space constraints, this list is a partial excerpt from the database. For additional information, please refer to the Alabama Commission on Higher Education at <http://www.ache.edu> or <https://wioa-alabama.org/eligible-training-provider-list/>

Labor Market Information

The Labor Market Information Division of the Alabama Department of Workforce 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 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 or blanks in place of data points. This is an indication that the data is unavailable or, for the respective occupation, cannot be reported due to standards provided by the Bureau of Labor Statistics.

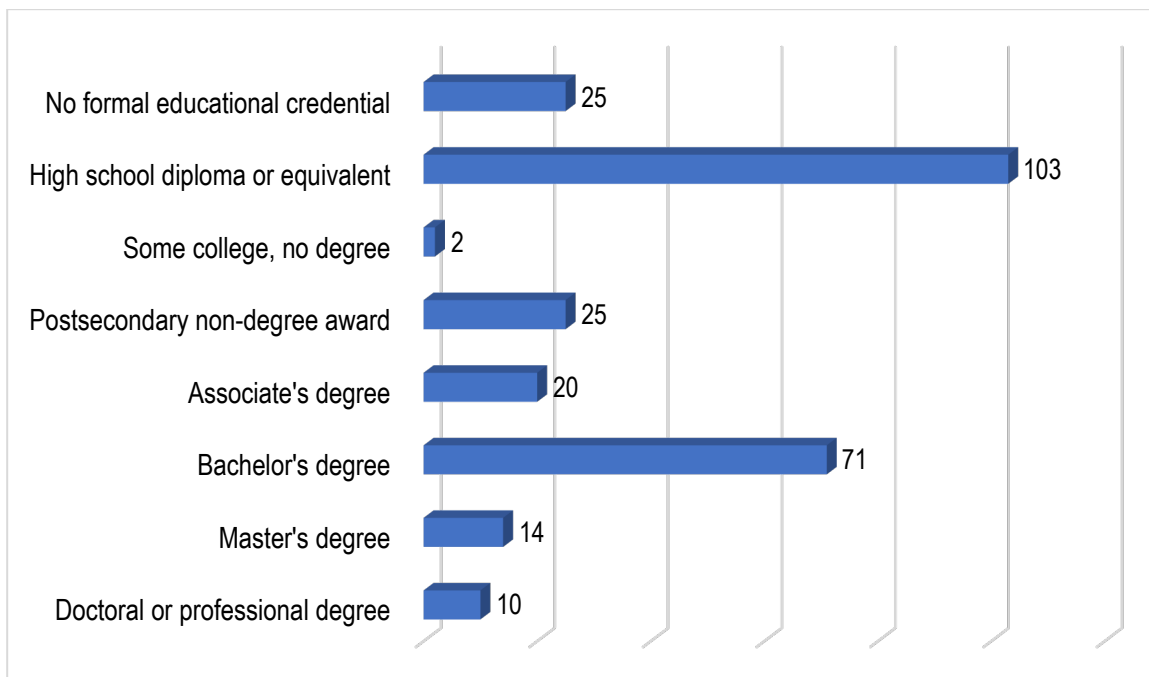
Data in this publication is current as of October 1, 2024.

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For more information on all occupations and career pathways in Alabama, please scan the QR code or visit <https://www2.labor.alabama.gov/WorkforceDev/CareerExploration/Default2.aspx> for interactive guides.



Within these pages are occupations that represent all levels of educational requirements within a variety of career fields. Counts by typical educational requirement:



Hot Technologies

This book contains examples of Technology Skills, including hot and in-demand technologies, associated with O*NET-SOC occupations. The subreport labeled “**Technology**” reflects a summary of the top technology Commodity Titles. These Commodity Titles represent a broad description of specific software as listed in the limited examples below.

The “**Technology**” category indicates requirements frequently included across all employer job postings. A concise list of all hot technologies may be downloaded from O*NET OnLine.

<u>Hot Technology Category</u>	<u>Example of Technology</u>
Analytical or scientific software -- --	SAS IBM SPSS Statistics Google Analytics
Business intelligence and data analysis software -- --	Tableau Microsoft Power BI Apache Spark
Computer aided design CAD software -- --	Autodesk AutoCAD Autodesk Revit Trimble SketchUp Pro
Data base user interface and query software -- -- --	Structured query language SQL Amazon Web Services AWS software Microsoft SQL Server Microsoft Access
Desktop publishing software	Adobe InDesign
Development environment software --	Microsoft Azure software Eclipse IDE
Enterprise resource planning ERP software --	SAP software Workday software
Geographic information system	ESRI ArcGIS software
Graphics or photo imaging software -- --	Adobe Illustrator Adobe Photoshop Adobe After Effects
Object or component-oriented development software -- -- -- --	R Python Oracle Java Apache Spark C#
Operating system software -- --	Linux Microsoft Windows Server Google Android
Process mapping and design software	Microsoft Visio
Time accounting software	Kronos Workforce Timekeeper
Web platform development software -- -- --	Cascading style sheets CSS Hypertext markup language HTML JavaScript Google Angular

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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: This occupation typically requires a Bachelor's degree

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 law 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 revenue 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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$22.34	Entry	\$46,474
Median	\$30.57	Median	\$63,581
Experienced	\$44.41	Experienced	\$92,365

Alabama Projections

2022 Estimated Employment:	25,450
2032 Projected Employment:	27,080
Average Total Openings:	2,165
Annual Growth Rate:	0.63%

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

Technology

Data base user interface and query software
Enterprise resource planning ERP software
Accounting software
Analytical or scientific software
Business intelligence and data analysis software
Development environment software
Medical software
Object or component oriented development software
Operating system software
Project management software

4-Year Institutions with Programs

Alabama A&M University
University of West Alabama
Alabama State University
Athens State University
Auburn University
University of South Alabama
University of North Alabama
University of Montevallo
University of Alabama in Huntsville
University of Alabama at Birmingham
Auburn University at Montgomery

2-Year Institution & ETPL Providers

Northwest Shoals Community College
Chattahoochee Valley Community College



Plan, direct, or coordinate one or more administrative services of an organization, such as records and information management, mail distribution, and other office support services.

Education: This occupation typically requires a Bachelor'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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Direct or coordinate the supportive services department of a business, agency, or organization. Set goals and deadlines for the department. Prepare and review operational reports and schedules to ensure accuracy and efficiency. Communicate with and provide guidance for external vendors and service providers to ensure the organization, department, or work unit's business needs are met. Develop operational standards and procedures for the work unit or department. Establish work procedures or schedules to organize the daily work of administrative staff. Learn to operate new office technologies as they are developed and implemented. Manage paper or electronic filing systems by recording information, updating paperwork, or maintaining documents, such as attendance records or correspondence. Meet with other departmental leaders to establish organizational goals, strategic plans, and objectives, as well as make decisions about personnel, resources, a space or equipment needs. Oversee payroll functions, such as maintaining timekeeping information and processing and submitting payroll. Read through contracts, regulations, and procedural guidelines to ensure comprehension and compliance. Represent work unit at meetings or conferences and serve as liaison for requests or complaints. Supervise administrative staff and provide training and orientation to new staff. Analyze internal processes and recommend and implement procedural or policy changes to improve operations, such as supply changes or the disposal of records. Acquire, distribute and store supplies.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$34.35	Entry	\$71,446
Median	\$48.78	Median	\$101,468
Experienced	\$69.01	Experienced	\$143,548

Alabama Projections

2022 Estimated Employment:	480
2032 Projected Employment:	510
Average Total Openings:	40
Annual Growth Rate:	0.67%

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

Technology

Accounting software
Analytical or scientific software
Cloud-based data access and sharing software
Computer aided design CAD software
Content workflow software
Data base management system software
Data base user interface and query software
Document management software
Electronic mail software
Enterprise resource planning ERP software

4-Year Institutions with Programs

Athens State University
University of Alabama in Huntsville
Auburn University
Alabama State University
Alabama A&M University

2-Year Institution & ETPL Providers

Northeast Alabama Community College
Coastal Alabama Community College
Jefferson State Community College
Shelton State Community College
Lawson State Community College
George C Wallace Community College
Southern Union State Community College
Bishop State Community College



Operate, install, adjust, and maintain integrated computer/communications systems, consoles, simulators, and other data acquisition, test, and measurement instruments and equipment, which are used to launch, track, position, and evaluate air and space vehicles. May record and interpret test data.

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Inspect, diagnose, maintain, and operate test setups and equipment to detect malfunctions. Record and interpret test data on parts, assemblies, and mechanisms. Confer with engineering personnel regarding details and implications of test procedures and results. Adjust, repair, or replace faulty components of test setups and equipment. Identify required data, data acquisition plans, and test parameters, setting up equipment to conform to these specifications. Construct and maintain test facilities for aircraft parts and systems, according to specifications. Operate and calibrate computer systems and devices to comply with test requirements and to perform data acquisition and analysis. Test aircraft systems under simulated operational conditions, performing systems readiness tests and pre- and post-operational checkouts, to establish design or fabrication parameter. Fabricate and install parts and systems to be tested in test equipment, using hand tools, power tools, and test instruments. Finish vehicle instrumentation and deinstrumentation. Design electrical and mechanical systems for avionics instrumentation applications.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$22.18	Entry	\$46,137
Median	\$30.70	Median	\$63,846
Experienced	\$37.09	Experienced	\$77,142

Alabama Projections

2022 Estimated Employment:	600
2032 Projected Employment:	650
Average Total Openings:	60
Annual Growth Rate:	0.77%

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

Technology

Cloud-based data access and sharing software
Computer aided design CAD software
Data base management system software
Data base user interface and query software
Electronic mail software
Enterprise application integration software
Enterprise resource planning ERP software
Object or component oriented development software
Office suite software
Operating system software

4-Year Institutions with Programs

University of Alabama in Huntsville
University of North Alabama
University of West Alabama

2-Year Institution & ETPL Providers

Bishop State Community College
Northeast Alabama Community College
Bevill State Community College
Coastal Alabama Community College
George C Wallace Community College
Enterprise State Community College
Jefferson State Community College
Snead State Community College



Perform engineering duties in designing, constructing, and testing aircraft, missiles, and spacecraft. May conduct basic and applied research to evaluate adaptability of materials and equipment to aircraft design and manufacture. May recommend improvements in testing equipment and techniques.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Direct or coordinate activities of engineering or technical personnel involved in designing, fabricating, modifying or testing of aircraft or aerospace products. Plan or conduct experimental, environmental, operational, or stress tests on models or prototypes of aircraft or aerospace systems or equipment. Formulate mathematical models or other methods of computer analysis to develop, evaluate, or modify design, according to customer engineering requirements. Write technical reports or other documentation, such as handbooks or bulletins, for use by engineering staff, management, or customers. Analyze project requests, proposals, or engineering data to determine feasibility, productibility, cost, or production time of aerospace or aeronautical products. Evaluate and approve selection of vendors by studying past performance or new advertisements. Plan or coordinate investigation and resolution of customers' reports of technical problems with aircraft or aerospace vehicles. Maintain records of performance reports for future reference. Design new or modify existing aerospace system to reduce polluting emissions, such as nitrogen oxide, carbon monoxide, or smoke emissions. Design or engineer filtration systems that reduce harmful emissions. Evaluate biofuel performance specifications to determine feasibility for aerospace applications. Formulate conceptual design of aeronautical or aerospace products or systems to meet customer requirements or conform to environmental regulations. 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. Diagnose performance problems by reviewing reports or documentation from customers or field engineers or by inspecting malfunctioning or damaged products.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$39.88	Entry	\$82,949
Median	\$61.13	Median	\$127,150
Experienced	\$69.85	Experienced	\$145,280

Alabama Projections

2022 Estimated Employment:	3,980
2032 Projected Employment:	4,240
Average Total Openings:	240
Annual Growth Rate:	0.64%

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

Technology

Analytical or scientific software
Computer aided design CAD software
Data base user interface and query software
Development environment software
Electronic mail software
Enterprise application integration software
Enterprise resource planning ERP software
Object or component oriented development software
Office suite software
Operating system software

4-Year Institutions with Programs

University of Alabama at Birmingham
University of Alabama
Auburn University
University of South Alabama
University of Alabama in Huntsville
Alabama A&M University

2-Year Institution & ETPL Providers

Northeast Alabama Community College
Bishop State Community College



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations 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: Adjust, repair, and service farm machinery and notify supervisors when machinery malfunctions. Observe and listen to machinery operation to detect equipment malfunctions. Irrigate soil, using portable pipes or ditch systems, and maintain ditches or pipes and pumps. Mix specified materials or chemicals, and dump solutions, powders, or seeds into planter or sprayer machinery. Operate or tend equipment used in agricultural production such as tractors, combines, and irrigation equipment. Manipulate controls to set, activate, and adjust mechanisms on machinery. Direct and monitor the activities of work crews engaged in planting, weeding, or harvesting activities. Load hoppers, containers, or conveyors to feed machines with products, using forklifts, transfer augers, suction gates, shovels, or pitchforks. Spray fertilizer or pesticide solutions to control insects, fungus and weed growth, and diseases, using hand sprayers. Attach farm implements such as plows, discs, sprayers, or harvesters to tractors, using bolts and hand tools. Operate towed machines such as seed drills or manure spreaders to plant, fertilize, dust, and spray crops. Drive trucks to haul crops, supplies, tools, or farm workers. Walk beside or ride on planting machines while inserting plants in planter mechanisms at specified intervals. Weigh crop-filled containers, and record weights and other identifying information. Load and unload crops or containers of materials, manually or using conveyors, handtrucks, forklifts, or transfer augers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.02	Entry	\$25,004
Median	\$14.79	Median	\$30,769
Experienced	\$17.46	Experienced	\$36,324

Alabama Projections

2022 Estimated Employment:	2,230
2032 Projected Employment:	2,420
Average Total Openings:	360
Annual Growth Rate:	0.83%

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

Technology

Data base user interface and query software
Presentation software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Read and interpret maintenance manuals, service bulletins, and other specifications to determine the feasibility and method of repairing or replacing malfunctioning or damaged components. Inspect completed work to certify that maintenance meets standards and that aircraft are ready for operation. Maintain repair logs, documenting all preventive and corrective aircraft maintenance. Conduct routine and special inspections as required by regulations. Examine and inspect aircraft components, including landing gear, hydraulic systems, and deicers locate cracks, breaks, leaks, or other problems. Inspect airframes for wear or other defects. 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. Measure the tension of control cables. Replace or repair worn, defective, or damaged components, using hand tools, gauges, and testing equipment. Measure parts for wear, using precision instruments. Assemble and install electrical, plumbing, mechanical, hydraulic, and structural components and accessories, using hand or power tools. Test operation engines and other systems, using test equipment, such as ignition analyzers, compression checkers, distributor timers, or ammeters. Obtain fuel and oil samples and check them for contamination. Reassemble engines following repair or inspection and reinstall engines in aircraft. Read and interpret pilots' descriptions of problem to diagnose causes.

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

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$25.61	Entry	\$53,264
Median	\$39.08	Median	\$81,287
Experienced	\$39.17	Experienced	\$81,472

Alabama Projections

2022 Estimated Employment:	4,530
2032 Projected Employment:	5,100
Average Total Openings:	405
Annual Growth Rate:	1.19%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Snead State Community College
Bevill State Community College
George C Wallace Community College
Southern Union State Community College
Enterprise State Community College
Bishop State Community College
Lawson State Community College
Coastal Alabama Community College
Calhoun Community College



Train animals for riding, harness, security, performance, or obedience, or for assisting persons with disabilities. Accustom animals to human voice and contact, and condition animals to respond to commands. Train animals according to prescribed standards for show or competition. May train animals to carry pack loads or work as part of pack team.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Conduct training programs to develop or maintain desired animal behaviors for competition, entertainment, obedience, security, riding, or related purposes. Evaluate animals for trainability and ability to perform. Observe animals' physical conditions to detect illness or unhealthy conditions requiring medical care. Cue or signal animals during performances. Administer prescribed medications to animals. Evaluate animals to determine their temperaments, abilities, or aptitude for training. Feed or exercise animals or provide other general care, such as cleaning or maintaining holding or performance areas. Talk to or interact with animals to familiarize them to human voices or contact. Keep records documenting animal health, diet, or behavior. Advise animal owners regarding the purchase of specific animals. Train horses or other equines for riding, harness, show, racing, or other work, using knowledge of breed characteristics, training methods, performance standards, and the peculiarities of each animal. Use oral, spur, rein, or hand commands to condition horses to carry riders or to pull horse-drawn equipment. Train dogs in human assistance or property protection duties. Retrain horses to break bad habits, such as kicking, bolting, or resisting bridling or grooming. Organize or conduct animal shows

License: None.

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.98	Entry	\$27,001
Median	\$15.82	Median	\$32,913
Experienced	\$25.58	Experienced	\$53,210

Alabama Projections

2022 Estimated Employment:	460
2032 Projected Employment:	560
Average Total Openings:	80
Annual Growth Rate:	2.13%

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

Technology

Enterprise resource planning ERP software
Project management software
Data base user interface and query software
Electronic mail software
Medical software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.14	Entry	\$35,660
Median	\$24.04	Median	\$50,005
Experienced	\$30.30	Experienced	\$63,034

Alabama Projections

2022 Estimated Employment:	1,040
2032 Projected Employment:	1,050
Average Total Openings:	95
Annual Growth Rate:	0.09%

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

Technology

Computer aided design CAD software
Graphics or photo imaging software
Development environment software
Data base user interface and query software
Desktop publishing software
Document management software
Electronic mail software
Enterprise application integration software
Enterprise resource planning ERP software
Geographic information system

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Calhoun Community College
H Councill Trenholm State
George C Wallace Community College
Bishop State Community College
Northwest Shoals Community College
Gadsden State Community College
Bevill State Community College
Lawson State Community College
Lurleen B Wallace Community College
Coastal Alabama Community College
Central Alabama Community College
Jefferson State Community College
Southern Union State Community College
J. F. Drake State Technical College
Snead State Community College
Shelton State Community College
Northeast Alabama Community College



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

Education: This occupation typically requires a Bachelor's degree

OJT: Employees may 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: Confer with management, production, or marketing staff to discuss project specifications or procedures. Plan or direct the installation, testing, operation, maintenance, or repair of facilities or equipment. Present and explain proposals, reports, or findings to clients. Consult or negotiate with clients to prepare project specifications. Develop or implement programs to improve sustainability or reduce the environmental impacts of engineering or architecture activities or operations. Evaluate environmental regulations or social pressures related to environmental issues to inform strategic or operational decision-making. Evaluate the environmental impacts of engineering, architecture, or research and development activities. Identify environmental threats or opportunities associated with the development and launch of new technologies. Manage the coordination and overall integration of technical activities in architecture or engineering projects. Direct, review, or approve project design changes. Prepare budgets, bids, or contracts. Assess project feasibility by analyzing technology, resource needs, or market demand. Direct recruitment, placement, and evaluation of architecture or engineering project staff. Review, recommend, or approve contracts or cost estimates. Develop or implement policies, standards, or procedures for engineering and technical work.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$47.86	Entry	\$99,556
Median	\$66.35	Median	\$137,998
Experienced	\$82.65	Experienced	\$171,906

Alabama Projections

2022 Estimated Employment:	2,730
2032 Projected Employment:	2,920
Average Total Openings:	195
Annual Growth Rate:	0.66%

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

Technology

Data base management system software
Object or component oriented development software
Development environment software
Web platform development software
Data base user interface and query software
Computer aided design CAD software
Operating system software
Project management software
Analytical or scientific software
Application server software

4-Year Institutions with Programs

Alabama A&M University
Alabama State University
Auburn University
University of Alabama
University of Alabama at Birmingham
University of Alabama in Huntsville
University of South Alabama
University of North Alabama

2-Year Institution & ETPL Providers



Formulate design concepts and presentation approaches for visual productions and media, such as print, broadcasting, video, and film. Direct workers engaged in artwork or layout design.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Research current trends and new technology, such as printing production techniques, computer software, and design trends. Formulate basic layout design or presentation approach and specify material details, such as style and size of type, photographs, graphics, animation, video, and sound. Review and approve art materials, copy materials, and proofs of printed copy developed by staff members. Manage own accounts and projects, working within budget and scheduling requirements. Confer with creative, art, copywriting, or production department heads to discuss client requirements and presentation concepts and to coordinate creative activities. Present final layouts to clients for approval. Confer with clients to determine objectives, budget, background information, and presentation approaches, styles, and techniques. Hire, train, and direct staff members who develop design concepts into art layouts or who prepare layouts for printing. Work with creative directors to develop design solutions. Review illustrative material to determine if it conforms to standards and specifications. Attend photo shoots and printing sessions to ensure that the products needed are obtained. Create custom illustrations or other graphic elements. Mark up, paste, and complete layouts and write typography instructions to prepare materials for typesetting or printing. Negotiate with printers and estimators to determine what services will be performed. Conceptualize and help design interfaces for multimedia games, products, and devices.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$26.41	Entry	\$54,933
Median	\$41.26	Median	\$85,812
Experienced	\$47.12	Experienced	\$98,000

Alabama Projections

2022 Estimated Employment:	1,110
2032 Projected Employment:	1,190
Average Total Openings:	115
Annual Growth Rate:	0.64%

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

Technology

Web platform development software
Graphics or photo imaging software
Web page creation and editing software
Desktop publishing software
Document management software
Electronic mail software
Graphical user interface development software
Network conferencing software
Object or component oriented development software
Office suite software

4-Year Institutions with Programs

Troy University
University of South Alabama

2-Year Institution & ETPL Providers



Evaluate and treat musculoskeletal injuries or illnesses. Provide preventive, therapeutic, emergency, and rehabilitative care.

Education: This occupation typically requires a Master's degree

OJT: Employees may 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: Perform general administrative tasks, such as keeping records or writing reports. File athlete insurance claims and communicate with insurance providers. Teach sports medicine courses to athletic training students. Clean and sanitize athletic training rooms. Conduct an initial assessment of an athlete's injury or illness to provide emergency or continued care and to determine whether they should be referred to physicians for definitive diagnosis and treatment. Care for athletic injuries, using physical therapy equipment, techniques, or medication. Evaluate athletes' readiness to play and provide participation clearances when necessary and warranted. Apply protective or injury preventive devices, such as tape, bandages, or braces, to body parts, such as ankles, fingers, or wrists. Assess and report the progress of recovering athletes to coaches or physicians. Collaborate with physicians to develop and implement comprehensive rehabilitation programs for athletic injuries. Advise athletes on the proper use of equipment. Plan or implement comprehensive athletic injury or illness prevention programs. Develop training programs or routines designed to improve athletic performance. Instruct coaches, athletes, parents, medical personnel, or community members in the care and prevention of athletic injuries. Inspect playing fields to locate any items that could injure players.

License: Application & License Fee: \$175.00; Renewal \$75.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$39,421
Median	\$***	Median	\$47,452
Experienced	\$***	Experienced	\$53,320

Alabama Projections

2022 Estimated Employment:	470
2032 Projected Employment:	570
Average Total Openings:	40
Annual Growth Rate:	1.86%

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

Technology

Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Southern Union State Community College
Chattahoochee Valley Community College



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Install, adjust, and operate electronic equipment to record, edit, and transmit radio and television programs, motion pictures, video conferencing, or multimedia presentations. Diagnose and resolve media system problems. Reserve audio-visual equipment and facilities, such as meeting rooms. Analyze and maintain data logs for audio-visual activities. Notify supervisors when major equipment repairs are needed. Monitor incoming and outgoing pictures and sound feeds to ensure quality and notify directors of any possible problems. Mix and regulate sound inputs and feeds or coordinate audio feeds with television pictures. Design layouts of audio and video equipment and perform upgrades and maintenance. Perform minor repairs and routine cleaning of audio and video equipment. Switch sources of video input from one camera or studio to another, from film to live programming, or from network to local programming. Meet with directors and senior members of camera crew to discuss assignments and determine filming sequences, camera movements, and picture composition. Construct and position properties, sets, lighting equipment, and other equipment. Compress, digitize, duplicate and store audio and video data. Obtain, set up, and load videotapes for scheduled productions or broadcasts. Edit videotapes by erasing and removing portions of programs and adding video or sound as required.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.85	Entry	\$30,887
Median	\$20.39	Median	\$42,407
Experienced	\$24.41	Experienced	\$50,779

Alabama Projections

2022 Estimated Employment:	810
2032 Projected Employment:	870
Average Total Openings:	80
Annual Growth Rate:	0.74%

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

Technology

Graphics or photo imaging software
Operating system software
Video conferencing software
Data base user interface and query software
Desktop publishing software
Electronic mail software
Office suite software
Presentation software
Project management software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Calhoun Community College
Chattahoochee Valley Community College



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Collect cash payments from customers, and make change or charge purchases to customers' credit cards, providing customers with receipts. Activate fuel pumps and fill fuel tanks of vehicles with gasoline or diesel fuel to specified levels. Prepare daily reports of fuel, oil, and accessory sales. Clean parking areas, offices, restrooms, or equipment, and remove trash. Provide customers with information about local roads or highways. Perform minor repairs, such as adjusting brakes, replacing spark plugs, or changing engine oil or filters. Order stock, and price and shelf incoming goods. Rotate, test, and repair or replace tires. Maintain customer records and follow up periodically with telephone, mail, or personal reminders of services due. Grease and lubricate vehicles or specified units, such as springs, universal joints, or steering knuckles, using grease guns or spray lubricants. Sell and install accessories, such as batteries, windshield wiper blades, fan belts, bulbs, or headlamps. Test and charge batteries. Check tire pressure and levels of fuel, motor oil, transmission, radiator, battery, or other fluids, adding air or fluids as required. Clean windshields.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.56	Entry	\$24,044
Median	\$13.95	Median	\$29,025
Experienced	\$16.00	Experienced	\$33,277

Alabama Projections

2022 Estimated Employment:	2,190
2032 Projected Employment:	2,360
Average Total Openings:	345
Annual Growth Rate:	0.73%

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

Technology

Electronic mail software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Repair and refinish automotive vehicle bodies and straighten vehicle frames.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. File, grind, sand, and smooth filled or repaired surfaces, using power tools and hand tools. Sand body areas to be painted and cover bumpers, windows, and trim with masking tape or paper to protect them from the paint. Follow supervisors' instructions as to which parts to restore or replace and how much time the job should take. Remove damaged sections of vehicles using metal-cutting guns, air grinders and wrenches, and install replacement parts using wrenches or welding equipment. 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. Prime and paint repaired surfaces, using paint sprayguns and motorized sanders. Mix polyester resins and hardeners to be used in restoring damaged areas. Chain or clamp frames and sections to alignment machines that use hydraulic pressure to align damaged components. Fill small dents that cannot be worked out with plastic or solder. 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. Position dolly blocks against surfaces of dented areas and beat opposite surfaces to remove dents, using hammers. Remove damaged panels, and identify the family and properties of the plastic used on a vehicle. Review damage reports, prepare or review repair cost estimates, and plan work to be performed. Remove small pits and dimples in body metal, using pick hammers and punches.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.57	Entry	\$30,312
Median	\$22.82	Median	\$47,470
Experienced	\$26.12	Experienced	\$54,320

Alabama Projections

2022 Estimated Employment:	2,070
2032 Projected Employment:	2,150
Average Total Openings:	190
Annual Growth Rate:	0.40%

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

Technology

Electronic mail software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Wallace Community College
Lawson State Community College
Reid State Technical College
Northwest Shoals Community College
Shelton State Community College
Southern Union State Community College
Bishop State Community College
Bevill State Community College
Wallace State Community College
Coastal Alabama Community College
Gadsden State Community College
Trenholm State Community College



Diagnose, adjust, repair, or overhaul automotive vehicles.

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.60	Entry	\$28,297
Median	\$19.49	Median	\$40,533
Experienced	\$25.85	Experienced	\$53,778

Alabama Projections

2022 Estimated Employment:	10,570
2032 Projected Employment:	11,100
Average Total Openings:	965
Annual Growth Rate:	0.49%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of West Alabama

2-Year Institution & ETPL Providers

Bishop State Community College
Gadsden State Community College
Lurleen B Wallace Community College
Drake State Technical College
Wallace State Community College
Shelton State Community College
Northwest Shoals Community College
Trenholm State Community College
Bevill State Community College
Lawson State Community College
Southern Union State Community College
Wallace Community College
Coastal Alabama Community College
Calhoun Community College



Install, inspect, test, adjust, or repair avionics equipment, such as radar, radio, navigation, and missile control systems in aircraft or space vehicles.

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Set up and operate ground support and test equipment to perform functional flight tests of electrical and electronic systems. Test and troubleshoot instruments, components, and assemblies, using circuit testers, oscilloscopes, or voltmeters. Keep records of maintenance and repair work. Coordinate work with that of engineers, technicians, and other aircraft maintenance personnel. Interpret flight test data to diagnose malfunctions and systemic performance problems. Install electrical and electronic components, assemblies, or systems in aircraft, using hand tools, power tools, or soldering irons. Adjust, repair, or replace malfunctioning components or assemblies, using hand tools or soldering irons. Connect components to assemblies such as radio systems, instruments, magnetos, inverters, and in-flight refueling systems, using hand tools and soldering irons. Assemble components such as switches, electrical controls, and junction boxes, using hand tools or soldering irons. Fabricate parts and test aids as required. Lay out installation of aircraft assemblies and systems, following documentation such as blueprints, manuals, and wiring diagrams. Assemble prototypes or models of circuits, instruments, and systems for use in testing. Operate computer-aided drafting and design applications to design avionics system modifications.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$29.95	Entry	\$62,303
Median	\$39.80	Median	\$82,780
Experienced	\$40.03	Experienced	\$83,252

Alabama Projections

2022 Estimated Employment:	1,130
2032 Projected Employment:	1,300
Average Total Openings:	120
Annual Growth Rate:	1.35%

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

Technology

Enterprise resource planning ERP software
Object or component oriented development software
Operating system software
Computer aided design CAD software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Enterprise State Community College
Coastal Alabama Community College



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

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.53	Entry	\$21,907
Median	\$13.48	Median	\$28,035
Experienced	\$15.29	Experienced	\$31,809

Alabama Projections

2022 Estimated Employment:	2,030
2032 Projected Employment:	2,200
Average Total Openings:	325
Annual Growth Rate:	0.83%

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

Technology

Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

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 invoice 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. Weigh envelopes containing statements to determine correct postage and affix postage, using stamps or metering equipment. Compare previously prepared bank statements with canceled checks and reconcile discrepancies.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.86	Entry	\$28,829
Median	\$17.50	Median	\$36,396
Experienced	\$19.88	Experienced	\$41,344

Alabama Projections

2022 Estimated Employment:	4,550
2032 Projected Employment:	4,680
Average Total Openings:	485
Annual Growth Rate:	0.28%

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

Technology

Enterprise resource planning ERP software
Medical software
Accounting software
Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Project management software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. Measure distance from reference points and mark guidelines to lay out work, using plumb bobs and levels. Calculate angles and courses and determine vertical and horizontal alignment of courses. Fasten or fuse brick or other building material to structure with wire clamps, anchor holes, torch, or cement. Break or cut bricks, tiles, or blocks to size, using trowel edge, hammer, or power saw. Remove excess mortar with trowels and hand tools, and finish mortar joints with jointing tools, for a sealed, uniform appearance. Interpret blueprints and drawings determine specifications and to calculate the materials required. Apply and smooth mortar or other mixture over work surface. Mix specified amounts of sand, clay, dirt, or mortar powder with water to form refractory mixtures. Examine brickwork or structure to determine need for repair. Clean working surface to remove scale, dust, soil or chips of brick and mortar, using broom, wire brush, or scraper. Lay and align bricks, blocks, or tiles to build or repair structures or high temperature equipment, such as cupola, kilns, ovens, or furnaces. Remove burned or damaged brick or mortar, using sledgehammer, crowbar, chipping gun, or chisel. Spray or spread refractory material over brickwork to protect against deterioration.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.31	Entry	\$38,079
Median	\$24.46	Median	\$50,866
Experienced	\$27.58	Experienced	\$57,369

Alabama Projections

2022 Estimated Employment:	530
2032 Projected Employment:	570
Average Total Openings:	50
Annual Growth Rate:	0.65%

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

Technology

Accounting software
Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Calhoun Community College
Wallace Community College
Coastal Alabama Community College
Gadsden State Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Diagnose and repair vehicle heating and cooling systems. Adjust or repair computer controlled exhaust emissions devices. Follow green operational practices involving conservation of water or energy or reduction of solid waste. Maintain or repair vehicles with alternative fuel systems, including biodiesel, hybrid, or compressed natural gas vehicles. Measure vehicle emissions to determine whether they are within acceptable limits. Install or repair accessories. Repair or adjust seats, doors, or windows. Dismount, mount, and repair or replace tires. 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. Inspect brake systems, steering mechanisms, wheel bearings, and other important parts to ensure that they are in proper operating condition. Perform routine maintenance such as changing oil, checking batteries, and lubricating equipment and machinery. Adjust and reline brakes, align wheels, tighten bolts and screws, and reassemble equipment. Raise trucks, buses, and heavy parts or equipment using hydraulic jacks or hoists. Test drive truck and buses to diagnose malfunctions or to ensure that they are working properly. Inspect, test, and listen to defective equipment to diagnose malfunctions, using test instruments such as handheld computers, motor analyzers, chassis charts, or pressure gauges.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.68	Entry	\$34,690
Median	\$22.74	Median	\$47,309
Experienced	\$27.33	Experienced	\$56,850

Alabama Projections

2022 Estimated Employment:	5,660
2032 Projected Employment:	5,950
Average Total Openings:	505
Annual Growth Rate:	0.49%

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

Technology

Computer aided design CAD software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Lawson State Community College
Bishop State Community College
Central Alabama Community College
George C Wallace Community College
Lurleen B Wallace Community College
H Councill Trenholm State
Gadsden State Community College
Shelton State Community College
Bevill State Community College
Reid State Technical College



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

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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. Assist passengers, such as elderly individuals with disabilities, on and off bus, ensure they are seated properly, help carry baggage, and answer questions about bus schedules or routes. Handle passenger emergencies or disruptions. Record information, such as cash receipts and ticket fares, and maintain log book. Collect tickets or cash fares from passengers. Maintain cleanliness of bus or motor coach. Announce stops to passengers. Read maps to plan bus routes. Inspect vehicles and check gas, oil, and water levels prior to departure. Park vehicles at loading areas so that passengers can board. Report delays or accidents. Advise passengers to be seated and orderly while on vehicles. Regulate heating, lighting, and ventilating systems for passenger comfort. Load and unload baggage baggage compartments.

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 Law Enforcement Agency.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.11	Entry	\$25,196
Median	\$16.57	Median	\$34,468
Experienced	\$19.51	Experienced	\$40,586

Alabama Projections

2022 Estimated Employment:	1,260
2032 Projected Employment:	1,350
Average Total Openings:	175
Annual Growth Rate:	0.69%

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

Technology

Operating system software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Bishop State Community College



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

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Wrap, weigh, label, and price cuts of meat. Prepare and place meat cuts and products in display counter to appear attractive and catch the shopper's eye. Prepare special cuts of meat ordered by customers. Cut, trim, bone, tie, and grind meats, such as beef, pork, poultry, and fish, to prepare in cooking form. Receive, inspect, and store meat upon delivery to ensure meat quality. Shape, lace, and tie roasts, using boning knife, skewer, and twine. Estimate requirements and order or requisition meat supplies to maintain inventories. Supervise other butchers or meat cutters. Record quantity of meat received and issued to cooks or keep records of meat sales. Negotiate with representatives from supply companies to determine order details. Cure, smoke, tenderize, and preserve meat.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.30	Entry	\$21,418
Median	\$14.11	Median	\$29,354
Experienced	\$17.39	Experienced	\$36,177

Alabama Projections

2022 Estimated Employment:	2,440
2032 Projected Employment:	2,500
Average Total Openings:	295
Annual Growth Rate:	0.25%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Produce or assemble components of articles, such as store fixtures, office equipment, cabinets, or high-grade furniture. Verify dimensions or check the quality or fit of pieces to ensure adherence to specifications. Set up or operate machines, including power saws, jointers, mortisers, tenoners, molders, or shapers, to cut, mold, or shape woodstock or wood substitutes. Measure and mark dimensions of parts on paper or lumber stock prior to cutting, following blueprints, to ensure a tight fit and quality product. Reinforce joints with nails or other fasteners to prepare articles for finishing. Attach parts or subassemblies together to form completed units, using glue, dowels, nails, screws, or clamps. 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. 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. Match materials for color, grain, or texture, giving attention to knots or other features of the wood. Trim, sand, or scrape surfaces or joints to prepare articles for finishing. Bore holes for insertion of screws or dowels, by hand or using boring machines. Program computers to operate machinery. Estimate the amounts, types, or costs of needed materials. Perform final touch-ups with sandpaper or steel wool. Install hardware, such as hinges, handles, catches, or drawer pulls, using hand tools.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.87	Entry	\$26,775
Median	\$15.77	Median	\$32,810
Experienced	\$18.46	Experienced	\$38,390

Alabama Projections

2022 Estimated Employment:	2,460
2032 Projected Employment:	2,630
Average Total Openings:	260
Annual Growth Rate:	0.70%

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

Technology

Computer aided design CAD software
Electronic mail software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

H Councill Trenholm State
Lurleen B Wallace Community College
Southern Union State Community College
George C Wallace Community College
Coastal Alabama Community College
Reid State Technical College
Northwest Shoals Community College
Calhoun Community College
Lawson State Community College
Shelton State Community College
Gadsden State Community College
Bishop State Community College
Central Alabama Community College



Conduct tests on pulmonary or cardiovascular systems of patients for diagnostic, therapeutic, or research purposes. May conduct or assist in electrocardiograms, cardiac catheterizations, pulmonary functions, lung capacity, and similar tests.

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Perform general administrative tasks, such as scheduling appointments or ordering supplies or equipment. Maintain a proper sterile field during surgical procedures. Assist physicians in the diagnosis and treatment of cardiac or peripheral vascular treatments, such as implanting pacemakers or assisting with balloon angioplasties to treat blood vessel blockages. Transcribe, type, and distribute reports of diagnostic procedures for interpretation by physician. Set up 24-hour Holter and event monitors, scan and interpret tapes, and report results to physicians. Monitor patients' blood pressure and heart rate using electrocardiogram (EKG) equipment during diagnostic or therapeutic procedures to notify the physician if something appears wrong. Monitor patient comfort and safety during tests, alerting physicians to abnormalities or changes in patient responses. Explain testing procedures to patients to obtain cooperation and reduce anxiety. Observe gauges, recorder, and video screens of data analysis system during imaging of cardiovascular system. Conduct electrocardiogram (EKG), phonocardiogram, echocardiogram, stress testing, or other cardiovascular tests to record patients' cardiac activity, using specialized electronic test equipment, recording devices, or laboratory instruments. Prepare and position patients for testing. Obtain and record patient identification, medical history, or test results. Attach electrodes to the patients' chests, arms, and legs, connect electrodes to leads from the electrocardiogram (EKG) machine, and operate the EKG machine to obtain a reading. Adjust equipment and controls according to physicians' orders or established protocol. Check, test, and maintain cardiology equipment, making minor repairs when necessary, to ensure proper operation.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.96	Entry	\$26,957
Median	\$18.92	Median	\$39,349
Experienced	\$26.75	Experienced	\$55,643

Alabama Projections

2022 Estimated Employment:	1,300
2032 Projected Employment:	1,370
Average Total Openings:	90
Annual Growth Rate:	0.56%

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

Technology

Electronic mail software
Medical software
Office suite software
Spreadsheet software
Web platform development software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

LB Allied Health Training Center



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Track delivery progress of shipments. Notify consignees, passengers, or customers of freight or baggage arrival and arrange for delivery. Check import or export documentation to determine cargo contents and use tariff coding system to classify goods according to fee or tariff group. Prepare manifests showing numbers of airplane passengers and baggage, mail, and freight weights, transmitting data to destinations. Contact vendors or claim adjustment departments to resolve shipment problems or contact service depots to arrange for repairs. Negotiate and arrange transport of goods with shipping or freight companies. Advise clients on transportation and payment methods. Determine method of shipment and prepare bills of lading, invoices, and other shipping documents. Estimate freight or postal rates and record shipment costs and weights. Enter shipping information into a computer by hand or by a hand-held scanner that reads bar codes on goods. Retrieve stored items and trace lost shipments as necessary. Pack goods for shipping, using tools such as staplers, strapping machines, and hammers. Direct delivery trucks to shipping doors or designated marshaling areas and help load and unload goods safely. Inspect and count items received and check them against invoices or other documents, recording shortages and rejecting damaged goods. Install straps, braces, and padding to loads to prevent shifting or damage during shipment.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.37	Entry	\$29,892
Median	\$20.50	Median	\$42,640
Experienced	\$25.81	Experienced	\$53,687

Alabama Projections

2022 Estimated Employment:	600
2032 Projected Employment:	630
Average Total Openings:	65
Annual Growth Rate:	0.57%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.18	Entry	\$31,581
Median	\$19.22	Median	\$39,973
Experienced	\$23.08	Experienced	\$48,015

Alabama Projections

2022 Estimated Employment:	9,120
2032 Projected Employment:	9,560
Average Total Openings:	810
Annual Growth Rate:	0.48%

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

Technology

Accounting software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Gadsden State Community College
Bishop State Community College
Reid State Technical College
Calhoun Community College
Northwest Shoals Community College
Shelton State Community College



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations 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: 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. Mold expansion joints and edges, using edging tools, jointers, and straightedge. Monitor how the wind, heat, or cold affect the curing of the concrete throughout the entire process. Signal truck driver to position truck to facilitate pouring concrete, and move chute to direct concrete on forms. Produce rough concrete surface, using broom. Operate power vibrator to compact concrete. Direct the casting of the concrete and supervise laborers who use shovels or special tools to spread it. Mix cement, sand, and water to produce concrete, grout, or slurry, using hoe, trowel, tamper, scraper, or concrete-mixing machine. 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. Wet surface to prepare for bonding, fill holes and cracks with grout or slurry, and smooth using trowel. Clean chipped area, using wire brush, and feel and observe surface to determine if it is rough or uneven. Apply hardening and sealing compounds to cure surface of concrete, and waterproof or restore surface.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.19	Entry	\$31,598
Median	\$19.59	Median	\$40,749
Experienced	\$23.36	Experienced	\$48,593

Alabama Projections

2022 Estimated Employment:	1,990
2032 Projected Employment:	2,070
Average Total Openings:	160
Annual Growth Rate:	0.41%

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

Technology

Information retrieval or search software
Analytical or scientific software
Project management software
Accounting software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Check the quality of raw or cooked food products to ensure that standards are met. Monitor sanitation practice to ensure that employees follow standards and regulations. Check the quantity and quality of received product. Order or requisition food or other supplies needed to ensure efficient operation. Supervise or coordinate activities of cooks or workers engaged in food preparation. Inspect supplies, equipment, or work areas to ensure conformance to established standards. Determine how food should be presented and create decorative food displays. Instruct cooks or other workers in the preparation, cooking, garnishing, or presentation of food. Estimate amounts and costs of required supplies, such as food and ingredients. 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. 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 functions. Determine production schedules and staff requirements necessary to ensure timely delivery of services. Recruit and hire staff, such as cooks and other kitchen workers. Meet with customers to discuss menus for special occasions, such as weddings, parties, or banquets.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.77	Entry	\$41,123
Median	\$28.76	Median	\$59,815
Experienced	\$34.45	Experienced	\$71,648

Alabama Projections

2022 Estimated Employment:	540
2032 Projected Employment:	610
Average Total Openings:	75
Annual Growth Rate:	1.18%

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

Technology

Spreadsheet software
Electronic mail software
Office suite software
Presentation software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

University of North Alabama

2-Year Institution & ETPL Providers

George C Wallace Community College
Lurleen B Wallace Community College
Bishop State Community College
J. F. Drake State Technical College
Lawson State Community College
Northeast Alabama Community College
Shelton State Community College
Coastal Alabama Community College
H Councill Trenholm State



Design chemical plant equipment and devise processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying principles and technology of chemistry, physics, and engineering.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Troubleshoot problems with chemical manufacturing processes. Evaluate chemical equipment and processes identify ways to optimize performance or to ensure compliance with safety and environmental regulations. Perform tests and monitor performance of processes throughout stages of production to determine degree of control over variables such as temperature, density, specific gravity, and pressure. Monitor and analyze data from processes and experiments. Develop safety procedures to be employed by workers operating equipment or working in close proximity to ongoing chemical reactions. Determine most effective arrangement of operations such as mixing, crushing, heat transfer, distillation, and drying. Prepare estimate of production cost and production progress reports for management. Direct activities of workers who operate or are engaged in constructing and improving absorption, evaporation, or electromagnetic equipment. Perform laboratory studies of steps in manufacture of new products and test proposed processes in small-scale operation, such as a pilot plant. Develop processes to separate components of liquids or gases or generate electrical currents, using controlled chemical processes. Conduct research to develop new and improved chemical manufacturing processes. Design measurement and control systems for chemical plants based on data collected in laboratory experiments and in pilot plant operations. Design and plan layout of equipment.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$36.20	Entry	\$75,300
Median	\$49.24	Median	\$102,424
Experienced	\$59.25	Experienced	\$123,234

Alabama Projections

2022 Estimated Employment:	650
2032 Projected Employment:	710
Average Total Openings:	40
Annual Growth Rate:	0.96%

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

Technology

Analytical or scientific software
Computer aided design CAD software
Data base user interface and query software
Development environment software
Enterprise resource planning ERP software
Object or component oriented development software
Office suite software
Presentation software
Process mapping and design software
Project management software

4-Year Institutions with Programs

University of South Alabama
University of Alabama in Huntsville
University of Alabama
Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Monitor product quality to ensure compliance with standards and specifications. Set up and conduct chemical experiments, tests, and analyses, using techniques such as chromatography, spectroscopy, physical or chemical separation techniques, or microscopy. Conduct chemical or physical laboratory tests to assist scientists in making qualitative or quantitative analyses of solids, liquids, or gaseous materials. Compile and interpret results of tests and analyses. Prepare chemical solutions for products or processes, following standardized formulas, or create experimental formulas. Maintain, clean, or sterilize laboratory instruments or equipment. Write technical reports or prepare graphs or charts to document experimental results. Order and inventory materials to maintain supplies. Direct or monitor other workers producing chemical products. Operate experimental pilot plants, assisting with experimental design. Develop new chemical engineering processes or production techniques. Design or fabricate experimental apparatus to develop new products or processes. Provide and maintain a safe work environment by participating in safety programs, committees, or teams and in conducting laboratory or plant safety audits. Train new employees on topics such as the proper operation of laboratory equipment.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.56	Entry	\$36,528
Median	\$25.04	Median	\$52,089
Experienced	\$31.28	Experienced	\$65,064

Alabama Projections

2022 Estimated Employment:	1,480
2032 Projected Employment:	1,540
Average Total Openings:	180
Annual Growth Rate:	0.44%

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

Technology

Object or component oriented development software
Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of South Alabama

2-Year Institution & ETPL Providers

Calhoun Community College
Northwest Shoals Community College
Bishop State Community College
Coastal Alabama Community College



Conduct qualitative and quantitative chemical analyses or experiments in laboratories for quality or process control or to develop new products or knowledge.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Analyze organic or inorganic compounds to determine chemical or physical properties, composition, structure, relationships, or reactions, using chromatography, spectroscopy, or spectrophotometry techniques. Develop, improve, or customize products, equipment, formulas, processes, or analytical methods. Confer with scientists or engineers to conduct analyses of research projects, interpret test results, or develop nonstandard tests. Direct, coordinate, or advise personnel in test procedures for analyzing components or physical properties of materials. Induce changes in composition of substances by introducing heat, light, energy, or chemical catalysts for quantitative or qualitative analysis. Write technical papers or reports or prepare standards and specification for processes, facilities, products, or tests. Prepare test solutions, compounds, or reagents for laboratory personnel to conduct tests. Maintain laboratory instruments to ensure proper working order and troubleshoot malfunctions when needed. Conduct quality control tests. Evaluate laboratory safety procedures to ensure compliance with standards or to make improvements as needed. Purchase laboratory supplies, such as chemicals, when supplies are low or near their expiration date.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$25.69	Entry	\$53,426
Median	\$38.09	Median	\$79,238
Experienced	\$46.74	Experienced	\$97,228

Alabama Projections

2022 Estimated Employment:	790
2032 Projected Employment:	850
Average Total Openings:	60
Annual Growth Rate:	0.74%

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

Technology

Data base user interface and query software
Development environment software
Enterprise application integration software
Enterprise resource planning ERP software
Object or component oriented development software
Office suite software
Presentation software
Process mapping and design software
Spreadsheet software
Web platform development software

4-Year Institutions with Programs

University of West Alabama
Alabama A&M University
Athens State University
University of North Alabama
University of Alabama in Huntsville
University of Alabama
University of Alabama at Birmingham
University of Montevallo
Alabama State University
Auburn University
Auburn University at Montgomery

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Interview clients individually, in families, or in groups, assessing their situations, capabilities, and problems to determine what services are required to meet their needs. 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. Maintain case history records and prepare reports. Counsel students whose behavior, school progress, or mental or physical impairment indicate a need for assistance, diagnosing students' problems and arranging for needed services. Consult with parents, teachers, and other school personnel to determine causes of problems, such as truancy and misbehavior, and to implement solutions. Counsel parents with child rearing problems, interviewing the child and family to determine whether further action is required. Develop and review service plans in consultation with clients and perform follow-ups assessing the quantity and quality of services provided. Collect supplementary information needed to assist client, such as employment records, medical records, or school reports. Address legal issues, such as child abuse and discipline, assisting with hearings and providing testimony to inform custody arrangements. 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. 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. Arrange for medical, psychiatric, and other tests that may disclose causes of difficulties and indicate remedial measures. Evaluate personal characteristics and home conditions of foster home or adoption applicants. 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. Supervise other social workers.

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

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.57	Entry	\$32,383
Median	\$20.24	Median	\$42,099
Experienced	\$24.54	Experienced	\$51,053

Alabama Projections

2022 Estimated Employment:	3,840
2032 Projected Employment:	3,950
Average Total Openings:	305
Annual Growth Rate:	0.28%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Montevallo
University of South Alabama
Alabama State University
Troy University
University of Alabama at Birmingham
Alabama A&M University
Jacksonville State University
University of North Alabama
University of Alabama
Auburn University at Montgomery
Auburn University

2-Year Institution & ETPL Providers

Lawson State Community College



Assess, treat, and care for patients by manipulation of spine and musculoskeletal system. May provide spinal adjustment or address sacral or pelvic misalignment.

Education: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Recommend and arrange for diagnostic procedures, such as blood chemistry tests, saliva tests, x-rays, or other imaging procedures. Perform a series of manual adjustments to the spine or other articulations of the body to correct the musculoskeletal system. Evaluate the functioning of the neuromusculoskeletal system and the spine using systems of chiropractic diagnosis. Diagnose health problems by reviewing patients' health and medical histories, questioning, observing, and examining patients and interpreting x-rays. Maintain accurate case histories of patients. Advise patients about recommended courses of treatment. Obtain and record patients' medical histories. Analyze x-rays to locate the sources of patients' difficulties and to rule out fractures or diseases as sources of problems. Counsel patients about nutrition, exercise, sleeping habits, stress management, or other matters. Consult with or refer patients to appropriate health practitioners when necessary. Suggest and apply the use of supports such as straps, tapes, bandages, or braces if necessary.

License: Application Fee: \$150.00; Annual Renewal: \$300.00; License/Permit: \$75.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.38	Entry	\$44,462
Median	\$29.93	Median	\$62,258
Experienced	\$41.28	Experienced	\$85,853

Alabama Projections

2022 Estimated Employment:	630
2032 Projected Employment:	690
Average Total Openings:	30
Annual Growth Rate:	0.99%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Calculate dimensions, square footage, profile and component specifications, and material quantities, using calculator or computer. Draft detailed dimensional drawings and design layouts for projects to ensure conformance to specifications. Analyze proposed site factors and design maps, graphs, tracings, and diagram to illustrate findings. Read and review project blueprints and structural specifications to determine dimensions structure or system and material requirements. Prepare reports and document project activities and data. Confer with supervisor to determine project details such as plan preparation, acceptance testing, and evaluation of field conditions. Inspect project site and evaluate contractor work to detect design malfunctions and ensure conformance to design specifications and applicable codes. Plan and conduct field surveys to locate new sites and analyze details of project sites. Develop plans and estimate costs for installation of systems, utilization of facilities, or construction of structures. Report maintenance problems occurring at project site to supervisor and negotiate changes to resolve system conflicts. Conduct materials test and analysis, using tools and equipment and applying engineering knowledge. Respond to public suggestions and complaints. Develop project budgets by estimating the cost of project activities. Negotiate with contractors on prices for new contracts or modifications to existing contracts.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.87	Entry	\$33,011
Median	\$22.61	Median	\$47,033
Experienced	\$27.07	Experienced	\$56,300

Alabama Projections

2022 Estimated Employment:	1,680
2032 Projected Employment:	1,700
Average Total Openings:	155
Annual Growth Rate:	0.13%

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

Technology

Computer aided design CAD software
Development environment software
Electronic mail software
Enterprise resource planning ERP software
Geographic information system
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Alabama A&M University

2-Year Institution & ETPL Providers

Bishop State Community College
Lurleen B Wallace Community College
Northeast Alabama Community College
J. F. Drake State Technical College
Gadsden State Community College



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: This occupation typically requires a Bachelor'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 load and grade requirements, water flow rates, or material stress factors to determine design specifications. Inspect project sites to monitor progress and ensure conformance to design specifications and safety or sanitation standards. 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. Prepare or present public reports on topics such as bid proposals, deeds, environmental impact statements, or property and right-of-way descriptions. Test soils or materials to determine the adequacy and strength of foundations, concrete, asphalt, or steel. Conduct studies of traffic patterns or environmental conditions to identify engineering problems and assess potential project impact. Design energy-efficient or environmentally sound civil structures. Design or engineer systems to efficiently dispose of chemical, biological, or other toxic wastes. Develop or implement engineering solutions to clean up industrial accidents or other contaminated sites. Direct engineering activities, ensuring compliance with environmental, safety, or other governmental regulations. Identify environmental risks and develop risk management strategies for civil engineering projects. Provide technical advice to industrial or managerial personnel regarding design, construction, program modifications, or structural repairs. Manage and direct the construction, operations, or maintenance activities at project site. Plan and design transportation or hydraulic systems or structures, using computer-assisted design or drawing tools.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$28.79	Entry	\$59,890
Median	\$40.04	Median	\$83,276
Experienced	\$52.24	Experienced	\$108,665

Alabama Projections

2022 Estimated Employment:	5,590
2032 Projected Employment:	5,840
Average Total Openings:	360
Annual Growth Rate:	0.45%

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

Technology

Computer aided design CAD software
Analytical or scientific software
Development environment software
Enterprise resource planning ERP software
Project management software
Data base user interface and query software
Document management software
Electronic mail software
Enterprise application integration software
File versioning software

4-Year Institutions with Programs

University of Alabama at Birmingham
Auburn University
Alabama A&M University
University of Alabama in Huntsville
University of Alabama
University of South Alabama

2-Year Institution & ETPL Providers

Gadsden State Community College



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

- Education:** This occupation typically requires No formal educational credential
- OJT:** Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.
- Tasks:** Inspect parts, equipment, or vehicles for cleanliness, damage, and compliance with standards or regulations. Scrub, scrape, or spray machine parts, equipment, or vehicles, using scrapers, brushes, clothes, cleaners, disinfectants, insecticides, acid, abrasives, vacuums, or hoses. Mix cleaning solutions, abrasive compositions, or other compounds, according to formulas. Press buttons to activate cleaning equipment or machines. Clean and polish vehicle windows. Rinse objects and place them on drying racks or use cloth, squeegees, or air compressors to dry surfaces. Drive vehicles to or from workshops or customers' workplaces or homes. Turn valves or handles on equipment to regulate pressure or flow of water, air, steam, or abrasives from sprayer nozzles. Pre-soak or rinse machine parts, equipment, or vehicles by immersing objects in cleaning solutions or water, manually or using hoists. Lubricate machinery, vehicles, or equipment or perform minor repairs or adjustments, using hand tools. Monitor operation of cleaning machines and stop machines or notify supervisor when malfunctions occur. Disassemble and reassemble machines or equipment or remove and reattach vehicle parts or trim, using hand tools. Connect hoses or lines to pumps or other equipment. Maintain inventories of supplies. Apply paints, dyes, polishes, reconditioners, waxes, or masking materials to vehicles to preserve, protect, or restore color or condition.
- License:** None.
- Outlook:** Satisfactory

Alabama Employment Outlook

Alabama Wage Data				Alabama Projections	
Hourly Wage		Annual Wage		2022 Estimated Employment:	7,650
Entry	\$10.23	Entry	\$21,276	2032 Projected Employment:	8,250
Median	\$13.75	Median	\$28,594	Average Total Openings:	1,105
Experienced	\$16.04	Experienced	\$33,365	Annual Growth Rate:	0.76%

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

Technology

Operating system software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

OJT: Employees may 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: Prepare and deliver sermons or other talks. Organize and lead regular religious services. Instruct people who seek conversion to a particular faith. Counsel individuals or groups concerning their spiritual, emotional, or personal needs. Visit people in homes, hospitals, or prisons to provide them with comfort and support. Train leaders of church, community, or youth groups. Study and interpret religious laws, doctrines, or traditions. Respond to requests for assistance during emergencies or crises. Devise ways in which congregational membership can be expanded. Collaborate with committees or individuals to address financial or administrative issues pertaining to congregations. Perform administrative duties, such as overseeing building management, ordering supplies, contracting for services or repairs, or supervising the work of staff members or volunteers. Refer people to community support services, psychologists, or doctors. Plan or lead religious education programs. Organize or engage in interfaith, community, civic, educational, or recreational activities sponsored by or related to religious programs.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.71	Entry	\$30,597
Median	\$23.50	Median	\$48,881
Experienced	\$29.18	Experienced	\$60,690

Alabama Projections

2022 Estimated Employment:	8,970
2032 Projected Employment:	9,610
Average Total Openings:	820
Annual Growth Rate:	0.69%

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

Technology

Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

Faulkner University
Heritage Christian University
Amridge University
Samford University
Huntsville Bible College
Stillman College

2-Year Institution & ETPL Providers



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: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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. Evaluate the effectiveness of counseling or treatments and the accuracy and completeness of diagnoses, modifying plans or diagnoses as necessary. Select, administer, score, and interpret psychological tests to obtain information on individuals' intelligence, achievements, interests, or personalities. Advise clients on how they could be helped through counseling. Develop and implement individual treatment plans, specifying type, frequency, intensity, and duration of therapy. Consult with other professionals, agencies, or universities to discuss therapies, treatments, counseling resources or techniques, and to share occupational information.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.43	Entry	\$23,775
Median	\$27.89	Median	\$58,015
Experienced	\$50.46	Experienced	\$104,964

Alabama Projections

2022 Estimated Employment:	440
2032 Projected Employment:	490
Average Total Openings:	25
Annual Growth Rate:	1.11%

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

Technology

Electronic mail software
Medical software
Office suite software
Presentation software
Project management software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

University of Alabama in Huntsville
Troy University
Auburn University
Talladega College
Stillman College
University of North Alabama
University of Mobile
Athens State University
Tuskegee University
Spring Hill College
University of South Alabama

2-Year Institution & ETPL Providers



Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Establish or monitor quality assurance programs or activities to ensure the accuracy of laboratory results. 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. Analyze laboratory findings to check the accuracy of the results. Conduct chemical analysis of body fluids, including blood, urine, or spinal fluid, to determine presence of normal or abnormal components. Operate, calibrate, or maintain equipment used in quantitative or qualitative analysis, such as spectrophotometers, calorimeters, flame photometers, or computer-controlled analyzers. Enter data from analysis of medical tests or clinical results into computer for storage. 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. 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. Cultivate, isolate, or assist in identifying microbial organisms or perform various tests on these microorganisms. Obtain, cut, stain, and mount biological material on slides for microscopic study and diagnosis following standard laboratory procedures. Select and prepare specimens and media for cell cultures, using aseptic technique and knowledge of medium components and cell requirements. Harvest cell cultures at optimum time, based on knowledge of cell cycle differences and culture conditions.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.64	Entry	\$30,441
Median	\$22.24	Median	\$46,262
Experienced	\$27.19	Experienced	\$56,552

Alabama Projections

2022 Estimated Employment:	5,810
2032 Projected Employment:	6,240
Average Total Openings:	425
Annual Growth Rate:	0.72%

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

Technology

Medical software
Spreadsheet software
Office suite software
Presentation software
Project management software
Word processing software
Electronic mail software
Enterprise resource planning ERP software

4-Year Institutions with Programs

University of Alabama at Birmingham
Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Plan, organize, and conduct practice sessions. Plan strategies and choose team members for individual game or sports seasons. Plan and direct physical conditioning programs that will enable athletes to achieve maximum performance. Adjust coaching techniques, based on the strengths and weaknesses of athletes. File scouting reports that detail player assessments, provide recommendations on athlete recruitment, and identify locations and individuals to be targeted for future recruitment efforts. 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. Analyze the strengths and weaknesses of opposing teams to develop game strategies. Evaluate athletes' skills and review performance records to determine their fitness and potential in a particular area of athletics. Keep abreast of changing rules, techniques, technologies, and philosophies relevant to their sport. Develop and arrange competition schedules and programs. Explain and enforce safety rules and regulations. Serve as organizer, leader, instructor, or referee for outdoor and indoor games, such as volleyball, football, and soccer. Explain and demonstrate the use of sports and training equipment, such as trampolines or weights. Arrange and conduct sports-related activities, such as training camps, skill-improvement courses, clinics, and pre-season try-outs. Select, acquire, store, and issue equipment and other materials as necessary.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$20,874
Median	\$***	Median	\$36,609
Experienced	\$***	Experienced	\$71,363

Alabama Projections

2022 Estimated Employment:	3,810
2032 Projected Employment:	4,280
Average Total Openings:	550
Annual Growth Rate:	1.15%

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

Technology

Word processing software
Electronic mail software
Object or component oriented development software
Office suite software
Presentation software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

University of Alabama in Huntsville
University of Alabama at Birmingham
University of North Alabama
Alabama State University
Auburn University
University of Montevallo
Troy University
Alabama A&M University
Athens State University
Jacksonville State University
University of Alabama

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Observe machine gauges and equipment operation to detect defects or deviations from standards, and make adjustments as necessary. Determine paint flow, viscosity, and coating quality by performing visual inspection; or by using viscometers. Weigh or measure chemicals, coatings, or paints before adding them to machines. 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. Start and stop operation of machines, using levers buttons. Record operational data on specified forms. Operate auxiliary machines or equipment used in coating or painting processes. Fill hoppers, reservoirs, troughs, or pans with material used to coat, paint, or spray, use conveyors or pails. Thread or feed items or products through or around machine rollers and dryers. Attach hoses or nozzles to machines, using wrenches and pliers, and make adjustments to obtain the proper dispersion of spray. Remove materials, parts, or workpieces from painting or coating machines, using hand tools. Examine, measure, weigh, or test sample products to ensure conformance to specifications. Hold or position spray guns to direct spray onto articles. Adjust controls on infrared ovens, heat lamps, portable ventilators, or exhaust units to speed the drying of surfaces between coats. Apply primer over any repairs made to surfaces.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.75	Entry	\$28,603
Median	\$18.42	Median	\$38,312
Experienced	\$22.53	Experienced	\$46,871

Alabama Projections

2022 Estimated Employment:	4,070
2032 Projected Employment:	4,470
Average Total Openings:	420
Annual Growth Rate:	0.93%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Check aircraft prior to flights to ensure that the engines, controls, instruments, and other systems are functioning properly. Contact control towers for takeoff clearances, arrival instructions, and other information, using radio equipment. 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. Consider airport altitudes, outside temperatures, plane weights, and wind speeds and directions to calculate the speed needed to become airborne. Order changes in fuel supplies, loads, routes, or schedules to ensure safety of flights. Obtain and review data such as load weights, fuel supplies, weather conditions, and flight schedules to determine flight plans and identify needed changes. Plan flights according to government and company regulations, using aeronautical charts and navigation instruments. Use instrumentation to pilot aircraft when visibility is poor. Check baggage or cargo to ensure that has been loaded correctly. Request changes in altitudes or routes as circumstances dictate. Choose routes, altitudes, and speeds that will provide the fastest, safest, and smoothest flights. Coordinate flight activities with ground crews and air traffic control, and inform crew members of flight and test procedures. Write specified information in flight records, such as flight times, altitudes flown, and fuel consumption. Teach company regulations and procedures to other pilots.

License: The FAA does not charge any fees.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$70,616
Median	\$***	Median	\$96,307
Experienced	\$***	Experienced	\$123,721

Alabama Projections

2022 Estimated Employment:	1,240
2032 Projected Employment:	1,330
Average Total Openings:	150
Annual Growth Rate:	0.65%

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

Technology

Graphics or photo imaging software
Office suite software

4-Year Institutions with Programs

Auburn University

2-Year Institution & ETPL Providers

Wallace State Community College



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: This occupation typically requires a High school diploma or equivalent

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

Tasks: Administer immunizations or other basic preventive treatments. Advise clients or community groups on issues related to diagnostic screenings, such as breast cancer screening, pap smears, glaucoma tests, or diabetes screenings. Advise clients or community groups on issues related to improving general health, such as diet or exercise. Advise clients or community groups on issues related to risk or prevention of conditions, such as lead poisoning, human immunodeficiency virus (HIV), prenatal substance abuse, or domestic violence. Advise clients or community groups on issues related to sanitation or hygiene, such as flossing or hand washing. Advise clients or community groups on issues related to self-care, such as diabetes management. Advise clients or community groups on issues related to social or intellectual development, such as education, childcare, or problem solving. Advise clients or community groups to ensure parental understanding of the importance of childhood immunizations and how to access immunization services. Advocate for individual or community health needs with government agencies or health service providers. Attend community meetings or health fairs to understand community issues or build relationships with community members. Conduct home visits for pregnant women, newborn infants, or other high-risk individuals to monitor their progress or assess their needs. 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. Identify the particular health care needs of individuals in a community or target area. Interpret, translate, or provide cultural mediation related to health services or information for community members.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.07	Entry	\$31,336
Median	\$17.66	Median	\$36,723
Experienced	\$20.46	Experienced	\$42,561

Alabama Projections

2022 Estimated Employment:	260
2032 Projected Employment:	290
Average Total Openings:	30
Annual Growth Rate:	1.25%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

Jacksonville State University
University of Alabama
University of Alabama at Birmingham
Troy University

2-Year Institution & ETPL Providers



Conduct programs of compensation and benefits and job analysis for employer. May specialize in specific areas, such as position classification and pension programs.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Develop and administer compensation programs, such as merit or incentive pay. Evaluate job positions, determining classification, exempt or non-exempt status, and salary. Ensure company compliance with federal and state laws, including reporting requirements. Advise managers and employees on state and federal employment regulations, collective agreements, benefit and compensation policies, personnel procedures, and classification programs. Plan, develop, evaluate, improve, and communicate methods and techniques for selecting, promoting, compensating, evaluating, and training workers. Provide advice on the resolution of classification and salary complaints. Prepare occupational classifications, job descriptions, and salary scales. Assist in preparing and maintaining personnel records and handbooks. Prepare reports, such as organization and flow charts and career path reports, to summarize job analysis and evaluation and compensation analysis information. Administer employee insurance, pension, and savings plans, working with insurance brokers and plan carriers. Negotiate collective agreements on behalf of employers or workers, and mediate labor disputes and grievances. Develop, implement, administer, and evaluate personnel and labor relations programs, including performance appraisal, affirmative action, and employment equity programs. Perform multifactor data and cost analyses that may be used in areas such as support of collective bargaining agreements. Research employee benefit and health and safety practices, and recommend changes or modifications to existing policies. Analyze organizational, occupational, and industrial data to facilitate organizational functions and provide technical information to business, industry, and government.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.64	Entry	\$45,009
Median	\$29.49	Median	\$61,337
Experienced	\$35.54	Experienced	\$73,926

Alabama Projections

2022 Estimated Employment:	620
2032 Projected Employment:	660
Average Total Openings:	50
Annual Growth Rate:	0.55%

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

Technology

Analytical or scientific software
Cloud-based data access and sharing software
Data base user interface and query software
Development environment software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Project management software
Spreadsheet software

4-Year Institutions with Programs

Athens State University
University of Alabama in Huntsville
University of Alabama at Birmingham
Troy University
Auburn University at Montgomery
Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor'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. A recognized apprenticeship program may be associated with these occupations.

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, 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. Issue licenses to individuals meeting standards. Collect fees for licenses. Administer oral, written, road, or flight tests to license applicants. Visit establishments to verify that valid licenses or permits are displayed and that licensing standards are being upheld. Score tests and observe equipment operation and control to rate ability of applicants. Prepare correspondence to inform concerned parties of licensing decisions or appeals processes. Identify compliance issues that require follow-up or investigation. Keep informed regarding pending industry changes, trends, or best practices. Provide assistance to internal or external auditors in compliance reviews.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$20.25	Entry	\$42,126
Median	\$31.58	Median	\$65,693
Experienced	\$41.80	Experienced	\$86,949

Alabama Projections

2022 Estimated Employment:	2,730
2032 Projected Employment:	2,860
Average Total Openings:	225
Annual Growth Rate:	0.48%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of South Alabama
University of Montevallo
University of Alabama
Troy University
Auburn University at Montgomery
Auburn University

2-Year Institution & ETPL Providers



Conduct research into fundamental computer and information science as theorists, designers, or inventors. Develop solutions to problems in the field of computer hardware and software.

Education: This occupation typically requires a Master's degree

OJT: Employees may 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: Analyze problems to develop solutions involving computer hardware and software. Assign or schedule tasks to meet work priorities and goals. Evaluate project plans and proposals to assess feasibility issues. Apply theoretical expertise and innovation to create or apply new technology, such as adapting principles for applying computers to new uses. Consult with users, management, vendors, and technicians to determine computing needs and system requirements. Meet with managers, vendors, and others to solicit cooperation and resolve problems. Conduct logical analyses of business, scientific, engineering, and other technical problems, formulating mathematical models of problems for solution by computers. Develop and interpret organizational goals, policies, and procedures. Participate in staffing decisions and direct training of subordinates. Develop performance standards, and evaluate work in light of established standards. Design computers and the software that runs them. Maintain network hardware and software, direct network security measures, and monitor networks to ensure availability to system users. Participate in multidisciplinary projects in areas such as virtual reality, human-computer interaction, or robotics. Approve, prepare, monitor, and adjust operational budgets. Direct daily operations of departments, coordinating project activities with other departments.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$30.13	Entry	\$62,666
Median	\$49.83	Median	\$103,636
Experienced	\$58.13	Experienced	\$120,914

Alabama Projections

2022 Estimated Employment:	***
2032 Projected Employment:	***
Average Total Openings:	55
Annual Growth Rate:	1.94%

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

Technology

Analytical or scientific software
Application server software
Business intelligence and data analysis software
Cloud-based management software
Data base management system software
Data base user interface and query software
Data mining software
Development environment software
Enterprise application integration software
Enterprise resource planning ERP software

4-Year Institutions with Programs

University of Montevallo
University of Alabama in Huntsville
Athens State University
University of South Alabama
University of Alabama at Birmingham
Auburn University

2-Year Institution & ETPL Providers



Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.

Education: This occupation typically requires a Bachelor's degree

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

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

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$40.11	Entry	\$83,420
Median	\$61.89	Median	\$128,733
Experienced	\$75.49	Experienced	\$157,013

Alabama Projections

2022 Estimated Employment:	5,370
2032 Projected Employment:	5,990
Average Total Openings:	425
Annual Growth Rate:	1.10%

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

Technology

Web platform development software
Development environment software
Object or component oriented development software
Data base management system software
Data base user interface and query software
Operating system software
Analytical or scientific software
Enterprise resource planning ERP software
Application server software
Business intelligence and data analysis software

4-Year Institutions with Programs

University of West Alabama
Auburn University
University of Alabama
University of North Alabama
University of Montevallo
University of Alabama in Huntsville
University of Alabama at Birmingham
University of South Alabama
Troy University
Auburn University at Montgomery
Athens State University

2-Year Institution & ETPL Providers

Gadsden State Community College
Coastal Alabama Community College
George C Wallace Community College
H Councill Trenholm State
J. F. Drake State Technical College
Enterprise State Community College
Chattahoochee Valley Community College
Southern Union State Community College
Bishop State Community College
Lawson State Community College
Lurleen B Wallace Community College
Bevill State Community College
Northeast Alabama Community College
Snead State Community College
Northwest Shoals Community College
Reid State Technical College
Shelton State Community College
Jefferson State Community College
Central Alabama Community College
Calhoun Community College



Develop programs to control machining or processing of materials by automatic machine tools, equipment, or systems. May also set up, operate, or maintain equipment.

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Determine the sequence of machine operations, and select the proper cutting tools needed to machine workpieces into the desired shapes. Revise programs or tapes to eliminate errors, and retest programs to check that problems have been solved. Analyze job orders, drawings, blueprints, specifications, printed circuit board pattern films, and design data to calculate dimensions, tool selection, machine speeds, and feed rates. Determine reference points, machine cutting paths, or hole locations, and compute angular and linear dimensions, radii, and curvatures. Observe machines on trial runs or conduct computer simulations to ensure that programs and machinery will function properly and produce items that meet specifications. Compare encoded tapes or computer printouts with original part specifications and blueprints to verify accuracy of instructions. Enter coordinates of hole locations into program memories by depressing pedals or buttons of programmers. Write programs in the language of a machine's controller and store programs on media, such as punch tapes, magnetic tapes, or disks. Modify existing programs to enhance efficiency. Enter computer commands to store or retrieve parts patterns, graphic displays, or programs that transfer data to other media. Prepare geometric layouts from graphic displays, using computer-assisted drafting software or drafting instruments and graph paper. Write instruction sheets and cutter lists for a machine's controller to guide setup and encode numerical control tapes. Sort shop orders into groups to maximize materials utilization and minimize machine setup time. Draw machine tool paths on pattern film according to guidelines for tool speed and efficiency, using colored markers. Perform preventative maintenance or minor repairs on machines.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.45	Entry	\$40,453
Median	\$24.93	Median	\$51,863
Experienced	\$28.09	Experienced	\$58,422

Alabama Projections

2022 Estimated Employment:	340
2032 Projected Employment:	410
Average Total Openings:	40
Annual Growth Rate:	1.99%

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

Technology

Computer aided design CAD software
Electronic mail software
Enterprise application integration software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Shelton State Community College



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: This occupation typically requires a Bachelor'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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Troubleshoot program and system malfunctions to restore normal functioning. Provide staff and users with assistance solving computer-related problems, such as malfunctions and program problems. Test, maintain, and monitor computer programs and systems, including coordinating the installation of computer programs and systems. Use object-oriented programming languages, as well as client and server applications development processes and multimedia and Internet technology. Confer with clients regarding the nature of the information processing or computation needs a computer program is to address. Coordinate and link the computer system within an organization to increase compatibility so that information can be shared. Consult with management to ensure agreement on system principles. Expand or modify system to serve new purposes or improve work flow. Interview or survey workers, observe job performance, or perform the job to determine what information is processed and how it is processed. Determine computer software or hardware needed to set up or alter systems. Train staff and users to work with computer systems and programs. Analyze information processing or computation needs and plan and design computer systems, using techniques such as structured analysis, data modeling, and information engineering. 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. Develop, document, and revise system design procedures, test procedures, and quality standards.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$33.18	Entry	\$69,006
Median	\$49.37	Median	\$102,699
Experienced	\$62.75	Experienced	\$130,516

Alabama Projections

2022 Estimated Employment:	5,240
2032 Projected Employment:	5,520
Average Total Openings:	340
Annual Growth Rate:	0.52%

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

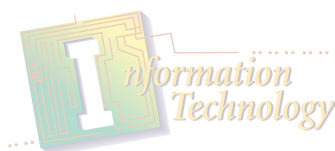
Technology

Web platform development software
Development environment software
Data base management system software
Data base user interface and query software
Object or component oriented development software
Operating system software
Project management software
Application server software
Analytical or scientific software
Cloud-based management software

4-Year Institutions with Programs

University of South Alabama
University of Montevallo
Auburn University
Alabama State University
Auburn University at Montgomery
Tuskegee University

2-Year Institution & ETPL Providers



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: This occupation typically requires Some college, no 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Answer user inquiries regarding computer software or hardware operation to resolve problems. Enter commands and observe system functioning to verify correct operations and detect errors. Install and perform minor repairs to hardware, software, or peripheral equipment, following design or installation specifications. Oversee the daily performance of computer systems. Set up equipment for employee use, performing or ensuring proper installation of cables, operating systems, or appropriate software. Maintain records of daily communication transactions, problems and remedial actions taken, or installation activities. Read technical manuals, confer with users, or conduct computer diagnostics to investigate and resolve problems or to provide technical assistance and support. Confer with staff, users, and management to establish requirements for new systems or modifications. 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. Prepare evaluations of software or hardware, and recommend improvements or upgrades. Read trade magazines and technical manuals, or attend conferences and seminars to maintain knowledge of hardware and software. Inspect equipment and read order sheets to prepare for delivery to user. Modify and customize commercial programs for internal needs. Conduct office automation feasibility studies, including workflow analysis, space design, or cost comparison analysis.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.24	Entry	\$31,695
Median	\$23.02	Median	\$47,873
Experienced	\$28.82	Experienced	\$59,946

Alabama Projections

2022 Estimated Employment:	8,360
2032 Projected Employment:	8,720
Average Total Openings:	595
Annual Growth Rate:	0.42%

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

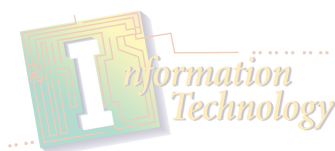
Technology

Web platform development software
Development environment software
Operating system software
Data base user interface and query software
Data base management system software
Object or component oriented development software
Computer aided design CAD software
Graphics or photo imaging software
Project management software
Application server software

4-Year Institutions with Programs

Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Clean or prepare construction sites to eliminate possible hazards. Read plans, instructions, or specifications to determine work activities. Control traffic passing near, in, or around work zones. Signal equipment operators to facilitate alignment, movement, or adjustment of machinery, equipment, or materials. Dig ditches or trenches, backfill excavations, or compact and level earth to grade specifications, using picks, shovels, pneumatic tampers, or rakes. Position, join, align, or seal structural components, such as concrete wall sections or pipes. Measure, mark, or record openings or distances to layout areas where construction work will be performed. Load, unload, or identify building materials, machinery, or tools, distributing them to the appropriate locations, according to project plans or specifications. Erect or dismantle scaffolding, shoring, braces, traffic barricades, ramps, or other temporary structures. Position or dismantle forms for pouring concrete, using saws, hammers, nails, or bolts. Lubricate, clean, or repair machinery, equipment, or tools. Operate jackhammers or drills to break up concrete or pavement. Smooth or finish freshly poured cement or concrete, using floats, trowels, screeds, or powered cement finishing tools. Operate or maintain air monitoring or other sampling devices in confined or hazardous environments. Install sewer, water, or storm drain pipes, using pipe-laying machinery or laser guidance equipment.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.18	Entry	\$23,255
Median	\$15.04	Median	\$31,285
Experienced	\$18.22	Experienced	\$37,901

Alabama Projections

2022 Estimated Employment:	21,710
2032 Projected Employment:	23,490
Average Total Openings:	2,100
Annual Growth Rate:	0.79%

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

Technology

Computer aided design CAD software
Electronic mail software
Office suite software
Operating system software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Apply green building strategies to reduce energy costs or minimize carbon output or other sources of harm to the environment. Develop construction budgets to compare green and non-green construction alternatives, in terms of short-term costs, long-term costs, or environmental impacts. Develop or implement environmental protection programs. Implement training programs on environmentally responsible building topics to update employee skills and knowledge. 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. Secure third-party verification from sources, such as Leadership in Energy Efficient Design (LEED), to ensure responsible design and building activities or to achieve favorable LEED ratings for building projects. Plan, schedule, or coordinate construction project activities to meet deadlines. Investigate damage, accidents, or delays at construction sites to ensure that proper construction procedures are being followed. Prepare contracts or negotiate revisions to contractual agreements with architects, consultants, clients, suppliers, or subcontractors. Implement new or modified plans in response to delays, bad weather, or construction site emergencies. Interpret and explain plans and contract terms to representatives of the owner or developer, including administrative staff, workers, or clients. Apply for and obtain all necessary permits or licenses. Evaluate construction methods and determine cost-effectiveness of plans, using computer models. Contract or oversee craft work, such as painting or plumbing.

License: License Fee: \$250.00; Application Fee: \$100.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$30.64	Entry	\$63,732
Median	\$45.89	Median	\$95,442
Experienced	\$57.33	Experienced	\$119,252

Alabama Projections

2022 Estimated Employment:	8,890
2032 Projected Employment:	9,690
Average Total Openings:	735
Annual Growth Rate:	0.86%

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

Technology

Computer aided design CAD software
Data base user interface and query software
Enterprise resource planning ERP software
Graphics or photo imaging software
Project management software
Word processing software
Analytical or scientific software
Cloud-based data access and sharing software
Document management software
Electronic mail software

4-Year Institutions with Programs

Alabama A&M University

2-Year Institution & ETPL Providers

Jefferson State Community College
Gadsden State Community College



Operate self-propelled mining machines that rip coal, metal and nonmetal ores, rock, stone, or sand from the mine face and load it onto conveyors, shuttle cars, or trucks in a continuous operation.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Operate mining machines to gather coal and convey it to floors or shuttle cars. Determine locations, boundaries and depths of holes or channels to be cut. Reposition machines to make additional holes or cuts. Drive machines into position at working faces. Move controls to start and regulate movement of conveyors and to start and position drill cutters or torches. Observe and listen to equipment operation to detect binding or stoppage of tools or other equipment malfunctions. Repair, oil, and adjust machines, and change cutting teeth, using wrenches. Move levers to raise and lower hydraulic safety bars supporting roofs above machines until other workers complete framing. Install casings to prevent cave-ins. Guide and assist crews laying track and resetting supports and blocking. Apply new technologies developed to minimize the environmental impact of coal mining. Scrape or wash conveyors, using belt scrapers or belt washers, to minimize dust production. Hang ventilation tubing and ventilation curtains to ensure that the mining face area is kept properly ventilated. Conduct methane gas checks to ensure breathing quality of air. Check the stability of roof and rib support systems before mining face areas.

License: Application Fee: \$100.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.18	Entry	\$39,899
Median	\$22.39	Median	\$46,566
Experienced	\$25.06	Experienced	\$52,127

Alabama Projections

2022 Estimated Employment:	200
2032 Projected Employment:	230
Average Total Openings:	25
Annual Growth Rate:	1.33%

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

Technology

Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

International Union of Operating Engineers



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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

License: None.

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.49	Entry	\$21,825
Median	\$13.77	Median	\$28,636
Experienced	\$15.69	Experienced	\$32,628

Alabama Projections

2022 Estimated Employment:	16,350
2032 Projected Employment:	21,910
Average Total Openings:	3,420
Annual Growth Rate:	2.97%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Bishop State Community College
Shelton State Community College
Lawson State Community College
Wallace State Community College
Lurleen B Wallace Community College
Trenholm State Community College
Drake State Technical College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Collect historical cost data to estimate costs for current or future products. Analyze blueprints and other documentation to prepare time, cost, materials, and labor estimates. Assess cost effectiveness of products, projects or services, tracking actual costs relative to bids as the project develops. Consult with clients, vendors personnel in other departments, or construction foremen to discuss and formulate estimates and resolve issues. Confer with engineers, architects, owners, contractors, and subcontractors on changes and adjustments to cost estimates. Prepare estimates used by management for purposes such as planning, organizing, and scheduling work. Prepare estimates for use in selecting vendors or subcontractors. Review material and labor requirements to decide whether it is more cost-effective to produce or purchase components. Prepare cost and expenditure statements and other necessary documentation at regular intervals for the duration of the project. Prepare and maintain a directory of suppliers, contractors and subcontractors. Set up cost monitoring and reporting system and procedures. Establish and maintain tendering process, and conduct negotiations. Conduct special studies to develop and establish standard hour and related cost data or to reduce cost. Visit site and record information about access, drainage and topography, and availability of utility services.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.67	Entry	\$40,904
Median	\$29.05	Median	\$60,428
Experienced	\$37.40	Experienced	\$77,796

Alabama Projections

2022 Estimated Employment:	2,260
2032 Projected Employment:	2,320
Average Total Openings:	195
Annual Growth Rate:	0.26%

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

Technology

Computer aided design CAD software
Enterprise resource planning ERP software
Project management software
Accounting software
Analytical or scientific software
Data base user interface and query software
Document management software
Electronic mail software
Graphics or photo imaging software
Office suite software

4-Year Institutions with Programs

Alabama State University
Auburn University at Montgomery
University of Alabama in Huntsville
University of Montevallo
University of Alabama at Birmingham
University of West Alabama
Jacksonville State University
University of North Alabama
University of Alabama
Athens State University
Alabama A&M University

2-Year Institution & ETPL Providers

Trenholm State Community College
Coastal Alabama Community College
Bishop State Community College
Snead State Community College
Wallace Community College
Calhoun Community College
Drake State Technical College
Central Alabama Community College
Northeast Alabama Community College
Jefferson State Community College
Wallace State Community College
Bevill State Community College
Lawson State Community College
Shelton State Community College
Southern Union State Community College
Chattahoochee Valley Community College
Enterprise State Community College



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

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.48	Entry	\$21,791
Median	\$14.01	Median	\$29,134
Experienced	\$17.06	Experienced	\$35,476

Alabama Projections

2022 Estimated Employment:	5,650
2032 Projected Employment:	6,130
Average Total Openings:	730
Annual Growth Rate:	0.81%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Pick up and deliver messages, documents, packages, and other items between offices or departments within an establishment or directly to other business concerns, traveling by foot, bicycle, motorcycle, automobile, or public conveyance.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Deliver and pick up medical records, lab specimens, and medications to and from hospitals and other medical facilities. Walk, ride bicycles, drive vehicles, or use public conveyances to reach destinations to deliver messages or materials. Load vehicles with listed goods, ensuring goods are loaded correctly and taking precautions with hazardous goods. Unload and sort items collected along delivery routes. Receive messages or materials to be delivered, and information on recipients, such as names, addresses, telephone numbers, and delivery instructions, communicated via telephone, two-way radio, or in person. Plan and follow the most efficient routes for delivering goods. Deliver messages and items, such as newspapers, documents, and packages, between establishment departments and to other establishments and private homes. Sort items to be delivered according to the delivery route. Obtain signatures and payments, or arrange for recipients to make payments. Record information, such as items received and delivered and recipients' responses to messages. Check with home offices after completed deliveries to confirm deliveries and collections and to receive instructions for other deliveries. Perform routine maintenance on delivery vehicles, such as monitoring fluid levels and replenishing fuel. Use telephone to deliver verbal messages. Perform general office or clerical work such as filing materials, operating duplicating machines, or running errands. Collect, seal, and stamp outgoing mail, using postage meters and envelope sealers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.31	Entry	\$23,524
Median	\$13.86	Median	\$28,824
Experienced	\$15.74	Experienced	\$32,736

Alabama Projections

2022 Estimated Employment:	3,170
2032 Projected Employment:	3,270
Average Total Openings:	355
Annual Growth Rate:	0.33%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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 summonses. 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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.49	Entry	\$25,988
Median	\$17.04	Median	\$35,443
Experienced	\$19.59	Experienced	\$40,752

Alabama Projections

2022 Estimated Employment:	2,190
2032 Projected Employment:	2,280
Average Total Openings:	230
Annual Growth Rate:	0.40%

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

Technology

Data base user interface and query software
Document management software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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

- Education:** This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.
- 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 cables or grappling devices for wear and install or replace cables, as needed. Clean, lubricate, and maintain mechanisms such as cables, pulleys, or grappling devices, making repairs, as necessary. Inspect and adjust crane mechanisms or lifting accessories to prevent malfunctions or damage. Direct helpers engaged in placing blocking or outrigging under cranes. Load or unload bundles from trucks, or move containers to storage bins, using moving equipment. Weigh bundles, using floor scales, and record weights for company records. Review daily work or delivery schedules to determine orders, sequences of deliveries, or special loading instructions. Direct truck drivers backing vehicles into loading bays and cover, uncover, or secure loads for delivery. Inspect bundle packaging for conformance to regulations or customer requirements, and remove and batch packaging tickets.
- License:** None.
- Outlook:** Satisfactory

Alabama Employment Outlook

Alabama Wage Data				Alabama Projections	
Hourly Wage		Annual Wage		2022 Estimated Employment:	1,010
Entry	\$17.85	Entry	\$37,132	2032 Projected Employment:	1,100
Median	\$23.59	Median	\$49,060	Average Total Openings:	105
Experienced	\$28.70	Experienced	\$59,697	Annual Growth Rate:	0.90%

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

Technology

Electronic mail software
Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

International Union of Operating Engineers



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

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.12	Entry	\$27,297
Median	\$16.11	Median	\$33,518
Experienced	\$20.16	Experienced	\$41,930

Alabama Projections

2022 Estimated Employment:	1,140
2032 Projected Employment:	1,220
Average Total Openings:	135
Annual Growth Rate:	0.69%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Develop and implement a set of techniques or analytics applications to transform raw data into meaningful information using data-oriented programming languages and visualization software. Apply data mining, data modeling, natural language processing, and machine learning to extract and analyze information from large structured and unstructured datasets. Visualize, interpret, and report data findings. May create dynamic data reports.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Analyze, manipulate, or process large sets of data using statistical software. Apply feature selection algorithms to models predicting outcomes of interest, such as sales, attrition, and healthcare use. Apply sampling techniques to determine groups to be surveyed or use complete enumeration methods. Clean and manipulate raw data using statistical software. Compare models using statistical performance metrics, such as loss functions or proportion of explained variance. Create graphs, charts, or other visualizations to convey the results of data analysis using specialized software. Deliver oral or written presentations of the results of mathematical modeling and data analysis to management or other end users. Design surveys, opinion polls, or other instruments to collect data. Identify business problems or management objectives that can be addressed through data analysis. Identify relationships and trends or any factors that could affect the results of research. Identify solutions to business problems, such as budgeting, staffing, and marketing decisions, using the results of data analysis. Propose solutions in engineering, the sciences, and other fields using mathematical theories and techniques. Read scientific articles, conference papers, or other sources of research to identify emerging analytic trends and technologies. Recommend data-driven solutions to key stakeholders. Test, validate, and reformulate models to ensure accurate prediction of outcomes of interest.

License: None.

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$26.60	Entry	\$55,333
Median	\$41.55	Median	\$86,420
Experienced	\$52.06	Experienced	\$108,279

Alabama Projections

2022 Estimated Employment:	***
2032 Projected Employment:	***
Average Total Openings:	100
Annual Growth Rate:	2.77%

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

Technology

Analytical or scientific software
Application server software
Business intelligence and data analysis software
Content workflow software
Data base management system software
Data base user interface and query software
Development environment software
Enterprise application integration software
Enterprise system management software
File versioning software

4-Year Institutions with Programs

Auburn University at Montgomery
University of Alabama
Columbia Southern University
Faulkner University
University of South Alabama
University of Alabama in Huntsville
University of Alabama at Birmingham
Talladega College
University of North Alabama
University of Montevallo
Athens State University

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Develop standards and guidelines for the use and acquisition of software and to protect vulnerable information. Modify existing databases and database management systems or direct programmers and analysts to make changes. 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. Approve, schedule, plan, and supervise the installation and testing of new products and improvements to computer systems, such as the installation of new databases. Train users and answer questions. Specify users and user access levels for each segment of database. Develop data models describing data elements and how they are used, following procedures and using pen, template, or computer software. Review procedures in database management system manuals to make changes to database. Select and enter codes to monitor database performance and to create production databases. Identify and evaluate industry trends in database systems to serve as a source of information and advice for upper management. Write and code logical and physical database descriptions and specify identifiers of database to management system, or direct others in coding descriptions. Review workflow charts developed by programmer analyst to understand tasks computer will perform, such as updating records. Revise company definition of data as defined in data dictionary. Identify, evaluate and recommend hardware or software technologies to achieve desired database performance.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$27.83	Entry	\$57,893
Median	\$39.57	Median	\$82,297
Experienced	\$49.19	Experienced	\$102,320

Alabama Projections

2022 Estimated Employment:	1,800
2032 Projected Employment:	1,910
Average Total Openings:	115
Annual Growth Rate:	0.57%

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

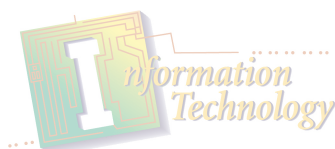
Technology

Web platform development software
Development environment software
Data base user interface and query software
Object or component oriented development software
Operating system software
Data base management system software
Application server software
Analytical or scientific software
Business intelligence and data analysis software
Enterprise application integration software

4-Year Institutions with Programs

University of North Alabama
Alabama A & M University
University of Alabama
Troy University
Auburn University
University of Alabama in Huntsville
University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

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

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.08	Entry	\$29,288
Median	\$17.56	Median	\$36,514
Experienced	\$20.22	Experienced	\$42,054

Alabama Projections

2022 Estimated Employment:	3,850
2032 Projected Employment:	4,340
Average Total Openings:	610
Annual Growth Rate:	1.21%

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

Technology

Medical software
Office suite software
Spreadsheet software

4-Year Institutions with Programs

University of Alabama at Birmingham
Auburn University

2-Year Institution & ETPL Providers

Calhoun Community College
Bevill State Community College
Wallace Community College
Lawson State Community College
Trenholm State Community College
Coastal Alabama Community College
Jes Health Services
Enterprise State Community College
Lurleen B Wallace Community College
Fortis College
Shelton State Community College
Wallace State Community College
Jefferson State Community College



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

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

License: In-State License by Regional Exam Fee: \$500.00; Renewal Fee: \$70.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.90	Entry	\$45,558
Median	\$26.88	Median	\$55,910
Experienced	\$27.95	Experienced	\$58,135

Alabama Projections

2022 Estimated Employment:	3,750
2032 Projected Employment:	4,240
Average Total Openings:	305
Annual Growth Rate:	1.23%

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

Technology

Medical software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

John C Calhoun State Community College
Fortis Institute
George C Wallace Community College



Construct and repair full or partial dentures or dental appliances.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Read prescriptions or specifications and examine models or impressions to determine the design of dental products to be constructed. Fabricate, alter, or repair dental devices, such as dentures, crowns, bridges, inlays or appliances for straightening teeth. Test appliances for conformance to specifications and accuracy of occlusion, using articulators and micrometers. Place tooth models on an apparatus that mimics bite and movement of patient's jaw to evaluate functionality of model. Melt metals or mix plaster, porcelain, or acrylic pastes and pour materials into molds or over frameworks to form dental prostheses or apparatuses. Prepare metal surfaces for bonding with porcelain to create artificial teeth, using small hand tools. Remove excess metal or porcelain and polish surfaces of prostheses or frameworks, using polishing machines. Create a model of patient's mouth by pouring plaster into a dental impression and allowing plaster to set. Load newly constructed teeth into porcelain furnaces to bake the porcelain onto the metal framework. Build and shape wax teeth, using small hand instruments and information from observations or dentists' specifications. Apply porcelain paste or wax over prosthesis frameworks or setups, using brushes and spatulas. Fill chipped or low spots in surfaces of devices, using acrylic resins. Prepare wax bite blocks and impression trays for use. Mold wax over denture setups to form the full contours of artificial gums. Train or supervise other dental technicians or dental laboratory bench workers.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.88	Entry	\$26,786
Median	\$18.41	Median	\$38,294
Experienced	\$22.83	Experienced	\$47,484

Alabama Projections

2022 Estimated Employment:	870
2032 Projected Employment:	980
Average Total Openings:	120
Annual Growth Rate:	1.24%

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

Technology

Accounting software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Examine, diagnose, and treat diseases, injuries, and malformations of teeth and gums. May treat diseases of nerve, pulp, and other dental tissues affecting oral hygiene and retention of teeth. May fit dental appliances or provide preventive care.

Education: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Use masks, gloves, and safety glasses to protect patients and self from infectious diseases. Use dental air turbines, hand instruments, dental appliances, or surgical implements. Manage business aspects such as employing or supervising staff or handling paperwork or insurance claims. Administer anesthetics to limit the amount of pain experienced by patients during procedures. Examine teeth, gums, and related tissues, using dental instruments, x-rays, or other diagnostic equipment, to evaluate dental health, diagnose diseases or abnormalities, and plan appropriate treatments. Formulate plan of treatment for patient's teeth and mouth tissue. Advise or instruct patients regarding preventive dental care, the causes and treatment of dental problems, or oral health care services. Design, make, or fit prosthodontic appliances, such as space maintainers, bridges, or dentures, or write fabrication instructions or prescriptions for denturists or dental technicians. Diagnose and treat diseases, injuries, or malformations of teeth, gums, or related oral structures and provide preventive or corrective services. Fill pulp chamber and canal with endodontic materials. Write prescriptions for antibiotics or other medications. Analyze or evaluate dental needs to determine changes or trends in patterns of dental disease. Treat exposure of pulp by pulp capping, removal of pulp from pulp chamber, or root canal, using dental instruments. Eliminate irritating margins of fillings and correct occlusions, using dental instruments. Perform or assist with periodontal surgery on the jaw or mouth.

License: In-State License by Regional Exam Fee: \$700.00; Renewal Fee: \$350.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$51.23	Entry	\$106,554
Median	\$96.15	Median	\$199,992
Experienced	\$110.21	Experienced	\$229,235

Alabama Projections

2022 Estimated Employment:	1,260
2032 Projected Employment:	1,370
Average Total Openings:	50
Annual Growth Rate:	0.82%

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

Technology

Medical software
Office suite software
Spreadsheet software

4-Year Institutions with Programs

University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$20.98	Entry	\$43,642
Median	\$30.41	Median	\$63,246
Experienced	\$43.40	Experienced	\$90,278

Alabama Projections

2022 Estimated Employment:	1,130
2032 Projected Employment:	1,160
Average Total Openings:	85
Annual Growth Rate:	0.28%

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

Technology

Data base user interface and query software
Analytical or scientific software
Electronic mail software
Graphics or photo imaging software
Office suite software
Operating system software
Presentation software
Process mapping and design software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham
Jacksonville State University
Alabama State University

2-Year Institution & ETPL Providers

Northeast Alabama Community College
Wallace Community College
Wallace State Community College
Chattahoochee Valley Community College
Jefferson State Community College
Northwest Shoals Community College
Lawson State Community College
Southern Union State Community College
Calhoun Community College



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

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Decide which images to include, looking for differences between healthy and pathological areas. 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. 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. Select appropriate equipment setting and adjust patient positions to obtain the best sites and angles. Determine whether scope of exam should be extended, based on findings. Process and code film from procedures and complete appropriate documentation. Obtain and record accurate patient history, including prior test results or information from physical examination. Prepare patient for exam by explaining procedure, transferring patient to ultrasound table, scrubbing skin and applying gel, and positioning patient properly. 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. 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. Supervise or train students or other medical sonographers. Maintain stock and supplies, preparing supplies for special examinations and ordering supplies when necessary.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$20.88	Entry	\$43,420
Median	\$30.03	Median	\$62,469
Experienced	\$32.98	Experienced	\$68,603

Alabama Projections

2022 Estimated Employment:	1,290
2032 Projected Employment:	1,510
Average Total Openings:	95
Annual Growth Rate:	1.58%

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

Technology

Medical software
Office suite software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Northwest Shoals Community College
Trenholm State Community College
Wallace State Community College
Lurleen B Wallace Community College
Lawson State Community College
Gadsden State Community College



Plan and conduct food service or nutritional programs to assist in the promotion of health and control of disease. May supervise activities of a department providing quantity food services, counsel individuals, or conduct nutritional research.

Education: This occupation typically requires a Bachelor's degree

OJT: Employees may 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: Evaluate laboratory tests in preparing nutrition recommendations. Incorporate patient cultural, ethnic, or religious preferences and needs in the development of nutrition plans. Record and evaluate patient and family health and food history, including symptoms, environmental toxic exposure, allergies, medication factors, and preventive health-care measures. Develop recipes and menus to address special nutrition needs, such as low glycemic, low histamine, or gluten- or allergen-free. Plan, conduct, and evaluate nutrigenomic or nutrigenetic research. Assess nutritional needs, diet restrictions, and current health plans to develop and implement dietary-care plans and provide nutritional counseling. Consult with physicians and health care personnel to determine nutritional needs and diet restrictions of patient or client. Advise patients and their families on nutritional principles, dietary plans, diet modifications, and food selection and preparation. Counsel individuals and groups on basic rules of good nutrition, healthy eating habits, and nutrition monitoring to improve their quality of life. Monitor food service operations to ensure conformance to nutritional, safety, sanitation and quality standards. Coordinate recipe development and standardization and develop new menus for independent food service operations. Develop policies for food service or nutritional programs to assist in health promotion and disease control. Inspect meals served for conformance to prescribed diets and standards of palatability and appearance. Develop curriculum and prepare manuals, visual aids, course outlines, and other materials used in teaching. Prepare and administer budgets for food, equipment, and supplies.

License: Application Fee: \$100.00; License Fee: \$150.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.10	Entry	\$43,880
Median	\$29.00	Median	\$60,319
Experienced	\$33.77	Experienced	\$70,246

Alabama Projections

2022 Estimated Employment:	750
2032 Projected Employment:	810
Average Total Openings:	55
Annual Growth Rate:	0.79%

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

Technology

Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham
University of Alabama

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Train and supervise religious education instructional staff. Develop or direct study courses or religious education programs within congregations. Select appropriate curricula or class structures for educational programs. 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. Analyze member participation or changes in congregational emphasis to determine needs for religious education. Collaborate with other ministry members to establish goals and objectives for religious education programs or to develop ways to encourage program participation. Schedule special events, such as camps, conferences, meetings, seminars, or retreats. Confer with clergy members, congregational officials, or congregational organizations to encourage support of or participation in religious education activities. Publicize programs through sources, such as newsletters, bulletins, or mailings. Analyze revenue and program cost data to determine budget priorities. 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. Plan or conduct conferences dealing with the interpretation of religious ideas or convictions. Visit congregational members' homes or arrange for pastoral visits to provide information or resources regarding religious education programs.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.93	Entry	\$33,142
Median	\$21.33	Median	\$44,373
Experienced	\$28.94	Experienced	\$60,200

Alabama Projections

2022 Estimated Employment:	7,210
2032 Projected Employment:	7,750
Average Total Openings:	770
Annual Growth Rate:	0.73%

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

Technology

Office suite software
Data base user interface and query software
Electronic mail software
Graphics or photo imaging software
Presentation software
Spreadsheet software
Video conferencing software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

Athens State University

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Schedule or dispatch workers, work crews, equipment, or service vehicles to appropriate locations, according to customer requests, specifications, or needs, using radios or telephones. Arrange for necessary repairs to restore service and schedules. Relay work orders, messages, or information to or from work crews, supervisor 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. Receive or prepare work orders. Oversee all communications within specifically assigned territories. Monitor personnel or equipment locations and utilization to coordinate service and schedules. Record and maintain file or records of customer requests, work or services performed, charges, expenses, inventory, or other dispatch information. 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. Order supplies or equipment and issue them to personnel.

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

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.16	Entry	\$27,367
Median	\$17.88	Median	\$37,198
Experienced	\$22.27	Experienced	\$46,317

Alabama Projections

2022 Estimated Employment:	2,130
2032 Projected Employment:	2,180
Average Total Openings:	205
Annual Growth Rate:	0.22%

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

Technology

Enterprise resource planning ERP software
Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Time accounting software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Collect money from customers, make change, and record transactions on customer receipts. Listen to and resolve customers' complaints regarding products or services. Inform regular customers of new products or services and price changes. Write customer orders and sales contracts according to company guidelines. Drive trucks to deliver such items as food, medical supplies, or newspapers. Collect coins from vending machines, refill machines, and remove aged merchandise. Record sales or delivery information on daily sales or delivery record. Review lists of dealers, customers, or station drops and load trucks. Arrange merchandise and sales promotion displays or issue sales promotion materials to customers. Maintain trucks and food-dispensing equipment and clean inside of machines that dispense food or beverages. Sell food specialties, such as sandwiches and beverages, to office workers and patrons of sports events.

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, Class "D" License: \$36.25

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$9.54	Entry	\$19,854
Median	\$14.27	Median	\$29,682
Experienced	\$19.55	Experienced	\$40,665

Alabama Projections

2022 Estimated Employment:	6,460
2032 Projected Employment:	7,280
Average Total Openings:	795
Annual Growth Rate:	1.21%

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

Technology

Office suite software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Plan, direct, or coordinate the academic, administrative, or auxiliary activities of kindergarten, elementary, or secondary schools.

Education: This occupation typically requires a Master's degree

OJT: Employees may 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: 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. Meet with federal, state, and local agencies to stay abreast of policies and to discuss improvements for education programs. Plan, coordinate, and oversee school logistics programs, such as bus and food services. Coordinate and direct extracurricular activities and programs, such as after-school events and athletic contests. Mentor and support administrative staff members, such as superintendents and principals. Create school improvement plans, using student performance data. Review and approve new programs, or recommend modifications to existing programs, submitting program proposals for school board approval as necessary. Prepare, maintain, or oversee the preparation and maintenance of attendance, activity, planning, or personnel reports and records. Confer with parents and staff to discuss educational activities, policies, and student behavior or learning problems. Prepare and submit budget requests and recommendations, or grant proposals to solicit program funding. Direct and coordinate school maintenance services and the use of school facilities. Counsel and provide guidance to students regarding personal, academic, vocational, or behavioral issues. Organize and direct committees of specialists, volunteers, and staff to provide technical and advisory assistance for programs. Teach classes or courses to students.

License: Application Fee: \$35.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$69,642
Median	\$***	Median	\$85,482
Experienced	\$***	Experienced	\$97,436

Alabama Projections

2022 Estimated Employment:	3,950
2032 Projected Employment:	4,180
Average Total Openings:	290
Annual Growth Rate:	0.55%

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

Technology

Analytical or scientific software
Cloud-based data access and sharing software
Data base management system software
Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama

2-Year Institution & ETPL Providers



Plan, direct, or coordinate academic or nonacademic activities of preschools or childcare centers and programs, including before- and after-school care.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Confer with parents and staff to discuss educational activities and policies and students' behavioral or learning problems. Prepare and maintain attendance, activity, planning, accounting, or personnel reports and records for officials and agencies, or direct preparation and maintenance activities. Set educational standards and goals and help establish policies, procedures, and programs to carry them out. Monitor students' progress and provide students and teachers with assistance in resolving any problems. Determine allocations of funds for staff, supplies, materials, and equipment and authorize purchases. Recruit, hire, train, and evaluate primary and supplemental staff and recommend personnel actions for programs and services. Direct and coordinate activities of teachers or administrators at daycare centers, schools, public agencies, or institutions. Plan, direct, and monitor instructional methods and content of educational, vocational, or student activity programs. Review and interpret government codes and develop procedures to meet codes and to ensure facility safety, security, and maintenance. Determine the scope of educational program offerings and prepare drafts of program schedules and descriptions to estimate staffing and facility requirements. Review and evaluate new and current programs to determine their efficiency, effectiveness, and compliance with state, local, and federal regulations and recommend any necessary modifications. Teach classes or courses or provide direct care to children. Prepare and submit budget requests or grant proposals to solicit program funding. Write articles, manuals, and other publications and assist in the distribution of promotional literature about programs and facilities. Collect and analyze survey data, regulatory information, and demographic and employment trends to forecast enrollment patterns and the need for curriculum changes.

License: Application Fee: \$35.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.36	Entry	\$31,941
Median	\$19.90	Median	\$41,401
Experienced	\$25.71	Experienced	\$53,475

Alabama Projections

2022 Estimated Employment:	620
2032 Projected Employment:	660
Average Total Openings:	45
Annual Growth Rate:	0.71%

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

Technology

Accounting software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Troy University
University of Alabama at Birmingham
University of Montevallo
University of West Alabama
Jacksonville State University
University of South Alabama
University of Alabama
Auburn University
Alabama A&M University
Alabama State University
University of North Alabama

2-Year Institution & ETPL Providers



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

Education: This occupation typically requires a Master's degree

OJT: Employees may 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: 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. Evaluate students' or individuals' abilities, interests, and personality characteristics, using test records, interviews, or professional sources. Identify cases of domestic abuse or other family problems and encourage students or parents to seek additional assistance from mental health professionals. Counsel students regarding educational issues, such as course and program selection, class scheduling and registratic school adjustment, truancy, study habits, and career planning. Collaborate with teachers and administrators in the development, evaluation, and revision of school programs and in the preparation of master schedules for curriculum offerings. Attend meetings, educational conferences, and training workshops, and serve on committees. Plan and promote career and employment-related programs and events, such as career planning presentations, work experience programs, job fairs, and career workshops. Establish and enforce administratic policies and rules governing student behavior. Establish contacts with employers to create internship and employment opportunities for students. Plan, direct, and participate in recruitment and enrollment activities. Supervise, train, and direct professional staff and interns. Counsel individuals or groups to help them understand and overcome personal, social, or behavioral problems affecting their educational or vocational situations. Refer students to outside counseling services. Maintain accurate and complete student records as required by laws, district policies, and administrative regulations. Provide crisis intervention to students when difficult situations occur at schools.

License: Application Fee: \$35.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.59	Entry	\$38,676
Median	\$28.65	Median	\$59,585
Experienced	\$31.42	Experienced	\$65,354

Alabama Projections

2022 Estimated Employment:	5,010
2032 Projected Employment:	5,550
Average Total Openings:	425
Annual Growth Rate:	1.04%

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

Technology

Enterprise resource planning ERP software
Word processing software
Cloud-based data access and sharing software
Data base reporting software
Data base user interface and query software
Electronic mail software
Graphics or photo imaging software
Office suite software
Presentation software
Project management software

4-Year Institutions with Programs

University of Alabama
Alabama State University
Auburn University
Jacksonville State University
Troy University
University of Alabama at Birmingham
University of North Alabama
University of South Alabama
University of West Alabama
Auburn University at Montgomery
University of Montevallo

2-Year Institution & ETPL Providers



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

Education: This occupation typically requires a Bachelor's degree

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

Tasks: 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. Operate computer-assisted engineering or design software or equipment to perform engineering tasks. Direct or coordinate manufacturing, construction, installation, maintenance, support, documentation, or testing activities to ensure compliance with specifications, codes, or customer requirements. Perform detailed calculations to compute and establish manufacturing, construction, or installation standards or specifications. Plan or implement research methodology or procedure to apply principles of electrical theory to engineering projects. Prepare specifications for purchases of material or equipment. Supervise or train project team members, as necessary. Investigate or test vendors' or competitors' products. Oversee project production efforts to assure projects are completed on time and within budget. Prepare technical drawings, specifications of electrical systems, or topographical maps to ensure that installation and operations conform to standards and customer requirements. Assist in developing capital programs for new equipment or major repairs. Compile data and write reports regarding existing or potential electrical engineering studies or projects. Collect data relating to commercial or residential development, population, or power system interconnection to determine operating efficiency of electrical systems. Conduct field surveys or study maps, graphs, diagrams, or other data to identify and correct power system problems.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$35.01	Entry	\$72,813
Median	\$49.83	Median	\$103,652
Experienced	\$63.60	Experienced	\$132,291

Alabama Projections

2022 Estimated Employment:	3,810
2032 Projected Employment:	4,000
Average Total Openings:	225
Annual Growth Rate:	0.49%

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

Technology

Operating system software
Computer aided design CAD software
Development environment software
Object or component oriented development software
Project management software
Analytical or scientific software
Data base user interface and query software
Enterprise resource planning ERP software
File versioning software
Geographic information system

4-Year Institutions with Programs

University of Alabama in Huntsville
University of Alabama
University of South Alabama
University of Alabama at Birmingham
Auburn University
Alabama A&M University

2-Year Institution & ETPL Providers

Bishop State Community College
Northeast Alabama Community College



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

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Adhere to safety practices and procedures, such as checking equipment regularly and erecting barriers around work areas. 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. Place insulating or fireproofing materials over conductors and joints. Install, maintain, and repair electrical distribution and transmission systems, including conduits, cables, wires, and related equipment, such as transformers, circuit breakers, and switches. Identify defective sectionalizing devices, circuit breakers, fuses, voltage regulators, transformers, switches, relays, or wiring, using wiring diagrams and electrical-testing instruments. Drive vehicle equipped with tools and materials to job sites. Coordinate work assignment preparation and completion with other workers. Inspect and test power lines and auxiliary equipment to locate and identify problems, using reading and testing instruments. String wire conductors and cables between poles, towers, trenches, pylons, and buildings, setting lines in place and using winches to adjust tension. Test conductors, according to electric diagrams and specifications, to identify corresponding conductors and to prevent incorrect connections. Replace or straighten damaged poles. Install watt-hour meters and connect service drops between power lines and consumers' facilities. Attach cross-arms, insulators, and auxiliary equipment to poles prior to installing them. Travel in trucks, helicopters, and airplanes to inspect lines for freedom from obstruction and adequacy of insulation.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$24.95	Entry	\$51,903
Median	\$39.88	Median	\$82,956
Experienced	\$46.37	Experienced	\$96,450

Alabama Projections

2022 Estimated Employment:	3,150
2032 Projected Employment:	3,370
Average Total Openings:	265
Annual Growth Rate:	0.68%

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

Technology

Computer aided design CAD software
Electronic mail software
Office suite software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Bevill State Community College



Assemble or modify electromechanical equipment or devices, such as servomechanisms, gyros, dynamometers, magnetic drums, tape drives, brakes, control linkage, actuators, and appliances.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Inspect, test, and adjust completed units to ensure that units meet specifications, tolerances, and customer order requirements. Assemble parts or units, and position, align, and fasten units to assemblies, subassemblies or frames, using hand tools and power tools. Position, align, and adjust parts for proper fit and assembly. Connect cables, tubes, and wiring, according to specifications. Attach name plates and mark identifying information on parts. Read blueprints and specifications to determine component parts and assembly sequences of electromechanical units. Disassemble units to replace parts or to crate them for shipping. Measure parts to determine tolerances, using precision measuring instruments such as micrometers, calipers, and verniers. Clean and lubricate parts and subassemblies, using grease paddles or oilcans. Drill, tap, ream, countersink, and spot-face bolt holes in parts, using drill presses and portable power drills. File, lap, and buff parts to fit, using hand and power tools. Pack or fold insulation between panels. Operate or tend automated assembling equipment, such as robotics and fixed automation equipment. Operate small cranes to transport or position large parts.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.84	Entry	\$24,618
Median	\$15.51	Median	\$32,271
Experienced	\$18.94	Experienced	\$39,399

Alabama Projections

2022 Estimated Employment:	4,220
2032 Projected Employment:	4,500
Average Total Openings:	485
Annual Growth Rate:	0.65%

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

Technology

Spreadsheet software
Office suite software
Electronic mail software
Word processing software
Enterprise resource planning ERP software
Computer aided design CAD software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Construct or fabricate parts, using hand tools, according to specifications. Assemble, install, test, or maintain electrical or electronic wiring, equipment, appliances, apparatus, or fixtures, using hand tools or power tools. Diagnose malfunctioning systems, apparatus, or components, using test equipment and hand tools to locate the cause of a breakdown and correct the problem. Connect wires to circuit breakers, transformers, or other components. Inspect electrical systems, equipment, or components to identify hazards, defects, or the need for adjustment or repair, and to ensure compliance with codes. Advise management on whether continued operation of equipment could be hazardous. 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. Maintain current electrician's license or identification card to meet governmental regulations. Plan layout and installation of electrical wiring, equipment, or fixtures, based on job specifications and local codes. Direct or train workers to install, maintain, or repair electrical wiring, equipment or fixtures. Prepare sketches or follow blueprints to determine the location of wiring or equipment and to ensure conformance to building and safety codes. 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. Install ground leads and connect power cables to equipment, such as motors. Perform business management duties, such as maintaining records or files, preparing reports, or ordering supplies or equipment. Repair or replace wiring, equipment, or fixtures, using hand tools or power tools.

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: 150.00; Journeyman Electrician Renewal Fee: \$35.00; Electrical Contractor Late Renewal Fee: \$50.00; Journeyman Electrician Late Renewal Fee: \$15.00; Inactive Electrical Contractor Certificate: \$75.00; Inactive Journeyman Electrician Certificate: \$15.00; Reinstatement of Electrical Contractor License: \$250.00; Reissuance or Replacement Card Fee: \$25.00; Provisional License Fee: \$75.00; Provisional License Renewal Fee: \$75.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.56	Entry	\$34,449
Median	\$23.18	Median	\$48,219
Experienced	\$27.85	Experienced	\$57,934

Alabama Projections

2022 Estimated Employment:	10,910
2032 Projected Employment:	12,120
Average Total Openings:	1,125
Annual Growth Rate:	1.06%

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

Technology

Computer aided design CAD software
Document management software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs



2-Year Institution & ETPL Providers

Northwest Shoals Community College
Wallace Community College
Lawson State Community College
Bevill State Community College
Calhoun Community College
Bishop State Community College
Drake State Technical College
Trenholm State Community College
Shelton State Community College

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: This occupation typically requires a Bachelor's degree

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

Tasks: Investigate green consumer electronics applications for consumer electronic devices, power saving devices for computers or televisions, or energy efficient power chargers. Research or develop new green electronics technologies, such as lighting, optical data storage devices, or energy efficient televisions. Determine project material or equipment needs. 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. Recommend repair or design modifications of electronics components or systems, based on factors such as environment, service, cost, or system capabilities. Provide technical support or instruction to staff or customers regarding electronics equipment standards. Prepare budget or cost estimates for equipment, construction, or installation projects or control expenditures. Design electronic components, software, products or systems for commercial, industrial, medical, military, or scientific applications. Inspect electronic equipment, instruments, products, or systems to ensure conformance to specifications, safety standards, or applicable codes or regulations. 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. Direct or coordinate activities concerned with manufacture, construction, installation, maintenance, operation, or modification of electronic equipment, products, or systems. Develop or perform operational, maintenance, or testing procedures for electronic products, components, equipment, or systems.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$37.29	Entry	\$77,562
Median	\$50.12	Median	\$104,250
Experienced	\$62.60	Experienced	\$130,212

Alabama Projections

2022 Estimated Employment:	2,050
2032 Projected Employment:	2,190
Average Total Openings:	125
Annual Growth Rate:	0.70%

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

Technology

Analytical or scientific software
Computer aided design CAD software
Data base user interface and query software
Development environment software
Enterprise application integration software
File versioning software
Geographic information system
Graphics or photo imaging software
Object or component oriented development software
Office suite software

4-Year Institutions with Programs

University of South Alabama
Alabama A&M University
University of Alabama in Huntsville
University of Alabama
University of Alabama at Birmingham
Auburn University

2-Year Institution & ETPL Providers

Bishop State Community College
Northeast Alabama Community College



Teach academic and social skills to students at the elementary school level.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Establish and enforce rules for behavior and procedures for maintaining order among the students. Observe and evaluate students' performance, behavior, social development, and physical health. Prepare materials and classrooms for class activities. Adapt teaching methods and instructional materials to meet students' varying needs and interests. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Instruct students individually and in groups, using teaching methods such as lectures, discussions, and demonstrations. Establish clear objectives for all lessons, units, and projects and communicate those objectives to students. Assign and grade class work and homework. Read books to entire classes or small groups. Prepare, administer, and grade tests and assignments to evaluate students' progress. Confer with parents or guardians, teachers, counselors, and administrators to resolve students' behavioral and academic problems. Meet with parents and guardians to discuss their children's progress and to determine priorities for their children and their resource needs. Maintain accurate and complete student records as required by laws, district policies, and administrative regulations. Prepare students for later grades by encouraging them to explore learning opportunities and to persevere with challenging tasks. Guide and counsel students with adjustment or academic problems or with special academic interests.

License: Application Fee: \$35.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$44,236
Median	\$***	Median	\$57,262
Experienced	\$***	Experienced	\$58,307

Alabama Projections

2022 Estimated Employment:	24,690
2032 Projected Employment:	25,970
Average Total Openings:	1,815
Annual Growth Rate:	0.51%

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

Technology

Word processing software
Cloud-based data access and sharing software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software

4-Year Institutions with Programs

University of Alabama in Huntsville
Jacksonville State University
University of Alabama
Alabama A&M University
University of Montevallo
University of Alabama at Birmingham
Alabama State University
Auburn University
Auburn University at Montgomery
University of North Alabama
Troy University

2-Year Institution & ETPL Providers



Assemble, install, repair, or maintain electric or hydraulic freight or passenger elevators, escalators, or dumbwaiters.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Assemble, install, repair, and maintain elevators, escalators, moving sidewalks, and dumbwaiters, using hand and power tools, and testing devices such as test lamps, ammeters, and voltmeters. Test newly installed equipment to ensure that it meets specifications, such as stopping at floors for set amounts of time. Locate malfunctions in brakes, motors, switches, and signal and control systems, using test equipment. Check that safety regulations and building codes are met, and complete service reports verifying conformance to standards. Connect electrical wiring to control panels and electric motors. Adjust safety controls, counterweights, door mechanisms, and components such as valves, ratchets, seals, and brake linings. Read and interpret blueprints to determine the layout of system components, frameworks, and foundations, and to select installation equipment. Inspect wiring connections, control panel hookups, door installations, and alignments and clearances of cars and hoistways to ensure that equipment will operate properly. Disassemble defective units, and repair or replace parts such as locks, gears, cables, and electric wiring. Maintain log books that detail all repairs and checks performed. Participate in additional training to keep skills up to date. Attach guide shoes and rollers to minimize the lateral motion of cars as they travel through shafts. Connect car frame to counterweights, using steel cables. Bolt or weld steel rails to the walls of shafts to guide elevators, working from scaffolding or platforms. Assemble elevator cars, installing each car's platform, walls, and doors.

License: License Fee: \$300.00; Renewal: \$200.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.16	Entry	\$35,701
Median	\$27.38	Median	\$56,944
Experienced	\$33.33	Experienced	\$69,336

Alabama Projections

2022 Estimated Employment:	340
2032 Projected Employment:	370
Average Total Openings:	30
Annual Growth Rate:	0.76%

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

Technology

Electronic mail software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of West Alabama

2-Year Institution & ETPL Providers

Southern Union State Community College
Chattahoochee Valley Community College
Reid State Technical College
Bevill State Community College
Lawson State Community College
Northwest Shoals Community College
Enterprise State Community College
Shelton State Community College
George C Wallace Community College
J. F. Drake State Technical College
H Councill Trenholm State
Gadsden State Community College
Northeast Alabama Community College
Calhoun Community College
Snead State Community College
Coastal Alabama Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Answer applicants' questions about benefits and claim procedures. Interview benefits recipients at specified intervals to certify their eligibility for continuing benefits. Interpret and explain information such as eligibility requirements, application details, payment methods, and applicants' legal rights. Initiate procedures to grant, modify, deny, or terminate assistance, or refer applicants to other agencies for assistance. Compile, record, and evaluate personal and financial data to verify completeness and accuracy, and to determine eligibility status. Interview and investigate applicants for public assistance to gather information pertinent to their applications. Check with employers or other references to verify answers and obtain further information. Keep records of assigned cases, and prepare required reports. Schedule benefits claimants for adjudication interviews to address questions of eligibility. Prepare applications and forms for applicants for such purposes as school enrollment, employment, and medical services. Refer applicants to job openings or to interviews with other state agencies in accordance with administrative guidelines or office procedures. Provide social workers with pertinent information gathered during applicant interviews. Compute and authorize amounts of assistance for programs, such as grants, monetary payments, and food stamps. Monitor the payments of benefits throughout the duration of a claim. Provide applicants with assistance in completing application forms, such as those for job referrals or unemployment compensation claims.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.57	Entry	\$36,553
Median	\$22.32	Median	\$46,426
Experienced	\$24.92	Experienced	\$51,828

Alabama Projections

2022 Estimated Employment:	2,690
2032 Projected Employment:	2,740
Average Total Openings:	240
Annual Growth Rate:	0.19%

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

Technology

Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

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 survivors, 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: \$40.00; Renewal Expired: \$50.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.37	Entry	\$23,646
Median	\$14.20	Median	\$29,531
Experienced	\$18.52	Experienced	\$38,526

Alabama Projections

2022 Estimated Employment:	2,360
2032 Projected Employment:	2,590
Average Total Openings:	195
Annual Growth Rate:	0.92%

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

Technology

Medical software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Columbia Southern University
Herzing University-Birmingham
University of South Alabama
Fortis College

2-Year Institution & ETPL Providers

Lurleen B Wallace Community College
Southern Union State Community College
Jefferson State Community College
Northwest Shoals Community College
George C Wallace Community College
Northeast Alabama Community College
Enterprise State Community College
Coastal Alabama Community College
Bevill State Community College
H Councill Trenholm State
Gadsden State Community College
Lawson State Community College
John C Calhoun State Community College
Chattahoochee Valley Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Prepare, review, or update environmental investigation or recommendation reports. Obtain, update, or maintain plans, permits, or standard operating procedures. Provide technical support for environmental remediation or litigation projects, including remediation system design or determination of regulatory applicability. Monitor progress of environmental improvement programs. Inspect industrial or municipal facilities or programs to evaluate operational effectiveness or ensure compliance with environmental regulations. Provide administrative support for projects by collecting data, providing project documentation, training staff, or performing other general administrative duties. Develop proposed project objectives and targets and report to management on progress in attaining them. Advise corporations or government agencies of procedures to follow in cleaning up contaminated sites to protect people and the environment. Advise industries or government agencies about environmental policies and standards. Inform company employees or other interested parties of environmental issues. Assess the existing or potential environmental impact of land use projects on air, water, or land. Assist budget implementation, forecasts, or administration. Develop site-specific health and safety protocols, such as spill contingency plans or methods for loading or transporting waste. Coordinate or manage environmental protection programs or projects, assigning or evaluating work. Serve as liaison with federal, state, or local agencies or officials on issues pertaining to solid or hazardous waste program requirements.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$30.00	Entry	\$62,391
Median	\$42.38	Median	\$88,150
Experienced	\$55.86	Experienced	\$116,192

Alabama Projections

2022 Estimated Employment:	750
2032 Projected Employment:	800
Average Total Openings:	55
Annual Growth Rate:	0.54%

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

Technology

Analytical or scientific software
Computer aided design CAD software
Data base user interface and query software
Geographic information system
Object or component oriented development software
Office suite software
Presentation software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama
Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Explain and enforce safety rules and regulations governing sports, recreational activities, and the use of exercise equipment. 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 participant capabilities and limitations. Observe participants and inform them of corrective measures necessary for skill improvement. 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. Maintain fitness equipment. Conduct therapeutic, recreational, or athletic activities. Monitor participants' progress and adapt programs as needed. Evaluate individuals' abilities, needs, and physical conditions, and develop suitable training programs to meet any special requirements. Plan physical education programs to promote development of participants' physical attributes and social skills. Provide students with information and resources regarding nutrition, weight control, and lifestyle issues. Administer emergency first aid, wrap injuries, treat minor chronic disabilities, or refer injured persons to physicians. Advise clients about proper clothing and shoes.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.05	Entry	\$25,069
Median	\$18.62	Median	\$38,737
Experienced	\$21.86	Experienced	\$45,460

Alabama Projections

2022 Estimated Employment:	3,690
2032 Projected Employment:	4,360
Average Total Openings:	805
Annual Growth Rate:	1.67%

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

Technology

Accounting software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Athens State University
Alabama A&M University
Jacksonville State University
University of Alabama
University of West Alabama
University of Alabama at Birmingham
Alabama State University
Auburn University
University of South Alabama
University of North Alabama
University of Montevallo

2-Year Institution & ETPL Providers

Southern Union State Community College



51-4021 Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic

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

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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. 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. Start machines and set controls to regulate vacuum, air pressure, sizing rings, and temperature, and to synchronize speed of extrusion. Replace worn dies when products vary from specifications. Reel extruded products into rolls of specified lengths and weights. Troubleshoot, maintain, and make minor repairs to equipment. Clean work areas. Adjust controls to draw or press metal into specified shapes and diameters. Operate shearing mechanisms to cut rods to specified lengths. Select nozzles, spacers, and wire guides, according to diameters and lengths of rods. Weigh and mix pelletized, granular, or powdered thermoplastic materials and coloring pigments. Load machine hoppers with mixed materials, using augers, or stuff rolls of plastic dough into machine cylinders. Test physical properties of products with testing devices such as acid-ba testers, burst testers, and impact testers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.12	Entry	\$27,282
Median	\$17.99	Median	\$37,415
Experienced	\$19.89	Experienced	\$41,379

Alabama Projections

2022 Estimated Employment:	2,410
2032 Projected Employment:	2,650
Average Total Openings:	280
Annual Growth Rate:	0.96%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

H Councill Trenholm State
Snead State Community College
Bishop State Community College
Gadsden State Community College



51-9041 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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Adjust machine components to regulate speeds, pressures, and temperatures, and amounts, dimensions, and flow of materials or ingredients. 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. Press control buttons to activate machinery and equipment. Turn controls to adjust machine functions, such as regulating air pressure, creating vacuums, and adjusting coolant flow. Review work orders, specifications, or instructions to determine materials, ingredients, procedures, components, settings, and adjustments for extruding, forming, pressing, or compacting machines. Select and install machine components, such as dies, molds, and cutters, according to specifications, using hand tools and measuring devices. Record and maintain production data, such as meter readings, and quantities, types, and dimensions of materials produced. Notify supervisors when extruded filaments fail to meet standards. Synchronize speeds of sections of machines when producing products involving several steps or processes. Feed products into machines by hand or conveyor. Clear jams, and remove defective or substandard materials or products. Move materials, supplies, components, and finished products between storage and work areas, using work aids such as racks, hoists, and handtrucks. Swab molds with solutions to prevent products from sticking. Complete work tickets, and place them with products.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.31	Entry	\$27,690
Median	\$17.67	Median	\$36,756
Experienced	\$22.81	Experienced	\$47,455

Alabama Projections

2022 Estimated Employment:	1,190
2032 Projected Employment:	1,250
Average Total Openings:	125
Annual Growth Rate:	0.49%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Plan, direct, or coordinate operations and functionalities of facilities and buildings. May include surrounding grounds or multiple facilities of an organization's campus.

Education: This occupation typically requires a Bachelor'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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Acquire, distribute and store supplies. Conduct classes to teach procedures to staff. Dispose of, or oversee the disposal of, surplus or unclaimed property. Manage leasing of facility space. Monitor the facility to ensure that remains safe, secure, and well-maintained. Oversee construction and renovation projects to improve efficiency and to ensure that facilities meet environmental, health, and security standards, and comply with government regulations. Oversee the maintenance and repair of machinery, equipment, and electrical and mechanical systems. Participate in architectural and engineering planning and design, including space and installation management. Plan, administer, and control budgets for contracts, equipment, and supplies. Prepare and review operational reports and schedules to ensure accuracy and efficiency. Set goals and deadlines for the department. Analyze and evaluate security operations to identify risks or opportunities for improvement through auditing, review, or assessment. Assess risks to mitigate potential consequences of incidents and develop a plan to respond to incidents. Attend meetings, professional seminars, or conferences to keep abreast of changes in executive legislative directives or new technologies impacting security operations. Communicate security status, updates, and actual or potential problems, using established protocols.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$37.10	Entry	\$77,173
Median	\$53.26	Median	\$110,785
Experienced	\$69.81	Experienced	\$145,195

Alabama Projections

2022 Estimated Employment:	700
2032 Projected Employment:	750
Average Total Openings:	60
Annual Growth Rate:	0.76%

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

Technology

Accounting software
Cloud-based data access and sharing software
Computer aided design CAD software
Data base management system software
Data base user interface and query software
Document management software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software

4-Year Institutions with Programs

Jacksonville State University
University of Alabama
University of North Alabama
Auburn University
Athens State University

2-Year Institution & ETPL Providers

Jefferson State Community College
Gadsden State Community College
Northwest Shoals Community College
Coastal Alabama Community College
Shelton State Community College



Diagnose, treat, and provide preventive care to individuals and families across the lifespan. May refer patients to specialists when needed for further diagnosis or treatment.

Education: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Train residents, medical students, and other health care professionals. Prepare government or organizational reports which include birth, death, and disease statistics, workforce evaluations, or medical status of individual. Prescribe or administer treatment, therapy, medication, vaccination, and other specialized medical care to treat or prevent illness, disease, or injury. Order, perform, and interpret tests and analyze records, reports, and examination information to diagnose patients' condition. Monitor patients' conditions and progress and reevaluate treatments as necessary. Collect, record, and maintain patient information, such as medical history reports, or examination results. Explain procedures and discuss test results or prescribed treatments with patients. Advise patients and community members concerning diet, activity, hygiene, and disease prevention. Refer patients to medical specialists or other practitioners when necessary. Direct and coordinate activities of nurses, students, assistants, specialists, therapists, and other medical staff. Coordinate work with nurses, social workers, rehabilitation therapists, pharmacists, psychologists, and other health care providers. Plan, implement or administer health programs or standards in hospitals, businesses, or communities for prevention or treatment of injury or illness.

License: License Fee: \$175.00; Annual Renewal Fee: \$300.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$69.13	Entry	\$143,786
Median	\$98.15	Median	\$204,145
Experienced	\$131.33	Experienced	\$273,166

Alabama Projections

2022 Estimated Employment:	590
2032 Projected Employment:	630
Average Total Openings:	20
Annual Growth Rate:	0.64%

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

Technology

Medical software
Office suite software
Spreadsheet software

4-Year Institutions with Programs

University of South Alabama
University of Alabama at Birmingham
Alabama College of Osteopathic Medicine

2-Year Institution & ETPL Providers



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

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Record details of repairs made and parts used. Reassemble machines and equipment following repair, testing operation and making adjustments, as necessary. Maintain, repair, and overhaul farm machinery and vehicles such as tractors, harvesters, and irrigation systems. Examine and listen to equipment, read inspection reports, and confer with customers to locate and diagnose malfunctions. Dismantle defective machines for repair, using hand tools. Test and replace electrical components and wiring, using test meters, soldering equipment, and hand tools. Repair or replace defective parts, using hand tools, milling and woodworking machines, lathes, welding equipment, grinders, or saws. Clean and lubricate parts. Tune or overhaul engines. 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. Calculate bills according to record of repairs made, labor time, and parts used. Install and repair agricultural irrigation, plumbing, and sprinkler systems. Repair bent or torn sheet metal.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.13	Entry	\$33,547
Median	\$21.01	Median	\$43,703
Experienced	\$24.17	Experienced	\$50,281

Alabama Projections

2022 Estimated Employment:	860
2032 Projected Employment:	990
Average Total Openings:	90
Annual Growth Rate:	1.44%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Erect and repair fences and fence gates, using hand and power tools.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Establish the location for a fence, and gather information needed to ensure that there are no electric cables or water lines in the area. Align posts, by lines or sighting, and verify vertical alignment of posts, using plumb bob or spirit levels. Measure and lay out fence lines and mark posthole positions, following instructions, drawings, or specifications. Dig postholes, using spades, posthole diggers, or power-driven augers. Set metal or wooden posts in upright positions in postholes. Discuss fencing needs with customers, and estimate and quote prices. Mix and pour concrete around bases of posts, or tamp soil into postholes to embed posts. Make rails for fence by sawing lumber or by cutting metal tubing to required lengths. Nail top and bottom rails to fence posts, or insert them in slots on posts. Stretch wire, wire mesh, or chain link fencing between posts, and attach fencing to frames. Attach fence rail supports to posts, using hammers and pliers. Assemble gates, and fasten gates into position, using hand tools. Complete top fence rails of metal fences by connecting tube sections, using metal sleeves. Insert metal tubing through rail supports. Attach rails or tension wire along bottoms of posts to form fencing frames.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.47	Entry	\$23,866
Median	\$14.56	Median	\$30,291
Experienced	\$18.53	Experienced	\$38,545

Alabama Projections

2022 Estimated Employment:	760
2032 Projected Employment:	820
Average Total Openings:	70
Annual Growth Rate:	0.70%

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

Technology

Computer aided design CAD software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Laminate layers of fiberglass on molds to form boat decks and hulls, bodies for golf carts, automobiles, or other products.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Release air bubbles and smooth seams, using rollers. Spray chopped fiberglass, resins, and catalysts onto prepared molds or dies using pneumatic spray guns with chopper attachments. Select precut fiberglass mats, cloth, and wood-bracing materials as required by projects being assembled. Pat or press layers of saturated mat or cloth into place on molds, using brushes or hands, and smooth out wrinkles and air bubbles with hands or squeegees. Mix catalysts into resins, and saturate cloth and mats with mixtures, using brushes. Bond wood reinforcing strips to decks and cabin structures of watercraft, using resin-saturated fiberglass. Check complete products for conformance to specifications and for defects by measuring with rulers or micrometers, by checking them visually, or by tapping them to detect bubbles or dead spots. Trim excess materials from molds, using hand shears or trimming knives. Repair or modify damaged or defective glass-fiber parts, checking thicknesses, densities, and contours to ensure a close fit after repair. Cure materials by letting them set at room temperature, placing them under heat lamps, or baking them in ovens. Apply layers of plastic resin to mold surfaces prior to placement of fiberglass mats, repeating layers until products have the desired thicknesses and plastics have jelled. Apply lacquers and waxes to mold surfaces to facilitate assembly and removal of laminated parts. Check all dies, templates, and cutout patterns to be used in the manufacturing process to ensure that they conform to dimensional data, photographs, blueprints, samples, or customer specifications. Inspect, clean, and assemble molds before beginning work. Trim cured materials by sawing them with diamond-impregnated cutoff wheels.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.82	Entry	\$28,746
Median	\$17.02	Median	\$35,405
Experienced	\$17.66	Experienced	\$36,727

Alabama Projections

2022 Estimated Employment:	430
2032 Projected Employment:	470
Average Total Openings:	50
Annual Growth Rate:	0.96%

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

Technology

Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Conduct quantitative analyses of information involving investment programs or financial data of public or private institutions, including valuation of businesses.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Advise clients on aspects of capitalization, such as amounts, sources, or timing. Analyze financial or operation performance of companies facing financial difficulties to identify or recommend remedies. Assess companies' investments for clients by examining company facilities. Collaborate on projects with other professionals, such as lawyers, accountants, or public relations experts. Collaborate with investment bankers to attract new corporate clients. Conduct financial analyses related to investments in green construction or green retrofitting projects. Confer with clients to restructure debt, refinance debt, or raise new debt. Create client presentations and plan details. Determine the prices at which securities should be syndicated and offered to the public. Develop and maintain client relationships. Draw charts and graphs, using computer spreadsheets, to illustrate technical reports. Employ financial models to develop solutions to financial problems or to assess the financial or capital impact of transactions. Evaluate and compare the relative quality of various securities in a given industry. Evaluate capital needs of clients and assess market conditions to inform structuring of financial packages. Inform investment decisions by analyzing financial information to forecast business, industry, or economic conditions.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$30.63	Entry	\$63,719
Median	\$42.59	Median	\$88,581
Experienced	\$57.66	Experienced	\$119,925

Alabama Projections

2022 Estimated Employment:	2,110
2032 Projected Employment:	2,290
Average Total Openings:	155
Annual Growth Rate:	0.78%

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

Technology

Data base user interface and query software
Enterprise resource planning ERP software
Analytical or scientific software
Business intelligence and data analysis software
Data base management system software
Development environment software
Project management software
Word processing software
Accounting software
Cloud-based data access and sharing software

4-Year Institutions with Programs

Alabama A&M University
University of Alabama
University of Alabama at Birmingham
University of South Alabama
University of West Alabama
Troy University
Auburn University at Montgomery
Jacksonville State University
University of Alabama in Huntsville
University of Montevallo
Auburn University

2-Year Institution & ETPL Providers



Plan, direct, or coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.

Education: This occupation typically requires a Bachelor's degree

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. Examine, evaluate, or process loan applications. Approve, reject, or coordinate the approval or rejection of lines of credit or commercial, real estate, or personal loans. Oversee the flow of cash or financial instruments. Prepare financial or regulatory reports required by laws, regulations, or boards of directors. Develop or analyze information to assess the current or future financial status of firms. Communicate with stockholders or other investors to provide information or to raise capital. Evaluate financial reporting systems, accounting or collection procedures, or investment activities and make recommendations for changes to procedures, operating systems, budgets, or other financial control functions. Network within communities to find and attract new business. Review collection reports to determine the status of collections and the amounts of outstanding balances.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$41.22	Entry	\$85,742
Median	\$61.61	Median	\$128,146
Experienced	\$81.45	Experienced	\$169,414

Alabama Projections

2022 Estimated Employment:	5,870
2032 Projected Employment:	6,840
Average Total Openings:	520
Annual Growth Rate:	1.55%

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

Technology

Data base user interface and query software
Enterprise resource planning ERP software
Analytical or scientific software
Business intelligence and data analysis software
Development environment software
Project management software
Accounting software
Cloud-based data access and sharing software
Customer relationship management CRM software
Data base management system software

4-Year Institutions with Programs

Auburn University at Montgomery

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Rescue survivors 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 call 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.

License: There are course tuition fees for the various programs that lead to of 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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.66	Entry	\$26,330
Median	\$18.72	Median	\$38,931
Experienced	\$24.33	Experienced	\$50,613

Alabama Projections

2022 Estimated Employment:	6,350
2032 Projected Employment:	6,670
Average Total Openings:	515
Annual Growth Rate:	0.50%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Alabama Fire College



Apply blocks, strips, or sheets of shock-absorbing, sound-deadening, or decorative coverings to floors.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Sweep, scrape, sand, or chip dirt and irregularities to clean base surfaces, correcting imperfections that may show through the covering. Cut flooring material to fit around obstructions. Inspect surface to be covered to ensure that it is firm and dry. Trim excess covering materials, tack edges, and join sections of covering material to form tight joint. Form a smooth foundation by stapling plywood or Masonite over the floor or by brushing waterproof compound onto surface and filling cracks with plaster, putty, or grout to seal pores. Measure and mark guidelines on surfaces or foundations, using chalk lines and dividers. Cut covering and foundation materials, according to blueprints and sketches. Roll and press sheet wall and floor covering into cement base to smooth and finish surface, using hand roller. Apply adhesive cement to floor or wall material to join and adhere foundation material. Determine traffic areas and decide location of seams. Lay out, position, and apply shock-absorbing, sound-deadening, or decorative coverings to floors, walls, and cabinets, following guidelines to keep courses straight and create designs. Remove excess cement to clean finished surface. Disconnect and remove appliances, light fixtures, and worn floor and wall covering from floors, walls, and cabinets. Heat and soften floor covering materials to patch cracks or fit floor coverings around irregular surfaces, using blowtorch.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.37	Entry	\$29,883
Median	\$19.65	Median	\$40,880
Experienced	\$20.78	Experienced	\$43,216

Alabama Projections

2022 Estimated Employment:	260
2032 Projected Employment:	290
Average Total Openings:	25
Annual Growth Rate:	1.05%

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

Technology

Office suite software
Web page creation and editing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Set up and operate equipment that mixes or blends ingredients used in the manufacturing of food products. Includes candy makers and cheese makers.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Record production and test data for each food product batch, such as the ingredients used, temperature, test results, and time cycle. Observe gauges and thermometers to determine if the mixing chamber temperature is within specified limits, and turn valves to control the temperature. Clean and sterilize vats and factory processing areas. Press switches and turn knobs to start, adjust, and regulate equipment, such as beaters, extruders, discharge pipes, and salt pumps. Observe and listen to equipment to detect possible malfunctions, such as leaks or plugging, and report malfunctions or undesirable tastes to supervisors. 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, by controlling vats that heat and mix ingredients. Follow recipes to produce food products of specified flavor, texture, clarity, bouquet, or color. 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. Determine mixing sequences, based on knowledge of temperature effects and of the solubility of specific ingredients. Fill processing or cooking containers, such as kettles, rotating cookers, pressure cookers, or vats, with ingredients, by opening valves, by starting pumps or injectors, or by hand. Give directions to other worker who are assisting in the batchmaking process. Homogenize or pasteurize material to prevent separation or to obtain prescribed butterfat content, using a homogenizing device. Inspect vats after cleaning to ensure that fermentable residue has been removed.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.05	Entry	\$25,055
Median	\$13.71	Median	\$28,522
Experienced	\$16.66	Experienced	\$34,645

Alabama Projections

2022 Estimated Employment:	1,250
2032 Projected Employment:	1,320
Average Total Openings:	200
Annual Growth Rate:	0.53%

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

Technology

Office suite software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Plan, direct, or coordinate activities of an organization or department that serves food and beverages.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Test cooked food by tasting and smelling it to ensure palatability and flavor conformity. Investigate and resolve complaints regarding food quality, service, or accommodations. Schedule and receive food and beverage deliveries, checking delivery contents to verify product quality and quantity. Monitor food preparation methods, portion sizes, and garnishing and presentation of food to ensure that food is prepared and presented in an acceptable manner. Monitor budgets and payroll records, and review financial transactions to ensure that expenditures are authorized and budgeted. Schedule staff hours and assign duties. Monitor compliance with health and fire regulations regarding food preparation and serving, and building maintenance in lodging and dining facilities. Coordinate assignments of cooking personnel to ensure economical use of food and timely preparation. Keep records required by government agencies regarding sanitation or food subsidies. Establish standards for personnel performance and customer service. Estimate food, liquor, wine, and other beverage consumption to anticipate amounts to be purchased or requisitioned. Review work procedures and operational problems to determine ways to improve service, performance, or safety. Perform some food preparation or service tasks, such as cooking, clearing tables, and serving food and drinks when necessary. Maintain food and equipment inventories, and keep inventory records. Organize and direct worker training programs, resolve personnel problems, hire new staff, and evaluate employee performance in dining and lodging facilities.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.67	Entry	\$40,918
Median	\$28.07	Median	\$58,394
Experienced	\$34.17	Experienced	\$71,074

Alabama Projections

2022 Estimated Employment:	5,660
2032 Projected Employment:	6,160
Average Total Openings:	700
Annual Growth Rate:	0.85%

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

Technology

Word processing software
Accounting software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Project management software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

University of South Alabama
University of North Alabama
University of Alabama
Troy University
Auburn University

2-Year Institution & ETPL Providers

Lawson State Community College
Coastal Alabama Community College
Jefferson State Community College
Bishop State Community College
Reid State Technical College
George C Wallace Community College
Shelton State Community College
Gadsden State Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Attend community events, meetings, or conferences to promote organizational goals or solicit donations or sponsorships. Contact corporate representatives, government officials, or community leaders to increase awareness of organizational causes, activities, or needs. Create or update donor databases. Design or produce materials such as posters, Web sites, or newsletters to promote, market, or advertise fundraising events. Develop corporate fundraising programs, such as employer gift-matching. Develop fundraising activity plans that maximize participation or contributions and minimize costs. Develop or implement fundraising activities, such as annual giving campaigns or direct mail programs. Develop strategies to encourage new or increased contributions. Direct or coordinate Web-based fundraising activities, such as online auctions or donation Web sites. Direct or supervise fundraising staff, including volunteer staff members. Establish fundraising or participation goals for special events or specified time periods. Explain the tax advantages of contributions to potential donors. Identify and build relationships with potential donors. Monitor budgets, expense reports, or other financial data for fundraising organizations. Monitor progress of fundraising drives.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.31	Entry	\$36,009
Median	\$24.26	Median	\$50,465
Experienced	\$30.44	Experienced	\$63,307

Alabama Projections

2022 Estimated Employment:	2,720
2032 Projected Employment:	2,910
Average Total Openings:	225
Annual Growth Rate:	0.67%

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

Technology

Customer relationship management CRM software
Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

Auburn University
University of South Alabama
University of Alabama in Huntsville
University of Montevallo
Samford University
Jacksonville State University
University of Alabama at Birmingham
Auburn University at Montgomery
University of Alabama

2-Year Institution & ETPL Providers



Plan, direct, or coordinate activities to solicit and maintain funds for special projects or nonprofit organizations.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Assign, supervise, and review the activities of fundraising staff. Compile or develop materials to submit to granting or other funding organizations. Conduct research to identify the goals, net worth, charitable donation history, or other data related to potential donors, potential investors, or general donor markets. Contact corporate representatives, government officials, or community leaders to increase awareness of organizational causes, activities, or needs. Design and edit promotional publications, such as brochures. Develop fundraising activity plans that maximize participation or contributions and minimize costs. Develop strategies to encourage new or increased contributions. Direct activities of external agencies, establishments, or departments that develop and implement fundraising strategies and programs. Establish and maintain effective working relationships with clients, government officials, and media representatives and use these relationships to develop new fundraising opportunities. Establish goals for soliciting funds, develop policies for collection and safeguarding of contributions, and coordinate disbursement of funds. Evaluate advertising and promotion programs for compatibility with fundraising efforts. Formulate policies and procedures related to fundraising programs. Manage fundraising budgets. Plan and direct special events for fundraising, such as silent auctions, dances, golf events, or walks. Produce films and other video products, regulate their distribution, and operate film library.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$24.59	Entry	\$51,143
Median	\$36.70	Median	\$76,336
Experienced	\$47.32	Experienced	\$98,425

Alabama Projections

2022 Estimated Employment:	1,290
2032 Projected Employment:	1,380
Average Total Openings:	100
Annual Growth Rate:	0.70%

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

Technology

Cloud-based data access and sharing software
Customer relationship management CRM software
Data base management system software
Data base user interface and query software
Data mining software
Desktop publishing software
Document management software
Electronic mail software
Enterprise resource planning ERP software
Graphics or photo imaging software

4-Year Institutions with Programs

Athens State University
Troy University
University of Alabama at Birmingham
University of North Alabama
University of South Alabama
Auburn University at Montgomery

2-Year Institution & ETPL Providers



Perform a variety of tasks during funeral, such as placing casket in parlor or chapel prior to service, arranging floral offerings or lights around casket, directing or escorting mourners, closing casket, and issuing and storing funeral equipment.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Transport the deceased to the funeral home. Attend to the needs of the bereaved, such as by offering comfort, counseling, or after-care programs. Perform various administrative tasks, such as typing documents or answering telephone calls. Supervise funeral processions and assist with cemetery parking. Deliver floral arrangements or other items to family members of the deceased. Perform general maintenance tasks for funeral homes, such as maintaining equipment or caring for funeral grounds. Embalm, dress, cosmeticize, and casket the deceased. Obtain doctors' signatures on death certificate and complete other paperwork, such as insurance claims forms. Prepare obituaries for newspapers. Perform a variety of tasks during funerals to assist funeral directors and to ensure that services run smoothly and as planned. Greet people at the funeral home. Offer assistance to mourners as they enter or exit limousines. Close caskets at appropriate point in services. Obtain burial permits and register deaths. Direct or escort mourners to parlors or chapels in which wakes or funerals are being held.

License: Application Fee: \$150.00; License Renewal Fee: \$50.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.32	Entry	\$21,457
Median	\$14.19	Median	\$29,519
Experienced	\$17.54	Experienced	\$36,493

Alabama Projections

2022 Estimated Employment:	550
2032 Projected Employment:	570
Average Total Openings:	80
Annual Growth Rate:	0.43%

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

Technology

Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Operate or tend heating equipment other than basic metal, plastic, or food processing equipment. Includes activities such as annealing glass, drying lumber, curing rubber, removing moisture from materials, or boiling soap.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Weigh or measure specified amounts of ingredients or materials for processing, using devices such as scales and calipers. Press and adjust controls to activate, set, and regulate equipment according to specifications. Monitor equipment operation, gauges, and panel lights to detect deviations from standards. Read and interpret work orders and instructions to determine work assignments, process specifications, and production schedule. Record gauge readings, test results, and shift production in log books. Confer with supervisors or other equipment operators to report equipment malfunctions or to resolve production problems. Examine or test samples of processed substances, or collect samples for laboratory testing, to ensure conformance to specifications. Clean, lubricate, and adjust equipment, using scrapers, solvents, air hoses, oil, and hand tools. Transport materials and products to and from work areas, manually or using carts, handtrucks, or hoists. Stop equipment and clear blockages or jams, using fingers, wire, or hand tools. Remove products from equipment, manually or using hoists, and prepare them for storage, shipment, or additional processing. Calculate amounts of materials to be loaded into furnaces, adjusting amounts as necessary for specific conditions. Feed fuel, such as coal and coke, into fireboxes or onto conveyors, and remove ashes from furnaces, using shovels and buckets. Melt or refine metal before casting, calculating required temperatures, and observe metal color, adjusting controls as necessary to maintain required temperatures. Replace worn or defective equipment parts using hand tools.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.19	Entry	\$31,592
Median	\$21.72	Median	\$45,187
Experienced	\$24.67	Experienced	\$51,316

Alabama Projections

2022 Estimated Employment:	730
2032 Projected Employment:	780
Average Total Openings:	85
Annual Growth Rate:	0.69%

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

Technology

Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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 Supervisors.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Implement or oversee environmental management or sustainability programs addressing issues such as recycling, conservation, or waste management. 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 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 department 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. Set prices or credit terms for goods or services, based on forecasts of customer demand. Manage the movement of goods into and out of production facilities to ensure efficiency, effectiveness, or sustainability of operations. Direct and coordinate activities of businesses or departments concerned with the production, pricing, sales, or distribution of product. Perform sales floor work, such as greeting or assisting customers, stocking shelves, or taking inventory. Develop or implement product-marketing strategies, including advertising campaigns or sales promotions. Direct non-merchandising departments of businesses, such as advertising or purchasing.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$25.49	Entry	\$53,012
Median	\$47.16	Median	\$98,085
Experienced	\$74.38	Experienced	\$154,721

Alabama Projections

2022 Estimated Employment:	41,580
2032 Projected Employment:	44,610
Average Total Openings:	3,690
Annual Growth Rate:	0.71%

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

Technology

Data base user interface and query software
Analytical or scientific software
Enterprise resource planning ERP software
Operating system software
Project management software
Cloud-based data access and sharing software
Data base management system software
Development environment software
Graphics or photo imaging software
Sales and marketing software

4-Year Institutions with Programs

Auburn University
Alabama State University

2-Year Institution & ETPL Providers

Coastal Alabama Community College



Install glass in windows, skylights, store fronts, and display cases, or on surfaces, such as building fronts, interior walls, ceilings, and tabletops.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Read and interpret blueprints or specifications to determine size, shape, color, type, or thickness of glass, location of framing, installation procedures, or staging or scaffolding materials required. Determine plumb of walls or ceilings, using plumb lines and levels. Fabricate or install metal sashes or moldings for glass installation, using aluminum or steel framing. Measure mirrors and dimensions of areas to be covered to determine work procedures. Fasten glass panes into wood sashes or frames with clips, points, or moldings, adding weather seals or putty around pane edges to seal joints. Secure mirrors in position, using mastic cement, putty, bolts, or screws. Cut, fit, install, repair, or replace glass or glass substitutes, such as plastic or aluminum, in building interiors or exteriors or in furniture or other products. Cut and remove broken glass prior installing replacement glass. Set glass doors into frames and bolt metal hinges, handles, locks, or other hardware to attach doors to frames and walls. Score glass with cutters' wheels, breaking off excess glass by hand or with notched tools. Cut, assemble, fit, or attach metal-framed glass enclosures for showers, bathtubs, display cases, skylights, solariums, or other structures. Drive trucks to installation sites and unload mirrors, glass equipment, or tools. Install pre-assembled metal or wood frameworks for windows or doors to be fitted with glass panels, using hand tools. Cut and attach mounting strips, metal or wood moldings, rubber gaskets, or metal clips to surfaces in preparation for mirror installation. Assemble, erect, or dismantle scaffolds, rigging, or hoisting equipment.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.50	Entry	\$30,165
Median	\$20.12	Median	\$41,859
Experienced	\$23.23	Experienced	\$48,325

Alabama Projections

2022 Estimated Employment:	590
2032 Projected Employment:	650
Average Total Openings:	65
Annual Growth Rate:	0.98%

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

Technology

Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Maintain archive of images, photos, or previous work products. Research new software or design concepts. Prepare digital files for printing. Research the target audience of projects. Write or edit copy for clients. Create designs, concepts, and sample layouts, based on knowledge of layout principles and esthetic design concepts. Determine size and arrangement of illustrative material and copy, and select style and size of type. Use computer software to generate new images. Mark up, paste, and assemble final layouts to prepare layouts for printer. Draw and print charts, graphs, illustrations, and other artwork, using computer. Review final layouts and suggest improvements, as needed. Confer with clients to discuss and determine layout design. Develop graphics and layouts for product illustrations, company logos, and Web sites. Key information into computer equipment to create layouts for client or supervisor. Prepare illustrations or rough sketches of material, discussing them with clients or supervisors and making necessary changes.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.25	Entry	\$31,725
Median	\$21.38	Median	\$44,478
Experienced	\$29.52	Experienced	\$61,407

Alabama Projections

2022 Estimated Employment:	2,690
2032 Projected Employment:	2,870
Average Total Openings:	240
Annual Growth Rate:	0.62%

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

Technology

Web platform development software
Computer aided design CAD software
Graphics or photo imaging software
Data base user interface and query software
Operating system software
Web page creation and editing software
Word processing software
Accounting software
Desktop publishing software
Document management software

4-Year Institutions with Programs

University of Alabama
Auburn University
Jacksonville State University
Troy University

2-Year Institution & ETPL Providers

Calhoun Community College
Enterprise State Community College
Coastal Alabama Community College
Lawson State Community College
Wallace State Community College
Chattahoochee Valley Community College



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Order, display, and maintain supplies. Keep work stations clean and sanitize tools, such as scissors and comb. Cut, trim and shape hair or hairpieces, based on customers' instructions, hair type, and facial features, using clippers, scissors, trimmers and razors. Analyze patrons' hair and other physical features to determine and recommend beauty treatment or suggest hair styles. Schedule client appointments. Bleach, dye, or tint hair, using applicator or brush. Update and maintain customer information records, such as beauty services provided. 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. Demonstrate and sell hair care products and cosmetics. 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. Comb, brush, and spray hair or wig to set style. Shape eyebrows and remove facial hair, using depilatory cream, tweezers, electrolysis or wax. Administer therapeutic medication and advise patron to seek medical treatment for chronic or contagious scalp conditions.

License: Original License Fee: \$50.00; Personal Renewal Fee: \$130.00; Apprentice Fee: \$75.00; Written Examination: \$75.00; Practical Examination: \$130.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$9.72	Entry	\$20,224
Median	\$14.11	Median	\$29,343
Experienced	\$21.18	Experienced	\$44,049

Alabama Projections

2022 Estimated Employment:	6,410
2032 Projected Employment:	7,170
Average Total Openings:	990
Annual Growth Rate:	1.13%

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

Technology

Accounting software
Office suite software
Operating system software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Gadsden State Community College
George C Wallace Community College
Lurleen B Wallace Community College
Northwest Shoals Community College
Reid State Technical College
J. F. Drake State Technical College
Coastal Alabama Community College
Shelton State Community College
Calhoun Community College
Central Alabama Community College
Bishop State Community College
Southern Union State Community College
Lawson State Community College
Northeast Alabama Community College
Snead State Community College
Bevill State Community College
H Councill Trenholm State



Provide and manage health education programs that help individuals, families, and their communities maximize and maintain healthy lifestyles. Use data to identify community needs prior to planning, implementing, monitoring, and evaluating programs designed to encourage healthy lifestyles, policies, and environments. May link health systems, health providers, insurers, and patients to address individual and population health needs. May serve as resource to assist individuals, other health professionals, or the community, and may administer fiscal resources for health education programs.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Develop educational materials and programs for community agencies, local government, and state government. Prepare and distribute health education materials, such as reports, bulletins, and visual aids, to address smoking, vaccines, and other public health concerns. Design and administer training programs for new employees and continuing education for existing employees. Document activities and record information, such as the numbers of applications completed, presentations conducted, and persons assisted. Develop and present health education and promotion programs, such as training workshops, conferences, and school or community presentations. Develop and maintain cooperative working relationships with agencies and organizations interested in public health care. Develop operational plans and policies necessary to achieve health education objectives and services. Collaborate with health specialists and civic groups to determine community health needs and the availability of services and to develop goals for meeting needs. Maintain databases, mailing lists, telephone networks, and other information to facilitate the functioning of health education programs. Supervise professional and technical staff in implementing health programs, objectives, and goals. Design and conduct evaluations and diagnostic studies to assess the quality and performance of health education programs. Provide program information to the public by preparing and presenting press releases, conducting media campaigns, or maintaining program-related Web sites. Provide guidance to agencies and organizations on assessment of health education needs and on development and delivery of health education programs. Develop and maintain health education libraries to provide resources for staff and community agencies. Develop, conduct, or coordinate health needs assessments and other public health surveys.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.08	Entry	\$35,527
Median	\$29.53	Median	\$61,430
Experienced	\$33.52	Experienced	\$69,718

Alabama Projections

2022 Estimated Employment:	420
2032 Projected Employment:	450
Average Total Openings:	45
Annual Growth Rate:	0.71%

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

Technology

Data base user interface and query software
Electronic mail software
Graphics or photo imaging software
Medical software
Office suite software
Presentation software
Process mapping and design software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

University of Alabama
University of Alabama at Birmingham
Jacksonville State University
Troy University
Alabama State University

2-Year Institution & ETPL Providers

Bishop State Community College



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: This occupation typically requires a Master's degree

OJT: Employees may 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: Educate clients about end-of-life symptoms and options to assist them in making informed decisions. Collaborate with other professionals to evaluate patients' medical or physical condition and to assess client needs. Investigate child abuse or neglect cases and take authorized protective action when necessary. 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. Counsel clients and patients in individual and group sessions to help them overcome dependencies, recover from illness and adjust to life. Organize support groups or counsel family members to assist them in understanding, dealing with, and supporting the client or patient. Advocate for clients or patients to resolve crises. Identify environmental impediments to client or patient progress through interviews and review of patient records. Utilize consultation data and social work experience to plan and coordinate client or patient care and rehabilitation, following through to ensure service efficacy. Modify treatment plans to comply with changes in clients' status. Monitor, evaluate, and record client progress according to measurable goals described in treatment and care plan. Supervise and direct other workers providing services to clients or patients. Develop or advise on social policy and assist in community development. Oversee Medicaid- and Medicare-related paperwork and recordkeeping in hospitals. 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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.61	Entry	\$36,635
Median	\$24.56	Median	\$51,076
Experienced	\$28.37	Experienced	\$59,009

Alabama Projections

2022 Estimated Employment:	2,440
2032 Projected Employment:	2,610
Average Total Openings:	230
Annual Growth Rate:	0.68%

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

Technology

Medical software
Office suite software
Presentation software
Project management software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

Troy University
Alabama State University
University of North Alabama
University of South Alabama
Alabama A&M University
University of Alabama at Birmingham
Auburn University
Jacksonville State University
University of Montevallo
University of Alabama
Auburn University at Montgomery

2-Year Institution & ETPL Providers

Lawson State Community College



Install or repair heating, central air conditioning, HVAC, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

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' recommendation 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.

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 \$190.00; Initial Fee for Certification of a Refrigeration License: \$190.00; Late fee for certification renewal received after December 31: \$250.00;

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.31	Entry	\$31,841
Median	\$22.49	Median	\$46,769
Experienced	\$26.48	Experienced	\$55,077

Alabama Projections

2022 Estimated Employment:	6,620
2032 Projected Employment:	7,270
Average Total Openings:	640
Annual Growth Rate:	0.94%

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

Technology

Computer aided design CAD software
Document management software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Northwest Shoals Community College
Central Alabama Community College
Northeast Alabama Community College
J. F. Drake State Technical College
Bishop State Community College
Southern Union State Community College
Reid State Technical College
George C Wallace Community College



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: This occupation typically requires a Postsecondary non-degree award

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Follow appropriate safety procedures for transporting dangerous goods. Check vehicles to ensure that mechanical, safety, and emergency equipment is in good working order. Maintain logs of working hours or of vehicle service or repair status, following applicable state and federal regulations. Obtain receipts or signatures for delivered goods and collect payment for services when required. Maneuver trucks into loading or unloading positions, following signals from loading crew and checking that vehicle and loading equipment are properly positioned. Drive trucks with capacities greater than 13 tons, including tractor-trailer combinations, to transport and deliver products, livestock, or other materials. Secure cargo for transport, using ropes, blocks, chain, binders, or covers. Read bills of lading to determine assignment details. Report vehicle defects, accidents, traffic violations, or damage to the vehicles. Read and interpret maps to determine vehicle routes. Couple or uncouple trailers by changing trailer jack positions, connecting or disconnecting air or electrical lines, or manipulating fifth-wheel locks. Collect delivery instructions from appropriate sources, verifying instructions and routes. Check conditions of trailers after contents have been unloaded to ensure that there has been no damage. Crank trailer landing gear up or down to safely secure vehicles. Perform basic vehicle maintenance tasks, such as adding oil, fuel, or radiator fluid, performing minor repairs, or washing trucks.

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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.85	Entry	\$32,963
Median	\$22.51	Median	\$46,826
Experienced	\$27.29	Experienced	\$56,759

Alabama Projections

2022 Estimated Employment:	39,300
2032 Projected Employment:	42,470
Average Total Openings:	4,565
Annual Growth Rate:	0.78%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Enterprise State Community College
Truck Driver Institute
AGAPE CDL TRAINING
Southern Union State Community College
Trenholm State Community College
160 Driving Academy
ESD School LLC
Bishop State Community College
Wallace State Community College
Central Alabama Community College
Affordable Truck Driver Training, LLC
Gadsden State Community College
Reid State Technical College
Wallace Community College
Mid State Driving Academy
Marshall Technical School
Davis CDL Truck Driving School, LLC
Bevill State Community College
Northeast Alabama Community College
Calhoun Community College
CDL of Alabama
Shelton State Community College



Help electricians by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Operate heavy equipment, such as backhoes. Trace out short circuits in wiring, using test meter. Measure, cut and bend wire and conduit, using measuring instruments and hand tools. Maintain tools, vehicles, and equipment and keep parts and supplies in order. Drill holes and pull or push wiring through openings, using hand and power tools. Perform semi-skilled and unskilled laboring duties related to the installation, maintenance and repair of a wide variety of electrical systems and equipment. Disassemble defective electrical equipment, replace defective or worn parts, and reassemble equipment, using hand tools. Transport tools, materials, equipment, and supplies to work site by hand, handtruck, or heavy, motorized truck. Examine electrical units for loose connections and broken insulation and tighten connections, using hand tools. Strip insulation from wire ends, using wire stripping pliers, and attach wires to terminals for subsequent soldering. Thread conduit ends, connect couplings, and fabricate and secure conduit support brackets, using hand tools. Construct controllers and panels, using power drills, drill presses, taps, saws, and punches. String transmission lines or cables through ducts or conduits, under the ground, through equipment, or to towers. Clean work area and wash parts. Erect electrical system components and barricades, and rig scaffolds, hoists, and shoring.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.84	Entry	\$26,702
Median	\$15.09	Median	\$31,391
Experienced	\$18.07	Experienced	\$37,579

Alabama Projections

2022 Estimated Employment:	1,920
2032 Projected Employment:	1,940
Average Total Openings:	215
Annual Growth Rate:	0.12%

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

Technology

Office suite software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Adjust, maintain, and repair tools, equipment, and machines, and assist more skilled workers with similar tasks. Order new parts to maintain inventory. Diagnose electrical problems and install and rewire electrical components. Design, weld, and fabricate parts, using blueprints or other mechanical plans. Tend and observe equipment and machinery to verify efficient and safe operation. Examine and test machinery, equipment, components, and parts for defects to ensure proper functioning. Adjust, connect, or disconnect wiring, piping, tubing, and other parts, using hand or power tools. Install or replace machinery, equipment, and new or replacement parts and instruments, 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. Apply protective materials to equipment, components, and parts to prevent defects and corrosion. Transfer tools, parts, equipment, and supplies to and from work stations and other areas. Disassemble broken or defective equipment to facilitate repair and reassemble equipment when repairs are complete. Assemble and maintain physical structures, using hand or power tools. Position vehicles, machinery, equipment, physical structures, and other objects for assembly or installation, using hand tools, power tools, and moving equipment. Prepare work stations for use by mechanics and repairers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.03	Entry	\$22,943
Median	\$14.23	Median	\$29,598
Experienced	\$17.03	Experienced	\$35,423

Alabama Projections

2022 Estimated Employment:	2,120
2032 Projected Employment:	2,260
Average Total Openings:	255
Annual Growth Rate:	0.63%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Perform rough-ins, repair and replace fixtures and water heaters, and locate, repair, or remove leaking or broken pipes. Cut or drill holes in walls or floors to accommodate the passage of pipes. Measure, cut, thread and assemble new pipe, placing the assembled pipe in hangers or other supports. Mount brackets and hanger on walls and ceilings to hold pipes, and set sleeves or inserts to provide support for pipes. Requisition tools and equipment, select type and size of pipe, and collect and transport materials and equipment to work site. Fit or assist in fitting valves, couplings, or assemblies to tanks, pumps, or systems, using hand tools. Assist pipe fitters in the layout, assembly, and installation of piping for air, ammonia, gas, and water systems. Excavate and grade ditches, and lay and join pipe for water and sewer service. Cut pipe and lift up to fitters. Disassemble and remove damaged or worn pipe. Clean shop, work area, and machines, using solvent and rags. Install gas burners to convert furnaces from wood, coal, or oil. Immerse pipe in chemical solution to remove dirt, oil, and scale. Clean and renew steam traps. Fill pipes with sand or resin to prevent distortion, and hold pipes during bending and installation.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.70	Entry	\$22,264
Median	\$14.88	Median	\$30,961
Experienced	\$17.91	Experienced	\$37,256

Alabama Projections

2022 Estimated Employment:	1,030
2032 Projected Employment:	1,100
Average Total Openings:	125
Annual Growth Rate:	0.67%

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

Technology

Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Perform preventative maintenance on vehicles and heavy equipment. 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. Flag motorists to warn them of obstacles or repair work ahead. Set out signs and cones around work areas to divert traffic. Dump, spread, and tamp asphalt, using pneumatic tampers, to repair joints and patch broken pavement. Drive trucks to transport crews and equipment to work sites. Inspect, clean and repair drainage systems, bridges, tunnels, and other structures. Haul and spread sand, gravel, and clay to fill washouts and repair road shoulders. Erect, install, or repair guardrails, road shoulders, berms, highway markers, warning signals, and highway lighting, using hand tools and power tools. Remove litter and debris from roadways, including debris from rock and mud slides. Clean and clear debris from culverts, catch basins, drop inlets, ditches, and other drain structures. Perform roadside landscaping work, such as clearing weeds and brush, and planting and trimming trees. Paint traffic control lines and place pavement traffic messages, by hand or using machines. Inspect markers to verify accurate installation. Apply poisons along roadsides and in animal burrows to eliminate unwanted roadside vegetation and rodents.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.65	Entry	\$24,226
Median	\$15.05	Median	\$31,304
Experienced	\$17.99	Experienced	\$37,419

Alabama Projections

2022 Estimated Employment:	3,150
2032 Projected Employment:	3,430
Average Total Openings:	320
Annual Growth Rate:	0.88%

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

Technology

Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

International Union of Operating Engineers



Plan, direct, or coordinate human resources activities and staff of an organization.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Prepare personnel forecast to project employment needs. Prepare and follow budgets for personnel operation. Develop, administer, and evaluate applicant tests. Oversee the evaluation, classification, and rating of occupations and job positions. Study legislation, arbitration decisions, and collective bargaining contracts to assess industry trends. Develop or administer special projects in areas such as pay equity, savings bond programs, day care, and employee awards. Provide terminated employees with outplacement or relocation assistance. Contract with vendors to provide employee services, such as food service, transportation, or relocation service. Administer compensation, benefits, and performance management systems, and safety and recreation programs. Identify staff vacancies and recruit, interview, and select applicants. Allocate human resources, ensuring appropriate matches between personnel. Provide current and prospective employees with information about policies, job duties, working conditions, wages, opportunities for promotion, and employee benefits. Perform difficult staffing duties, including dealing with understaffing, refereeing disputes, firing employees, and administering disciplinary procedures. 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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$31.80	Entry	\$66,143
Median	\$48.28	Median	\$100,421
Experienced	\$67.55	Experienced	\$140,499

Alabama Projections

2022 Estimated Employment:	2,100
2032 Projected Employment:	2,250
Average Total Openings:	175
Annual Growth Rate:	0.69%

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

Technology

Enterprise resource planning ERP software
Accounting software
Analytical or scientific software
Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Process mapping and design software
Project management software
Spreadsheet software

4-Year Institutions with Programs

University of North Alabama
Alabama A&M University
Auburn University

2-Year Institution & ETPL Providers



Recruit, screen, interview, or place individuals within an organization. May perform other activities in multiple human resources areas.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Address employee relations issues, such as harassment allegations, work complaints, or other employee concerns. Analyze employment-related data and prepare required reports. Conduct exit interviews and ensure that necessary employment termination paperwork is completed. Conduct reference or background checks on job applicants. Confer with management to develop or implement personnel policies or procedures. Contact job applicants to inform them of the status of their applications. Develop or implement recruiting strategies to meet current or anticipated staffing needs. Hire employees and process hiring-related paperwork. Inform job applicants of details such as duties and responsibilities, compensation, benefits, schedules, working conditions, or promotion opportunities. Interpret and explain human resources policies, procedures, laws, standards, or regulations. Interview job applicants to obtain information on work history, training, education, or job skills. Maintain and update human resources documents, such as organizational charts, employee handbooks or directories, or performance evaluation forms. Maintain current knowledge of Equal Employment Opportunity (EEO) and affirmative action guidelines and laws, such as the Americans with Disabilities Act (ADA). 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. Prepare or maintain employment records related to events, such as hiring, termination, leaves, transfers, or promotions, using human resources management system software.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.38	Entry	\$40,313
Median	\$28.12	Median	\$58,487
Experienced	\$35.81	Experienced	\$74,481

Alabama Projections

2022 Estimated Employment:	10,840
2032 Projected Employment:	11,630
Average Total Openings:	1,000
Annual Growth Rate:	0.71%

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

Technology

Enterprise resource planning ERP software
Data base user interface and query software
Graphics or photo imaging software
Analytical or scientific software
Cloud-based data access and sharing software
Development environment software
Operating system software
Project management software
Video conferencing software
Web platform development software

4-Year Institutions with Programs

Auburn University
Troy University
Faulkner University
University of North Alabama
University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Evaluate industrial operations for compliance with permits or regulations related to the generation, storage, treatment, transportation, or disposal of hazardous materials or waste. Test selected products at specified stages in the production process for performance characteristics or adherence to specifications. Verify that equipment is being operated and maintained according to quality assurance standards by observing worker performance. Adhere to all applicable regulations, policies, and procedures for health, safety, and environmental compliance. Analyze, estimate, or report production costs. Assist engineers in developing, building, or testing prototypes or new products, processes, or procedures. Calibrate or adjust equipment to ensure quality production, using tools such as calipers, micrometers, height gauges, protractors, or ring gauges. Conduct statistical studies to analyze or compare production costs for sustainable and nonsustainable designs. Coordinate equipment purchases, installations, or transfers. Create or interpret engineering drawings, schema diagrams, formulas, or blueprints for management or engineering staff. Design plant layouts or production facilities. Develop manufacturing infrastructure to integrate or deploy new manufacturing processes. Develop or implement programs to address problems related to production, materials, safety, or quality. Develop production, inventory, or quality assurance programs. Develop sustainable manufacturing technologies to reduce greenhouse gas emissions, minimize raw material use, replace toxic materials with non-toxic materials, replace non-renewable materials with renewable materials, or reduce waste.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.64	Entry	\$45,007
Median	\$28.08	Median	\$58,408
Experienced	\$32.74	Experienced	\$68,092

Alabama Projections

2022 Estimated Employment:	870
2032 Projected Employment:	980
Average Total Openings:	95
Annual Growth Rate:	1.11%

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

Technology

Computer aided design CAD software
Development environment software
Analytical or scientific software
Operating system software
Cloud-based data access and sharing software
Data base user interface and query software
Electronic mail software
Enterprise application integration software
Enterprise resource planning ERP software
Object or component oriented development software

4-Year Institutions with Programs

Alabama A&M University
University of West Alabama
University of North Alabama
Jacksonville State University

2-Year Institution & ETPL Providers

Gadsden State Community College
Bevill State Community College
Chattahoochee Valley Community College
H Councill Trenholm State
Coastal Alabama Community College
Lawson State Community College
Jefferson State Community College
Southern Union State Community College
J. F. Drake State Technical College
Shelton State Community College
Calhoun Community College
Northeast Alabama Community College
George C Wallace Community College
Central Alabama Community College
Bishop State Community College



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: This occupation typically requires a Bachelor's degree

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

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

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$31.85	Entry	\$66,257
Median	\$41.42	Median	\$86,149
Experienced	\$51.76	Experienced	\$107,665

Alabama Projections

2022 Estimated Employment:	7,120
2032 Projected Employment:	8,570
Average Total Openings:	575
Annual Growth Rate:	1.87%

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

Technology

Computer aided design CAD software
Data base user interface and query software
Development environment software
Object or component oriented development software
Operating system software
Analytical or scientific software
Application server software
Cloud-based data access and sharing software
Enterprise application integration software
Enterprise resource planning ERP software

4-Year Institutions with Programs

University of Alabama in Huntsville
University of North Alabama
Auburn University

2-Year Institution & ETPL Providers

Coastal Alabama Community College



Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems. May also install, dismantle, or move machinery and heavy equipment according to plans.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Disassemble machinery or equipment to remove parts and make repairs. Repair or replace broken or malfunctioning components of machinery or equipment. Repair or maintain the operating condition of industrial production or processing machinery or equipment. Examine parts for defects, such as breakage or excessive wear. Reassemble equipment after completion of inspections, testing, or repairs. Observe and test the operation of machinery or equipment to diagnose malfunctions, using voltmeters or other testing devices. Operate newly repaired machinery or equipment to verify the adequacy of repairs. Clean, lubricate, or adjust parts, equipment or machinery. Analyze test results, machine error messages, or information obtained from operators to diagnose equipment problems. Record repairs and maintenance performed. Study blueprints or manufacturers' manuals to determine correct installation or operation of machinery. Record parts or materials used and order or requisition new parts or materials, as necessary. Cut and weld metal to repair broken metal parts, fabricate new parts, or assemble new equipment. Demonstrate equipment functions and features to machine operators. Enter codes and instructions to program computer-controlled machinery.

License: None.

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.76	Entry	\$39,030
Median	\$27.08	Median	\$56,326
Experienced	\$31.31	Experienced	\$65,132

Alabama Projections

2022 Estimated Employment:	16,070
2032 Projected Employment:	20,040
Average Total Openings:	1,785
Annual Growth Rate:	2.23%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of West Alabama

2-Year Institution & ETPL Providers

Bishop State Community College
Lawson State Community College
Bevill State Community College
Trenholm State Community College
Northwest Shoals Community College
Shelton State Community College
Wallace Community College
Calhoun Community College
Southern Union State Community College
Reid State Technical College
Snead State Community College
Coastal Alabama Community College
Enterprise State Community College
Drake State Technical College
Northeast Alabama Community College
Chattahoochee Valley Community College
Gadsden State Community College



Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Conduct site audits to ensure adherence to safety and environmental regulations. Develop or enforce procedures for normal operation of manufacturing systems. Implement operational and emergency procedures. Maintain records to demonstrate compliance with safety and environmental laws, regulations, or policies. Monitor permit requirements for updates. Optimize operational costs and productivity consistent with safety and environmental rules and regulations. Prepare reports on operations and system productivity or efficiency. Supervise subordinate employees. Direct or coordinate production, processing, distribution, or marketing activities of industrial organizations. Develop budgets or approve expenditures for supplies, materials, or human resources, ensuring that materials, labor, or equipment are used efficiently to meet production targets. 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. 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. Initiate or coordinate inventory or cost control programs. Prepare and maintain production reports or personnel records.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$35.38	Entry	\$73,584
Median	\$50.96	Median	\$106,005
Experienced	\$67.98	Experienced	\$141,397

Alabama Projections

2022 Estimated Employment:	2,850
2032 Projected Employment:	3,090
Average Total Openings:	225
Annual Growth Rate:	0.82%

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

Technology

Enterprise resource planning ERP software
Accounting software
Computer aided design CAD software
Desktop publishing software
Document management software
Electronic mail software
Graphics or photo imaging software
Office suite software
Presentation software
Project management software

4-Year Institutions with Programs

University of Alabama
University of Alabama in Huntsville
Alabama A&M University
Athens State University
Auburn University
Troy University
University of South Alabama

2-Year Institution & ETPL Providers

Shelton State Community College
J. F. Drake State Technical College
Bishop State Community College



Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. Move controls to drive gasoline- or electric-powered trucks, cars, or tractors and transport materials between loading, processing, and storage areas. 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. Position lifting devices under, over, or around loaded pallets, skids, or boxes and secure material or products for transport to designated areas. Perform routine maintenance on vehicles or auxiliary equipment, such as cleaning, lubricating, recharging batteries, fueling, or replacing liquefied-gas tank. Weigh materials or products and record weight or other production data on tags or labels. Operate or tend automatic stacking, loading, packaging, or cutting machines. Turn valves and open chutes to dump, spray, or release materials from dump cars or storage bins into hoppers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data				Alabama Projections	
Hourly Wage		Annual Wage		2022 Estimated Employment:	15,350
Entry	\$14.59	Entry	\$30,355	2032 Projected Employment:	16,490
Median	\$18.59	Median	\$38,673	Average Total Openings:	1,640
Experienced	\$21.41	Experienced	\$44,529	Annual Growth Rate:	0.72%

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

Technology

Computer aided design CAD software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Train users and promote security awareness to ensure system security and to improve server and network efficiency. Develop plans to safeguard computer files against accidental or unauthorized modification, destruction, or disclosure and to meet emergency data processing needs. Confer with users to discuss issues such as computer data access needs, security violations, and programming changes. Monitor current reports of computer viruses to determine when to update virus protection systems. Modify computer security files to incorporate new software, correct errors, or change individual access status. Coordinate implementation of computer system plan with establishment personnel and outside vendors. Monitor use of data files and regulate access to safeguard information in computer files. Perform risk assessments and execute tests of data processing system to ensure functioning of data processing activities and security measures. Encrypt data transmissions and erect firewalls to conceal confidential information as it is being transmitted and to keep out tainted digital transfers. Document computer security and emergency measures policies, procedures, and test. Review violations of computer security procedures and discuss procedures with violators to ensure violations are not repeated.

License: None.

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$29.77	Entry	\$61,931
Median	\$50.31	Median	\$104,650
Experienced	\$62.30	Experienced	\$129,593

Alabama Projections

2022 Estimated Employment:	2,720
2032 Projected Employment:	3,460
Average Total Openings:	255
Annual Growth Rate:	2.44%

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

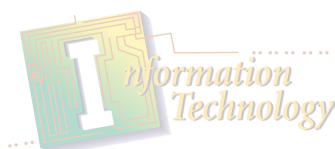
Technology

Web platform development software
Development environment software
Data base management system software
Operating system software
Data base user interface and query software
Object or component oriented development software
Application server software
Enterprise application integration software
Enterprise resource planning ERP software
Project management software

4-Year Institutions with Programs

University of Alabama in Huntsville
Auburn University
Tuskegee University
Troy University
University of South Alabama
Herzing University-Birmingham
Columbia Southern University
University of North Alabama
Talladega College
Strayer University-Alabama
Miles College

2-Year Institution & ETPL Providers



Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Discard or reject products, materials, or equipment not meeting specifications. Inspect, test, or measure materials, products, installations, or work for conformance to specifications. Record inspection or test data, such as weights, temperatures, grades, or moisture content, and quantities inspected or graded. Mark items with details, such as grade or acceptance-rejection status. Measure dimensions of products to verify conformance to specifications, using measuring instruments, such as rulers, calipers, gauges, or micrometers. Analyze test data, making computations as necessary, to determine test results. Collect or select samples for testing or for use as models. Compare colors, shapes, textures, or grades of products or materials with color charts, templates, or samples to verify conformance to standards. Write test or inspection reports describing results, recommendations, or needed repairs. Read dials or meters to verify that equipment is functioning at specified levels. Remove defects, such as chips, burrs, or lap corroded or pitted surfaces. Adjust, clean, or repair products or processing equipment to correct defects found during inspections. Fabricate, install, position, or connect components, parts, finished products, or instruments for testing or operational purposes. Grade, classify, or sort products according to sizes, weights, colors, or other specifications. Make minor adjustments to equipment, such as turning setscrews to calibrate instruments to required tolerances.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.65	Entry	\$26,312
Median	\$17.42	Median	\$36,235
Experienced	\$21.65	Experienced	\$45,036

Alabama Projections

2022 Estimated Employment:	11,810
2032 Projected Employment:	12,300
Average Total Openings:	1,425
Annual Growth Rate:	0.41%

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

Technology

Computer aided design CAD software
Data base user interface and query software
Analytical or scientific software
Cloud-based data access and sharing software
Content workflow software
Data base management system software
Electronic mail software
Enterprise application integration software
Enterprise resource planning ERP software
Object or component oriented development software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Calhoun Community College



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: This occupation typically requires a Master's degree

OJT: Employees may 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: Adapt instructional content or delivery methods for different levels or types of learners. Analyze performance data to determine effectiveness of instructional systems, courses, or instructional materials. Assess effectiveness and efficiency of instruction according to ease of instructional technology use and student learning, knowledge transfer, and satisfaction. Conduct needs assessments and strategic learning assessments to develop the basis for curriculum development or to update curricula. Define instructional, learning, or performance objectives. Design instructional aids for stand-alone or instructor-led classroom or online use. Design learning products, including Web-based aids or electronic performance support systems. Develop instructional materials, such as lesson plans, handouts, or examinations. Develop master course documentation or manuals according to applicable accreditation, certification, or other requirements. Develop measurement tools to evaluate the effectiveness of instruction or training interventions. Edit instructional materials, such as books, simulation exercises, lesson plans, instructor guides, and tests. Interview subject-matter experts or conduct other research to develop instructional content. Present and make recommendations regarding course design, technology, and instruction delivery options. Provide analytical support for the design and development of training curricula, learning strategies, educational policies, or courseware standards. Recommend changes curricula or delivery methods, based on information such as instructional effectiveness data, current or future performance requirements, feasibility, and costs.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.67	Entry	\$45,076
Median	\$31.46	Median	\$65,438
Experienced	\$41.74	Experienced	\$86,821

Alabama Projections

2022 Estimated Employment:	1,850
2032 Projected Employment:	1,960
Average Total Openings:	175
Annual Growth Rate:	0.62%

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

Technology

Web platform development software
Graphics or photo imaging software
Data base user interface and query software
Cloud-based data access and sharing software
Data base management system software
Desktop publishing software
Document management software
Electronic mail software
Enterprise application integration software
Object or component oriented development software

4-Year Institutions with Programs

Jacksonville State University
University of Alabama at Birmingham
University of West Alabama
University of North Alabama
Alabama State University
Auburn University
University of Montevallo
Athens State University
Auburn University at Montgomery
University of Alabama

2-Year Institution & ETPL Providers



Line and cover structures with insulating materials. May work with batt, roll, or blown insulation materials.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Read blueprints, and select appropriate insulation, based on space characteristics and the heat retaining or excluding characteristics of the material. Measure and cut insulation for covering surfaces, using tape measures, handsaws, power saws, knives, or scissors. Cover and line structures with blown or rolled forms of materials to insulate against cold, heat, or moisture, using saws, knives, rasps, trowels, blowers, or other tools and implements. Fit, wrap, staple, or glue insulating materials to structures or surfaces, using hand tools or wires. Cover, seal, or finish insulated surfaces or access holes with plastic covers, canvas strips, sealants, tap cement or asphalt mastic. Distribute insulating materials evenly into small spaces within floors, ceilings, or wall using blowers and hose attachments, or cement mortars. Fill blower hoppers with insulating materials. Move controls, buttons, or levers to start blowers and regulate flow of materials through nozzles. Prepare surfaces for insulation application by brushing or spreading on adhesives, cement, or asphalt, or by attaching metal pins to surfaces. Remove old insulation, such as asbestos, following safety procedures.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.17	Entry	\$27,393
Median	\$19.38	Median	\$40,317
Experienced	\$23.32	Experienced	\$48,506

Alabama Projections

2022 Estimated Employment:	710
2032 Projected Employment:	750
Average Total Openings:	60
Annual Growth Rate:	0.55%

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

Technology

Electronic mail software
Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

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

Tasks: Call on policyholders to deliver and explain policy, to analyze insurance program and suggest additions or changes, or to change beneficiaries. Calculate premiums and establish payment method. 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. 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. Seek out new clients and develop clientele by networking to find new customers and generate lists of prospective clients. Explain features, advantages, and disadvantages of various policies to promote sale of insurance plans. Contact underwriter and submit forms to obtain binder coverage. Ensure that policy requirements are fulfilled, including any necessary medical examinations and the completion of appropriate forms. Confer with clients to obtain and provide information when claims are made on a policy. Perform administrative tasks, such as maintaining records and handling policy renewals. Select company that offers type of coverage requested by client to underwrite policy. Monitor insurance claims to ensure they are settled equitably for both the client and the insurer. Develop marketing strategies to compete with other individuals or companies who sell insurance. 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: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.35	Entry	\$31,933
Median	\$25.46	Median	\$52,954
Experienced	\$49.45	Experienced	\$102,865

Alabama Projections

2022 Estimated Employment:	8,650
2032 Projected Employment:	9,320
Average Total Openings:	775
Annual Growth Rate:	0.75%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Video conferencing software
Video creation and editing software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Plan, design, and furnish the internal space of rooms or buildings. Design interior environments or create physical layouts that are practical, aesthetic, and conducive to the intended purposes. May specialize in a particular field, style, or phase of interior design.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Estimate material requirements and costs, and present design to client for approval. Confer with client to determine factors affecting planning of interior environments, such as budget, architectural preferences, purpose, and function. Select or design, and purchase furnishings, art work, and accessories. Subcontract fabrication, installation, and arrangement of carpeting, fixtures, accessories, draperies, paint and wall covering art work, furniture, and related items. Render design ideas in form of paste-ups or drawings. Plan and design interior environments for boats, planes, buses, trains, and other enclosed spaces. Coordinate with other professionals, such as contractors, architects, engineers, and plumbers, to ensure job success. Review and detail shop drawings for construction plans. Use computer-aided drafting (CAD) and related software to produce construction documents. Design plans to be safe and to be compliant with the American Disabilities Act (ADA). Inspect construction work on site to ensure its adherence to the design plans. Design spaces to be environmentally friendly, using sustainable, recycled materials when feasible. Research and explore the use of new materials, technologies, and products to incorporate into designs. Research health and safety code requirements to inform design.

License: Registration Application Fee: \$300.00; Renewal Fee: \$160.00; Late Renewal Fee: \$75.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.21	Entry	\$33,718
Median	\$28.45	Median	\$59,173
Experienced	\$33.46	Experienced	\$69,595

Alabama Projections

2022 Estimated Employment:	990
2032 Projected Employment:	1,060
Average Total Openings:	100
Annual Growth Rate:	0.66%

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

Technology

Computer aided design CAD software
Graphics or photo imaging software
Desktop publishing software
Document management software
Electronic mail software
Office suite software
Presentation software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama
Auburn University
University of North Alabama

2-Year Institution & ETPL Providers



Manually move freight, stock, luggage, or other materials, or perform other general labor. Includes all manual laborers not elsewhere classified.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. Record numbers of units handled or moved, using daily production sheets or work tickets. 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. Assemble product containers or crates, using hand tools and pre-cut lumber. Pack containers and re-pack damaged containers. Carry needed tools or supplies from storage or trucks and return them after use. Install protective devices, such as bracing, padding, or strapping, to prevent shifting or damage to items being transported. Maintain equipment storage areas to ensure that inventory is protected. Attach slings, hooks, or other devices to lift cargo and guide loads. Adjust controls to guide, position, or move equipment, such as cranes, booms, or cameras. Connect electrical equipment to power sources so that it can be tested before use. Extract chemicals from discarded appliances, such as air conditioners or refrigerators, using specialized machinery, such as refrigerant recovery equipment. Sort materials, such as metals, glass, wood, paper or plastics, into appropriate containers for recycling.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.67	Entry	\$24,282
Median	\$15.37	Median	\$31,967
Experienced	\$17.72	Experienced	\$36,856

Alabama Projections

2022 Estimated Employment:	40,700
2032 Projected Employment:	44,010
Average Total Openings:	5,795
Annual Growth Rate:	0.78%

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

Technology

Word processing software
Computer aided design CAD software
Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations 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: Operate vehicles or powered equipment, such as mowers, tractors, twin-axle vehicles, snow blowers, chainsaws, electric clippers, sod cutters, or pruning saws. Mow or edge lawns, using power mowers or edgers. Shovel snow from walks, driveways, or parking lots, and spread salt in those areas. Care for established lawns by mulching, aerating, weeding, grubbing, removing thatch, or trimming or edging around flower beds, walks, or walls. Use hand tools, such as shovels, rakes, pruning saws, saws, hedge or brush trimmers, or axes. Prune or trim trees, shrubs, or hedges, using shears, pruners, or chain saws. Gather and remove litter. Maintain or repair tools, equipment, or structures, such as buildings, greenhouses, fences, or benches, using hand or power tools. Mix and spray or spread fertilizers, herbicides, or insecticides onto grass, shrubs, or trees, using hand or automatic sprayers or spreaders. Water lawns, trees, or plants, using portable sprinkler systems, hoses, or watering cans. Trim or pick flowers and clean flower beds. Rake, mulch, and compost leaves. Follow planned landscaping designs to determine where to lay sod, sow grass, or plant flowers or foliage. Plant seeds, bulbs, foliage, flowering plants, grass, ground covers, trees, or shrubs, and apply mulch for protection, using gardenir tools. Decorate gardens with stones or plants.

License: Application Fee: \$150.00; Annual License Fee: \$155.00 (plus \$45.00 per category of work performed)

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.35	Entry	\$23,612
Median	\$14.41	Median	\$29,965
Experienced	\$17.00	Experienced	\$35,368

Alabama Projections

2022 Estimated Employment:	14,020
2032 Projected Employment:	15,080
Average Total Openings:	1,960
Annual Growth Rate:	0.73%

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

Technology

Office suite software
Operating system software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Prepare, draft, and review legal documents, such as wills, deeds, patent applications, mortgages, leases, and contracts. Negotiate contractual agreements. Advise clients concerning business transactions, claim liability, advisability of prosecuting or defending lawsuits, or legal rights and obligations. Interpret laws, rulings and regulations for individuals and businesses. Analyze the probable outcomes of cases, using knowledge of legal precedents. Present and summarize cases to judges and juries. 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. Represent client in court or before government agencies. Examine legal data to determine advisability of defending or prosecuting lawsuit. Select jurors, argue motions, meet with judges, and question witnesses during the course of a trial. Present evidence to defend clients or prosecute defendants in criminal or civil litigation. Study Constitution, statutes, decisions, regulations, and ordinances of quasi-judicial bodies to determine ramification for cases. Prepare legal briefs and opinions, and file appeals in state and federal courts of appeal. Negotiate settlements of civil disputes.

License: State Bar Exam Fee: \$575.00; Occupational License Fee: \$300.00; Annual License Renewal Fee: \$325.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$31.74	Entry	\$66,018
Median	\$59.28	Median	\$123,302
Experienced	\$83.20	Experienced	\$173,055

Alabama Projections

2022 Estimated Employment:	7,720
2032 Projected Employment:	8,390
Average Total Openings:	375
Annual Growth Rate:	0.84%

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

Technology

Enterprise resource planning ERP software
Data base user interface and query software
Data mining software
Document management software
Electronic mail software
Office suite software
Presentation software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama

2-Year Institution & ETPL Providers

George C Wallace Community College



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: This occupation typically requires a Master's degree

OJT: Employees may 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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.24	Entry	\$37,931
Median	\$28.64	Median	\$59,572
Experienced	\$31.10	Experienced	\$64,685

Alabama Projections

2022 Estimated Employment:	2,780
2032 Projected Employment:	2,930
Average Total Openings:	280
Annual Growth Rate:	0.52%

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

Technology

Web platform development software
Graphics or photo imaging software
Data base user interface and query software
Office suite software
Cloud-based data access and sharing software
Computer aided design CAD software
Desktop publishing software
Document management software
Electronic mail software
Enterprise application integration software

4-Year Institutions with Programs

University of South Alabama

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Observe patients, charting and reporting changes in patients' conditions, such as adverse reactions to medication or treatment, and taking any necessary action. Administer prescribed medications or start intravenous fluids, noting times and amounts on patients' charts. 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. Help patients with bathing, dressing, maintaining personal hygiene, moving in bed, or standing and walking. Supervise nurses' aides or assistants. Work as part of a healthcare team to assess patient needs, plan and modify care, and implement interventions. Record food and fluid intake and output. Evaluate nursing intervention outcomes, conferring with other healthcare team members as necessary. Assemble and use equipment, such as catheters, tracheotomy tubes or oxygen suppliers. 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. Prepare or examine food trays for conformance to prescribed diet. Apply compresses, ice bags, or hot water bottles. Clean rooms and make beds.

License: Initial Application Fee for LPN: \$100.00; Biannual Renewal Fee: \$100.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.30	Entry	\$33,912
Median	\$22.12	Median	\$46,019
Experienced	\$24.48	Experienced	\$50,916

Alabama Projections

2022 Estimated Employment:	11,450
2032 Projected Employment:	12,150
Average Total Openings:	960
Annual Growth Rate:	0.60%

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

Technology

Medical software
Electronic mail software
Office suite software
Operating system software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Enterprise State Community College
Snead State Community College
Chattahoochee Valley Community College
Lurleen B Wallace Community College
Lawson State Community College
Jefferson State Community College
Central Alabama Community College
Calhoun Community College
Bishop State Community College
Gadsden State Community College
H Councill Trenholm State
Reid State Technical College
Shelton State Community College
J. F. Drake State Technical College
Northeast Alabama Community College
Southern Union State Community College
Northwest Shoals Community College
Bevill State Community College
Coastal Alabama Community College
George C Wallace Community College



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Obey traffic laws and follow established traffic and transportation procedures. 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. Report any mechanical problems encountered with vehicles. Present bills and receipts and collect payments for goods delivered or loaded. Load and unload trucks, vans, or automobiles. Verify the contents of inventory loads against shipping papers. Turn in receipts and money received from deliveries. Maintain records, such as vehicle logs, records of cargo, or billing statements, in accordance with regulations. Read maps and follow written or verbal geographic directions. Report delays, accidents, or other traffic and transportation situations to bases or other vehicles, using telephones or mobile two-way radios. 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. Use and maintain the tools or equipment found on commercial vehicles, such as weighing or measuring devices. Perform emergency repairs, such as changing tires or installing light bulbs, fuses, tire chains, or spark plugs.

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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.90	Entry	\$24,762
Median	\$17.24	Median	\$35,855
Experienced	\$22.93	Experienced	\$47,701

Alabama Projections

2022 Estimated Employment:	17,030
2032 Projected Employment:	18,660
Average Total Openings:	2,015
Annual Growth Rate:	0.92%

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

Technology

Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Davis CDL Truck Driving School, LLC
Reid State Technical College
160 Driving Academy
Wallace Community College
Gadsden State Community College
Mid State Driving Academy
Marshall Technical School
Affordable Truck Driver Training, LLC
ESD School LLC
Bevill State Community College
AGAPE CDL TRAINING
CDL of Alabama
Northeast Alabama Community College
Shelton State Community College
Calhoun Community College
Southern Union State Community College
Truck Driver Institute
Trenholm State Community College
Wallace State Community College
Enterprise State Community College
Bishop State Community College
Central Alabama Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Verify and examine information and accuracy of loan application and closing documents. Interview loan applicants to obtain personal and financial data and to assist in completing applications. Assemble and compile documents for loan closings, such as title abstracts, insurance forms, loan forms, and tax receipts. Answer questions and advise customers regarding loans and transactions. Contact customers by mail, telephone, or in person concerning acceptance or rejection of applications. Record applications for loan and credit, loan information, and disbursements of funds, using computers. Prepare and type loan applications, closing documents, legal documents, letters, forms, government notices, and checks, using computers. Present loan and repayment schedules to customers. Calculate, review, and correct errors on interest, principal, payment, and closing costs, using computers or calculators. Check value of customer collateral to be held as loan security. Contact credit bureaus, employers, and other sources to check applicants' credit and personal references. File and maintain loan records. Schedule and conduct closings of mortgage transactions. Accept payment on accounts. Submit loan applications with recommendation for underwriting approval.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.18	Entry	\$29,492
Median	\$17.92	Median	\$37,275
Experienced	\$21.15	Experienced	\$43,988

Alabama Projections

2022 Estimated Employment:	2,830
2032 Projected Employment:	2,860
Average Total Openings:	235
Annual Growth Rate:	0.09%

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

Technology

Customer relationship management CRM software
Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Assist in selection of financial award candidates using electronic databases to certify loan eligibility. Authorize sign mail collection letters. Calculate amount of debt and funds available to plan methods of payoff and to estimate time for debt liquidation. Confer with underwriters to resolve mortgage application problems. Contact applicants or creditors to resolve questions about applications or to assist with completion of paperwork. Contact borrowers with delinquent accounts to obtain payment in full or to negotiate repayment plans. Counsel clients on personal and family financial problems, such as excessive spending or borrowing of funds. Establish payment priorities according to credit terms and interest rates to reduce clients' overall costs. Inform individual and groups about the financial assistance available to college or university students. Maintain and review account records, updating and recategorizing them according to status changes. Match individuals' needs and eligibility with available financial aid programs to provide informed recommendations. Review accounts to determine write-offs for collection agencies. Review billing for accuracy. Approve loans within specified limits, and refer loan applications outside those limits to management for approval. Meet with applicants to obtain information for loan applications and to answer questions about the process.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.70	Entry	\$38,897
Median	\$28.68	Median	\$59,648
Experienced	\$42.71	Experienced	\$88,838

Alabama Projections

2022 Estimated Employment:	5,870
2032 Projected Employment:	6,210
Average Total Openings:	440
Annual Growth Rate:	0.58%

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

Technology

Enterprise resource planning ERP software
Customer relationship management CRM software
Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

Alabama A&M University
Auburn University
University of Alabama in Huntsville
University of Alabama at Birmingham
Auburn University at Montgomery
University of South Alabama
Troy University
University of Montevallo
Alabama State University
University of North Alabama
University of Alabama

2-Year Institution & ETPL Providers



Plan, direct, or coordinate activities of an organization or department that provides lodging and other accommodations.

Education: This occupation typically requires a High school diploma or equivalent

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

Tasks: Greet and register guests. Answer inquiries pertaining to hotel policies and services, and resolve occupants' complaints. Assign duties to workers, and schedule shifts. Coordinate front-office activities of hotels or motels, and resolve problems. 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. Manage and maintain temporary or permanent lodging facilities. Observe and monitor staff performance to ensure efficient operations and adherence to facility's policies and procedures. Train staff members. Show, rent, or assign accommodations. Develop and implement policies and procedures for the operation of a department or establishment. Inspect guest rooms, public areas, and grounds for cleanliness and appearance. Prepare required paperwork pertaining to departmental functions. Interview and hire applicants. Purchase supplies, and arrange for outside services, such as deliveries, laundry, maintenance and repair, and trash collection.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.18	Entry	\$35,731
Median	\$28.50	Median	\$59,280
Experienced	\$36.80	Experienced	\$76,546

Alabama Projections

2022 Estimated Employment:	490
2032 Projected Employment:	570
Average Total Openings:	60
Annual Growth Rate:	1.41%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

University of South Alabama
Troy University
Auburn University
University of Alabama
University of North Alabama

2-Year Institution & ETPL Providers

Jefferson State Community College
Coastal Alabama Community College



Grade logs or estimate the marketable content or value of logs or pulpwood in sorting yards, millpond, log deck, or similar locations. Inspect logs for defects or measure logs to determine volume.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Arrange for hauling of logs to appropriate mill sites. Evaluate log characteristics and determine grades, using established criteria. Record data about individual trees or load volumes into tally books or hand-held collection terminals. Paint identification marks of specified colors on logs to identify grades or species, using spray cans, or call out grades to log markers. Measure felled logs or loads of pulpwood to calculate volume, weight, dimensions, and marketable value, using measuring devices and conversion tables. Measure log lengths and mark bores for bucking into logs, according to specifications. Identify logs of substandard or special grade so that they can be returned to shippers, regraded, recut, or transferred for other processing. Jab logs with metal ends of scale sticks, and inspect logs to ascertain characteristics or defects such as water damage, splits, knots, broken ends, rotten areas, twists, and curves. Drive to sawmills, wharfs, or skids to inspect logs or pulpwood. Communicate with coworkers by signals to direct log movement. Weigh log trucks before and after unloading, and record load weights and supplier identities. Saw felled trees into lengths.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.27	Entry	\$29,688
Median	\$18.28	Median	\$38,026
Experienced	\$22.95	Experienced	\$47,726

Alabama Projections

2022 Estimated Employment:	250
2032 Projected Employment:	280
Average Total Openings:	40
Annual Growth Rate:	1.14%

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

Technology

Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Drive logging tractor or wheeled vehicle equipped with one or more accessories, such as bulldozer blade, frontal shear, grapple, logging arch, cable winches, hoisting rack, or crane boom, to fell tree; to skid, load, unload, or stack logs; or to pull stumps or clear brush. Includes operating stand-alone logging machines, such as log chippers.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations 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: Inspect equipment for safety prior to use, and perform necessary basic maintenance tasks. Drive straight or articulated tractors equipped with accessories such as bulldozer blades, grapples, logging arches, cable winches, and crane booms to skid, load, unload, or stack logs, pull stumps, or clear brush. Drive crawler or wheeled tractors to drag or transport logs from felling sites to log landing areas for processing and loading. Drive tractors for building or repairing logging and skid roads. Grade logs according to characteristics such as knot size and straightness, and according to established industry or company standards. Control hydraulic tractors equipped with tree clamps and booms to lift, swing, and bunch sheared trees. Drive and maneuver tractors and tree harvesters to shear the tops off of trees, cut and limb the trees, and cut the logs into desired lengths. Fill out required job or shift report forms. Calculate total board feet, cordage, or other wood measurement units, using conversion tables.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.24	Entry	\$31,690
Median	\$21.02	Median	\$43,717
Experienced	\$24.19	Experienced	\$50,319

Alabama Projections

2022 Estimated Employment:	2,100
2032 Projected Employment:	2,130
Average Total Openings:	305
Annual Growth Rate:	0.13%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Shelton State Community College
H Councill Trenholm State
Coastal Alabama Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Perform managerial duties such as hiring and training employees and overseeing facility needs or requirements. 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. Direct availability and allocation of materials, supplies, and finished products. 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. Protect and control proprietary materials. Review logistics performance with customers against targets, benchmarks, and service agreements. Develop and implement technical project management tools, such as plans, schedules, and responsibility and compliance matrices. Direct team activities, establishing task priorities, scheduling and tracking work assignments, providing guidance, and ensuring the availability of resources. Report project plans, progress, and results. Direct and support the compilation and analysis of technical source data necessary for product development. Explain proposed solutions to customers, management, or other interested parties through written proposals and oral presentations. Develop proposals that include documentation for estimates. Plan, organize and execute logistics support activities, such as maintenance planning, repair analysis, and test equipment recommendations. Provide project management services, including the provision and analysis of technical data.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$27.84	Entry	\$57,917
Median	\$42.89	Median	\$89,211
Experienced	\$51.57	Experienced	\$107,268

Alabama Projections

2022 Estimated Employment:	5,460
2032 Projected Employment:	6,350
Average Total Openings:	555
Annual Growth Rate:	1.52%

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

Technology

Data base user interface and query software
Enterprise resource planning ERP software
Project management software
Accounting software
Cloud-based data access and sharing software
Computer aided design CAD software
Electronic mail software
Office suite software
Presentation software
Process mapping and design software

4-Year Institutions with Programs

Athens State University

2-Year Institution & ETPL Providers



Feed materials into or remove materials from machines or equipment that is automatic or tended by other workers.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Inspect materials and products for defects, and to ensure conformance to specifications. Remove materials and products from machines and equipment, and place them in boxes, trucks or conveyors, using hand tools and moving devices. Push dual control buttons and move controls to start, stop, or adjust machinery and equipment. Identify and mark materials, products, and samples, following instructions. Load materials and products into machines and equipment, or onto conveyors, using hand tools and moving devices. Clean and maintain machinery, equipment, and work areas to ensure proper functioning and safe working conditions. Weigh or measure materials or products to ensure conformance to specifications. Fasten, package, or stack materials and products, using hand tools and fastening equipment. Record production and operational data, such as amount of materials processed. Add chemicals, solutions, or ingredients to machines or equipment as required by the manufacturing process. Transfer materials and products to and from machinery and equipment, using industrial trucks or hand trucks. Open and close gates of belt and pneumatic conveyors on machines that are fed directly from preceding machines. Shovel or scoop materials into containers, machines, or equipment for processing, storage, or transport.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.49	Entry	\$25,973
Median	\$15.42	Median	\$32,067
Experienced	\$18.41	Experienced	\$38,285

Alabama Projections

2022 Estimated Employment:	2,530
2032 Projected Employment:	2,760
Average Total Openings:	435
Annual Growth Rate:	0.87%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Dispose of scrap or waste material in accordance with company policies and environmental regulations. Separate scrap waste and related materials for reuse, recycling, or disposal. Calculate dimensions or tolerances, using instruments, such as micrometers or vernier calipers. Set up, adjust, or operate basic or specialized machine tools used to perform precision machining operations. Maintain machine tools in proper operational condition. Study sample parts, blueprints, drawings, or engineering information to determine methods or sequences of operations needed to fabricate products. Diagnose machine tool malfunctions to determine need for adjustments or repairs. Evaluate machining procedures and recommend changes or modifications for improved efficiency or adaptability. 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. Align and secure holding fixtures, cutting tools, attachments, accessories, or materials onto machines. Monitor the feed and speed of machines during the machining process. Lay out, measure, and mark metal stock to display placement of cuts. Check work pieces to ensure that they are properly lubricated or cooled. Operate equipment to verify operational efficiency.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.57	Entry	\$34,469
Median	\$23.58	Median	\$49,046
Experienced	\$27.83	Experienced	\$57,884

Alabama Projections

2022 Estimated Employment:	5,150
2032 Projected Employment:	5,570
Average Total Openings:	560
Annual Growth Rate:	0.80%

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

Technology

Computer aided design CAD software
Computer aided manufacturing CAM software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Northwest Shoals Community College
Gadsden State Community College
Trenholm State Community College
Southern Union State Community College
Wallace State Community College
Central Alabama Community College



Operate Magnetic Resonance Imaging (MRI) scanners. Monitor patient safety and comfort, and view images of area being scanned to ensure quality of pictures. May administer gadolinium contrast dosage intravenously. May interview patient, explain MRI procedures, and position patient on examining table. May enter into the computer data such as patient history, anatomical area to be scanned, orientation specified, and position of entry.

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Attach physiological monitoring leads to patient's finger, chest, waist, or other body parts. Calibrate magnetic resonance imaging (MRI) console or peripheral hardware. Conduct screening interviews of patients to identify contraindications, such as ferrous objects, pregnancy, prosthetic heart valves, cardiac pacemakers, or tattoos. Connect physiological leads to physiological acquisition control (PAC) units. Develop or otherwise produce film records of magnetic resonance images. Explain magnetic resonance imaging (MRI) procedures to patients, patient representatives, or family members. Intravenously inject contrast dyes, such as gadolinium contrast, in accordance with scope of practice. Inspect images for quality, using magnetic resonance scanner equipment and laser camera. Operate magnetic resonance imaging (MRI) scanners. Position patients on cradle, attaching immobilization devices, if needed, to ensure appropriate placement for imaging. Select appropriate imaging techniques or coils to produce required images. Troubleshoot technical issues related to magnetic resonance imaging (MRI) scanner or peripheral equipment, such as monitors or coils. Conduct inventories to maintain stock of clinical supplies. Instruct medical staff or students in magnetic resonance imaging (MRI) procedures or equipment operation. Operate optical systems to capture dynamic magnetic resonance imaging (MRI) images, such as functional brain imaging, real-time organ motion tracking, or musculoskeletal anatomy and trajectory visualization.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$24.23	Entry	\$50,393
Median	\$31.44	Median	\$65,386
Experienced	\$34.78	Experienced	\$72,335

Alabama Projections

2022 Estimated Employment:	670
2032 Projected Employment:	740
Average Total Openings:	45
Annual Growth Rate:	0.99%

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

Technology

Medical software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Assemble boilers at installation sites, using tools such as levels, plumb bobs, hammers, torches, or other hand tools. Install equipment to improve the energy or operational efficiency of residential or commercial buildings. Perform routine maintenance on boilers, such as replacing burners or hoses, installing replacement parts, or reinforcing structural weaknesses to ensure optimal boiler efficiency. Position, attach, or blow insulating materials to prevent energy losses from buildings, pipes, or other structures or objects. 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. Maintain or repair specialized equipment or machinery located in cafeterias, laundries, hospitals, stores, offices, or factories. Order parts, supplies, or equipment from catalogs or suppliers. Perform general cleaning of buildings or properties. Train or manage maintenance personnel or subcontractors. Provide groundskeeping services, such as landscaping or snow removal. Estimate costs to repair machinery, equipment, or building structures. Design new equipment to aid in the repair or maintenance of machines, mechanical equipment, or building structures. Assemble, install, or repair wiring, electrical or electronic components, pipe systems, plumbing, machinery, or equipment. Diagnose mechanical problems and determine how to correct them, checking blueprints, repair manuals, or parts catalogs, as necessary.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.42	Entry	\$25,825
Median	\$18.06	Median	\$37,565
Experienced	\$22.54	Experienced	\$46,892

Alabama Projections

2022 Estimated Employment:	17,390
2032 Projected Employment:	18,590
Average Total Openings:	1,735
Annual Growth Rate:	0.67%

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

Technology

Operating system software
Project management software
Word processing software
Computer aided design CAD software
Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Lubricate machinery, change parts, or perform other routine machinery maintenance.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Reassemble machines after the completion of repair or maintenance work. Start machines and observe mechanical operation to determine efficiency and to detect problems. Inspect or test damaged machine parts, and mark defective areas or advise supervisors of repair needs. Lubricate or apply adhesives or other materials to machines, machine parts, or other equipment according to specified procedures. Install, replace, or change machine parts and attachments, according to production specifications. Dismantle machines and remove parts for repair, using hand tools, chain falls, jacks, cranes, or hoists. Record production, repair, and machine maintenance information. Read work orders and specifications to determine machines and equipment requiring repair or maintenance. Set up and operate machines, and adjust controls to regulate operations. 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. Transport machine parts, tools, equipment, and other material between work areas and storage, using cranes, hoists, or dollies. 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. Replace or repair metal, wood, leather, glass, or other lining in machines, or in equipment compartments or containers.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.50	Entry	\$38,475
Median	\$20.68	Median	\$43,016
Experienced	\$25.51	Experienced	\$53,064

Alabama Projections

2022 Estimated Employment:	540
2032 Projected Employment:	620
Average Total Openings:	60
Annual Growth Rate:	1.43%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of West Alabama

2-Year Institution & ETPL Providers

Coastal Alabama Community College
Drake State Technical College
Northwest Shoals Community College
Bevill State Community College
Shelton State Community College
Lawson State Community College
Northeast Alabama Community College
Wallace Community College
Bishop State Community College
Southern Union State Community College
Calhoun Community College
Trenholm State Community College
Enterprise State Community College
Chattahoochee Valley Community College
Gadsden State Community College
Snead State Community College
Reid State Technical College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Gather and organize information on problems or procedures. Analyze data gathered and develop solutions or alternative methods of proceeding. Confer with personnel concerned to ensure successful functioning of newly implemented systems or procedures. Develop and implement records management program for filing, protection, and retrieval of records, and assure compliance with program. Review forms and reports and confer with management and users about format, distribution, and purpose, identifying problems and improvements. Interview personnel and conduct on-site observation to ascertain unit functions, work performed, and methods equipment, and personnel used. Document findings of study and prepare recommendations for implementation of new systems, procedures, or organizational changes. Prepare manuals and train workers in use of new forms, reports, procedures or equipment, according to organizational policy. Design, evaluate, recommend, and approve changes of forms and reports. Plan study of work problems and procedures, such as organizational change, communications, information flow, integrated production methods, inventory control, or cost analysis. Recommend purchase of storage equipment and design area layout to locate equipment in space available.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$27.44	Entry	\$57,080
Median	\$45.03	Median	\$93,662
Experienced	\$58.44	Experienced	\$121,564

Alabama Projections

2022 Estimated Employment:	6,690
2032 Projected Employment:	7,340
Average Total Openings:	630
Annual Growth Rate:	0.93%

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

Technology

Web platform development software
Development environment software
Data base user interface and query software
Object or component oriented development software
Data base management system software
Operating system software
Project management software
Business intelligence and data analysis software
Analytical or scientific software
Enterprise application integration software

4-Year Institutions with Programs

Jacksonville State University
Auburn University at Montgomery
Alabama State University
Troy University
University of Alabama
University of Alabama at Birmingham
University of Alabama in Huntsville
University of North Alabama
University of South Alabama
University of West Alabama
Auburn University

2-Year Institution & ETPL Providers



Clean and shape customers' fingernails and toenails. May polish or decorate nails.

Education: This occupation typically requires a Postsecondary non-degree award

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. Use rotary abrasive wheels to shape and smooth nails or artificial extensions. Assess the condition of clients' hands, remove dead skin, and massage hands. 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. Clean and sanitize tools and work environment. Schedule client appointments and accept payments. Remove previously applied nail polish, using liquid remover and swabs. Shape and smooth ends of nails, using scissors, files, or emery boards. Apply undercoat and clear or colored polish onto nails with brush. Advise clients on nail care and use of products and colors. Maintain supply inventories and records of client services. Roughen surfaces of fingernails, using abrasive wheel. Promote and sell nail care products.

License: Original License Fee: \$50.00; Personal Renewal Fee: \$100.00; Apprentice Fee: \$75.00; Written Examination: \$75.00; Practical Examination: \$130.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.97	Entry	\$22,822
Median	\$13.92	Median	\$28,955
Experienced	\$16.30	Experienced	\$33,911

Alabama Projections

2022 Estimated Employment:	1,420
2032 Projected Employment:	1,590
Average Total Openings:	190
Annual Growth Rate:	1.15%

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

Technology

Office suite software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Calhoun Community College
Lurleen B Wallace Community College
Snead State Community College
Gadsden State Community College
Shelton State Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Collect and analyze data on customer demographics, preferences, needs, and buying habits to identify potential markets and factors affecting product demand. Prepare reports of findings, illustrating data graphically and translating complex findings into written text. Measure and assess customer and employee satisfaction. Forecast and track marketing and sales trends, analyzing collected data. Seek and provide information to help companies determine their position in the marketplace. Measure the effectiveness of marketing, advertising, and communications programs and strategies. Conduct research on consumer opinions and marketing strategies, collaborating with marketing professionals, statisticians, pollsters, and other professionals. Attend staff conferences to provide management with information and proposals concerning the promotion, distribution, design, and pricing of company products or services. Gather data on competitors and analyze their prices, sales, and method of marketing and distribution. Monitor industry statistics and follow trends in trade literature. Devise and evaluate methods and procedures for collecting data, such as surveys, opinion polls, or questionnaires, or arrange to obtain existing data. Develop and implement procedures for identifying advertising needs. Direct trained survey interviewers. Keep abreast of government regulations and emerging Web technology to ensure regulatory compliance by reviewing current literature, talking with colleagues, participating in educational programs, attending meetings or workshops, or participating in professional organizations or conferences. Resolve product availability problems in collaboration with customer service staff.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.09	Entry	\$35,539
Median	\$26.65	Median	\$55,430
Experienced	\$38.14	Experienced	\$79,334

Alabama Projections

2022 Estimated Employment:	10,150
2032 Projected Employment:	11,520
Average Total Openings:	1,105
Annual Growth Rate:	1.28%

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

Technology

Data base user interface and query software
Web platform development software
Graphics or photo imaging software
Analytical or scientific software
Data base management system software
Enterprise resource planning ERP software
Cloud-based data access and sharing software
Development environment software
Operating system software
Sales and marketing software

4-Year Institutions with Programs

University of Alabama at Birmingham
University of North Alabama
Jacksonville State University
Samford University
University of Alabama
University of South Alabama
Auburn University at Montgomery
Alabama A & M University
University of Alabama in Huntsville
Alabama State University
University of Montevallo

2-Year Institution & ETPL Providers

Coastal Alabama Community College
Central Alabama Community College
Lawson State Community College
Chattahoochee Valley Community College
Northeast Alabama Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Consult with buying personnel to gain advice regarding environmentally sound or sustainable products. Develop business cases for environmental marketing strategies. Integrate environmental information into product or company marketing strategies, policies, or activities. Recommend modifications to products, packaging, production processes, or other characteristics to improve the environmental soundness or sustainability of products. Formulate, direct, or coordinate marketing activities or policies to promote products or services, working with advertising or promotion managers. Develop pricing strategies, balancing firm objectives and customer satisfaction. Identify, develop, or evaluate marketing strategy, based on knowledge of establishment objectives, market characteristics, and cost and markup factors. Evaluate the financial aspects of product development, such as budgets, expenditures, research and development appropriations, or return-on-investment and profit-loss projections. Direct the hiring, training, or performance evaluations of marketing or sales staff and oversee their daily activities. Negotiate contracts with vendors or distributors to manage product distribution, establishing distribution networks or developing distribution strategies. Consult with product development personnel on product specifications, such as design, color, or packaging. Compile lists describing product or service offerings. Use sales forecasting or strategic planning to ensure the sale and profitability of products, lines, or services, analyzing business developments and monitoring market trends. Select products or accessories to be displayed at trade or special production shows. Confer with legal staff to resolve problems, such as copyright infringement or royalty sharing with outside producers or distributors.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$34.73	Entry	\$72,244
Median	\$56.66	Median	\$117,850
Experienced	\$80.07	Experienced	\$166,539

Alabama Projections

2022 Estimated Employment:	1,670
2032 Projected Employment:	1,760
Average Total Openings:	145
Annual Growth Rate:	0.56%

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

Technology

Data base user interface and query software
Data base management system software
Web platform development software
Development environment software
Graphics or photo imaging software
Analytical or scientific software
Enterprise resource planning ERP software
Object or component oriented development software
Project management software
Cloud-based data access and sharing software

4-Year Institutions with Programs

Auburn University
University of Alabama
University of Alabama at Birmingham
Troy University

2-Year Institution & ETPL Providers

Central Alabama Community College
H Councill Trenholm State



Diagnose and treat mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Apply psychotherapeutic and family systems theories and techniques in the delivery of services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders.

Education: This occupation typically requires a Master's degree

OJT: Employees may 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: Develop and implement individualized treatment plans addressing family relationship problems, destructive patterns of behavior, and other personal issues. Confer with other counselors, doctors, and professionals to analyze individual cases and to coordinate counseling services. Ask questions that will help clients identify the feelings and behaviors. Counsel clients on concerns, such as unsatisfactory relationships, divorce and separation, child rearing, home management, or financial difficulties. Encourage individuals and family members to develop and use skills and strategies for confronting their problems in a constructive manner. Maintain case files that include activities, progress notes, evaluations, and recommendations. Collect information about clients using techniques such as testing, interviewing, discussion, or observation. Determine whether clients should be counseled or referred to other specialists in such fields as medicine, psychiatry, or legal aid. Confer with clients to develop plans for posttreatment activities. Follow up on results of counseling programs and clients' adjustments to determine effectiveness of programs. Provide instructions to clients on how to obtain help with legal, financial, and other personal issues. Gather information from doctors, schools, social workers, juvenile counselors, law enforcement personnel, and others to make recommendations to courts for resolution of child custody or visitation disputes. Provide public education and consultation to other professionals or groups regarding counseling services, issues, and methods. Supervise other counselors, social service staff, and assistants. Write evaluations of parents and children for use by courts deciding divorce and custody cases, testifying in court if necessary.

License: LMFT License Fee: \$325.00; LMFT License Renewal Fee: \$325.00; First Time Applicant Fee: \$150.00; Late Renewal Fee: \$200.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.83	Entry	\$35,006
Median	\$18.95	Median	\$39,425
Experienced	\$23.33	Experienced	\$48,526

Alabama Projections

2022 Estimated Employment:	480
2032 Projected Employment:	510
Average Total Openings:	35
Annual Growth Rate:	0.69%

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

Technology

Accounting software
Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Project management software
Spreadsheet software
Video conferencing software
Word processing software

4-Year Institutions with Programs

Auburn University
University of West Alabama

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Perform other adjunctive therapies or treatment techniques in addition to massage. Maintain massage areas by restocking supplies or sanitizing equipment. 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 point of the body. Massage and knead muscles and soft tissues of the body to provide treatment for medical conditions, injuries, or wellness maintenance. Maintain treatment records. Provide clients with guidance and information about techniques for postural improvement and stretching, strengthening, relaxation, and rehabilitative exercises. Assess clients' soft tissue condition, joint quality and function, muscle strength, and range of motion. Develop and propose client treatment plans that specify which types of massage are to be used. Use complementary aids, such as infrared lamps, wet compresses, ice, and whirlpool baths to promote clients' recovery, relaxation, and well-being. Consult with other health care professionals, such as physiotherapists, chiropractors, physicians, and psychologists, to develop treatment plans for clients. Prepare and blend oils and apply the blends to clients' skin.

License: Application Fee: \$25.00; License Fee: \$100.00; Renewal Fee: \$100.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$9.53	Entry	\$19,822
Median	\$12.54	Median	\$26,092
Experienced	\$19.00	Experienced	\$39,525

Alabama Projections

2022 Estimated Employment:	1,110
2032 Projected Employment:	1,320
Average Total Openings:	185
Annual Growth Rate:	1.79%

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

Technology

Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Gadsden State Community College
Wallace State Community College
Southern Union State Community College
Trenholm State Community College
Northeast Alabama Community College
Lurleen B Wallace Community College



Evaluate materials and develop machinery and processes to manufacture materials for use in products that must meet specialized design and performance specifications. Develop new uses for known materials. Includes those engineers working with composite materials or specializing in one type of material, such as graphite, metal and metal alloys, ceramics and glass, plastics and polymers, and naturally occurring materials. Includes metallurgists and metallurgical engineers, ceramic engineers, and welding engineers.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Present technical information at conferences. Analyze product failure data and laboratory test results to determine causes of problems and develop solutions. Monitor material performance, and evaluate its deterioration. Supervise the work of technologists, technicians, and other engineers and scientists. Design and direct the testing or control of processing procedures. Evaluate technical specifications and economic factors relating to process or product design objectives. Conduct or supervise tests on raw materials or finished products to ensure their quality. Perform managerial functions, such as preparing proposals and budgets, analyzing labor costs, and writing reports. Solve problems in a number of engineering fields, such as mechanical, chemical, electrical, civil, nuclear, and aerospace. Plan and evaluate new projects, consulting with other engineers and corporate executives, as necessary. Review new product plans, and make recommendations for material selection, based on design objectives such as strength, weight, heat resistance, electrical conductivity, and cost. Design processing plants and equipment. Modify properties of metal alloys, using thermal and mechanical treatments. Guide technical staff in developing materials for specific uses in projected products or devices. Plan and implement laboratory operations to develop material and fabrication procedures that meet cost, product specification, and performance standards.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$34.01	Entry	\$70,749
Median	\$48.10	Median	\$100,043
Experienced	\$57.94	Experienced	\$120,518

Alabama Projections

2022 Estimated Employment:	710
2032 Projected Employment:	800
Average Total Openings:	55
Annual Growth Rate:	1.17%

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

Technology

Analytical or scientific software
Cloud-based data access and sharing software
Computer aided design CAD software
Data base user interface and query software
Development environment software
Electronic mail software
Enterprise resource planning ERP software
Object or component oriented development software
Office suite software
Presentation software

4-Year Institutions with Programs

University of Alabama
Auburn University
University of Alabama at Birmingham

2-Year Institution & ETPL Providers



Use hands or hand tools to perform routine cutting and trimming of meat, poultry, and seafood.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations 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: Use knives, cleavers, meat saws, bandsaws, or other equipment to perform meat cutting and trimming. Clean, trim, slice, and section carcasses for future processing. Cut and trim meat to prepare for packing. Remove parts, such as skin, feathers, scales or bones, from carcass. Inspect meat products for defects, bruises or blemishes and remove them along with any excess fat. Produce hamburger meat and meat trimmings. Process primal parts into cuts that are ready for retail use. Obtain and distribute specified meat or carcass. Separate meats and byproducts into specified containers and seal containers. Weigh meats and tag containers for weight and contents. Clean and salt hides. Prepare ready-to-heat foods by filleting meat or fish or cutting it into bite-sized pieces, preparing and adding vegetables or applying sauces or breading.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.41	Entry	\$23,727
Median	\$13.76	Median	\$28,613
Experienced	\$15.02	Experienced	\$31,246

Alabama Projections

2022 Estimated Employment:	9,680
2032 Projected Employment:	10,120
Average Total Openings:	1,210
Annual Growth Rate:	0.44%

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

Technology

Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Install, service, or repair automatic door mechanisms and hydraulic doors. Includes garage door mechanics.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Prepare doors for hardware installation, such as drilling holes to install locks. Adjust doors to open or close with the correct amount of effort, or make simple adjustments to electric openers. Wind large springs with upward motion of arm. Inspect job sites, assessing headroom, side room, or other conditions to determine appropriateness of door for a given location. Collect payment upon job completion. Complete required paperwork, such as work orders, according to services performed or required. Fasten angle iron back-hangers to ceilings and tracks, using fasteners or welding equipment. Repair or replace worn or broken door parts, using hand tools. Carry springs to tops of doors, using ladders or scaffolding, and attach springs to tracks to install spring systems. Set doors into place or stack hardware sections into openings after rail or track installation. Remove or disassemble defective automatic mechanical door closers, using hand tools. Install door frames, rails, steel rolling curtains, electronic-eye mechanisms, or electric door openers and closers, using power tools, hand tools, and electronic test equipment. Assemble and fasten tracks to structures or bucks, using impact wrenches or welding equipment. Run low voltage wiring on ceiling surfaces, using insulated staples. Cut door stops or angle irons to fit openings.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.63	Entry	\$30,435
Median	\$18.00	Median	\$37,440
Experienced	\$19.96	Experienced	\$41,520

Alabama Projections

2022 Estimated Employment:	***
2032 Projected Employment:	***
Average Total Openings:	40
Annual Growth Rate:	1.11%

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

Technology

Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Apply theory and principles of mechanical engineering to modify, develop, test, or adjust machinery and equipment under direction of engineering staff or physical scientists.

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Prepare parts sketches and write work orders and purchase requests to be furnished by outside contractors. Draft detail drawing or sketch for drafting room completion or to request parts fabrication by machine, sheet or wood shops. Review project instructions and blueprints to ascertain test specifications, procedures, and objectives, and test nature of technical problems such as redesign. Review project instructions and specifications to identify, modify and plan requirements fabrication, assembly and testing. Set up and conduct tests of complete units and components under operational conditions to investigate proposals for improving equipment performance. Analyze test results in relation to design or rated specifications and test objectives, and modify or adjust equipment to meet specifications. Evaluate tool drawing designs by measuring drawing dimensions and comparing with original specifications for form and function using engineering skills. Calculate required capacities for equipment of proposed system to obtain specified performance and submit data to engineering personnel for approval. Record test procedures and results, numerical and graphical data, and recommendations for changes in product or test methods. Read dials and meters to determine amperage, voltage, electrical output and input at specific operating temperature to analyze parts performance. Estimate cost factors including labor and material for purchased and fabricated parts and costs for assembly, testing, or installing. Set up prototype and test apparatus and operate test controlling equipment to observe and record prototype test results. Analyze energy requirements and distribution systems to maximize the use of intermittent or inflexible renewable energy sources, such as wind or nuclear. Analyze or estimate production costs, such as labor, equipment, and plant space. Assemble or disassemble complex mechanical systems.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.28	Entry	\$40,100
Median	\$24.61	Median	\$51,198
Experienced	\$31.65	Experienced	\$65,840

Alabama Projections

2022 Estimated Employment:	720
2032 Projected Employment:	760
Average Total Openings:	70
Annual Growth Rate:	0.53%

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

Technology

Analytical or scientific software
Cloud-based data access and sharing software
Computer aided design CAD software
Data base user interface and query software
Development environment software
Electronic mail software
Enterprise resource planning ERP software
Object or component oriented development software
Office suite software
Presentation software

4-Year Institutions with Programs

Alabama A&M University

2-Year Institution & ETPL Providers

Calhoun Community College
Jefferson State Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Read and interpret blueprints, technical drawings, schematics, or computer-generated reports. Confer with engineers or other personnel to implement operating procedures, resolve system malfunctions, or provide technical information. Research and analyze customer design proposals, specifications, manuals, or other data to evaluate the feasibility, cost, or maintenance requirements of designs or applications. Provide feedback to design engineers on customer problems or needs. 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. Recommend design modifications to eliminate machine or system malfunctions. Develop, coordinate, or monitor all aspects of production, including selection of manufacturing methods, fabrication, or operation of product designs. Establish or coordinate the maintenance or safety procedures, service schedule, or supply of materials required to maintain machines or equipment in the prescribed condition. Write performance requirements for product development or engineering projects. Apply engineering principles or practices to emerging fields, such as robotics, waste management, or biomedical engineering. Design test control apparatus or equipment or develop procedures for testing products. Calculate energy losses for buildings, using equipment such as computers, combustion analyzers, or pressure gauges. Design integrated mechanical or alternative systems, such as mechanical cooling systems with natural ventilation systems, to improve energy efficiency. Direct the installation, operation, maintenance, or repair of renewable energy equipment, such as heating, ventilating, and air conditioning (HVAC) or water systems.

License: Application Fee: \$125.00; License Fee: \$100.00; Renewal Fee: \$100.00; Examination Fee: Traditional \$350.00, CBT \$375.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$31.80	Entry	\$66,144
Median	\$46.78	Median	\$97,292
Experienced	\$56.86	Experienced	\$118,262

Alabama Projections

2022 Estimated Employment:	4,990
2032 Projected Employment:	5,670
Average Total Openings:	355
Annual Growth Rate:	1.28%

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

Technology

Computer aided design CAD software
Object or component oriented development software
Development environment software
Configuration management software
Data base user interface and query software
Graphics or photo imaging software
Project management software
Analytical or scientific software
Cloud-based data access and sharing software
Customer relationship management CRM software

4-Year Institutions with Programs

Auburn University
University of South Alabama
University of Alabama
University of Alabama at Birmingham
University of Alabama in Huntsville
Alabama A&M University

2-Year Institution & ETPL Providers



Plan, direct, or coordinate medical and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Direct, supervise and evaluate work activities of medical, nursing, technical, clerical, service, maintenance, and other personnel. Establish objectives and evaluative or operational criteria for units managed. Direct or conduct recruitment, hiring, and training of personnel. Develop and maintain computerized record management system to store and process data, such as personnel activities and information, and to produce reports. 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. 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. Monitor the use of diagnostic services, inpatient beds, facilities, and staff to ensure effective use of resources and assess the need for additional staff, equipment, and services. Maintain awareness of advances in medicine, computerized diagnostic and treatment equipment, data processing technology, government regulations, health insurance changes, and financing options. Manage change in integrated health care delivery systems, such as work restructuring, technological innovations, and shifts in the focus of care. Prepare activity reports to inform management of the status and implementation plans of programs, services, and quality initiatives. 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. Consult with medical, business, and community groups to discuss service problems, respond to community needs, enhance public relations, coordinate activities and plans, and promote health programs. Inspect facilities and recommend building or equipment modifications to ensure emergency readiness and compliance to access, safety, and sanitation regulations.

License: Application Fee: \$150.00; State Written Exam Fee: \$350.00; Renewal Fee: \$125.00

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$29.68	Entry	\$61,729
Median	\$39.54	Median	\$82,242
Experienced	\$52.81	Experienced	\$109,840

Alabama Projections

2022 Estimated Employment:	9,130
2032 Projected Employment:	11,810
Average Total Openings:	995
Annual Growth Rate:	2.60%

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

Technology

Data base user interface and query software
Medical software
Project management software
Analytical or scientific software
Data base management system software
Development environment software
Enterprise resource planning ERP software
Spreadsheet software
Word processing software
Accounting software

4-Year Institutions with Programs

Alabama State University
Auburn University
Auburn University at Montgomery
Jacksonville State University
Troy University
University of Alabama
University of Alabama at Birmingham
University of Alabama in Huntsville
University of North Alabama
University of South Alabama
Athens State University

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Interview patients to obtain medical information and measure their vital signs, weight, and height. Record patients' medical history, vital statistics, or information such as test results in medical records. Prepare and administer medications as directed by a physician. Collect blood, tissue, or other laboratory specimens, log the specimens, and prepare them for testing. Explain treatment procedures, medications, diets, or physicians' instructions to patients. Help physicians examine and treat patients, handing them instruments or materials or performing such tasks as giving injections or removing sutures. Authorize drug refills and provide prescription information to pharmacies. Prepare treatment rooms for patient examinations, keeping the rooms neat and clean. Clean and sterilize instruments and dispose of contaminated supplies. Schedule appointments for patients. Change dressings on wounds. Contact medical facilities or departments to schedule patients for tests or admission. Perform general office duties, such as answering telephones, taking dictation, or completing insurance forms. Inventory and order medical, lab, or office supplies or equipment. Perform routine laboratory tests and sample analyses.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.69	Entry	\$26,391
Median	\$15.31	Median	\$31,850
Experienced	\$17.14	Experienced	\$35,646

Alabama Projections

2022 Estimated Employment:	12,680
2032 Projected Employment:	14,860
Average Total Openings:	1,970
Annual Growth Rate:	1.60%

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

Technology

Medical software
Accounting software
Cloud-based data access and sharing software
Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of South Alabama
Auburn University
Auburn University at Montgomery

2-Year Institution & ETPL Providers

Fortis College
Enterprise State Community College
Wallace State Community College
Genesis Allied Health Services LLC
Reliant Health Career Center
Drake State Technical College
Northwest Shoals Community College
Shelton State Community College
Gadsden State Community College
Trenholm State Community College
Lurleen B Wallace Community College
Snead State Community College
Jes Health Services
Central Alabama Community College
Calhoun Community College
Southern Union State Community College
Coastal Alabama Community College
Lawson State Community College
Wallace Community College
Northeast Alabama Community College
Chattahoochee Valley Community College
Monroe Healthcare Training Academy



Prepare, sterilize, install, or clean laboratory or healthcare equipment. May perform routine laboratory tasks and operate or inspect equipment.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Stock crash carts or other medical supplies. Maintain records of inventory or equipment usage and order medical instruments or supplies when inventory is low. Organize and assemble routine or specialty surgical instrument trays or other sterilized supplies, filling special requests as needed. Clean instruments to prepare them for sterilization. Operate and maintain steam autoclaves, keeping records of loads completed, items in loads, and maintenance procedures performed. Record sterilizer test results. Disinfect and sterilize equipment such as respirators, hospital beds, or oxygen or dialysis equipment, using sterilizers, aerators, or washers. Sterilize equipment and observe gauges and equipment operation to detect malfunctions and to ensure equipment is operating to prescribed standards. Examine equipment to detect leaks, worn or loose parts, or other indication of disrepair. Report defective equipment to appropriate supervisors or staff. Check sterile supplies to ensure they are not outdated. Attend hospital in-service programs related to areas of work specialization. Purge waste from equipment by connecting equipment to water sources and flushing water through systems.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.93	Entry	\$26,898
Median	\$15.22	Median	\$31,667
Experienced	\$17.41	Experienced	\$36,222

Alabama Projections

2022 Estimated Employment:	860
2032 Projected Employment:	920
Average Total Openings:	125
Annual Growth Rate:	0.66%

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

Technology

Medical software
Cloud-based data access and sharing software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Time accounting software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Jefferson State Community College



Test, adjust, or repair biomedical or electromedical equipment.

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Inspect, test, or troubleshoot malfunctioning medical or related equipment, following manufacturers' specifications and using test and analysis instruments. Install medical equipment. 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. Keep records of maintenance, repair, and required updates of equipment. Perform preventive maintenance or service such as cleaning, lubricating, or adjusting equipment. Test or calibrate components or equipment, following manufacturers' manuals and troubleshooting techniques, using hand tools, power tools, or measuring devices. Explain or demonstrate correct operation or preventive maintenance of medical equipment to personnel. Study technical manuals or attend training sessions provided by equipment manufacturers to maintain current knowledge. 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. Solder loose connections, using soldering iron. Test, evaluate, and classify excess or in-use medical equipment and determine serviceability, condition, and disposition, in accordance with regulations. Research catalogs or repair part lists to locate sources for repair parts, requisitioning parts and recording their receipt. Evaluate technical specifications to identify equipment or systems best suited for intended use and possible purchase, based on specifications, user needs, or technical requirements. Contribute expertise to develop medical maintenance standard operating procedures.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.26	Entry	\$35,904
Median	\$25.97	Median	\$54,022
Experienced	\$32.74	Experienced	\$68,105

Alabama Projections

2022 Estimated Employment:	1,040
2032 Projected Employment:	1,190
Average Total Openings:	115
Annual Growth Rate:	1.32%

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

Technology

Customer relationship management CRM software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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 control and care improvement efforts. Consult classification manuals to locate information about disease processes. Enter data, such as demographic characteristics, history and extent of disease, diagnostic procedures, or treatment into computer. Identify, compile, abstract, and code patient data, using standard classification systems. Maintain or operate a variety of health record indexes or storage and retrieval systems collect, classify, store, or analyze information. Post medical insurance billings. Process and prepare business or government forms. Process patient admission or discharge documents. Protect the security of medical records to ensure that confidentiality is maintained. Release information to persons or agencies according to regulations. 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. Retrieve patient medical records for physicians, technicians, or other medical personnel. Review records for completeness, accuracy, and compliance with regulations. Scan patients' health records into electronic formats.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.80	Entry	\$26,615
Median	\$17.87	Median	\$37,163
Experienced	\$22.55	Experienced	\$46,907

Alabama Projections

2022 Estimated Employment:	2,560
2032 Projected Employment:	2,800
Average Total Openings:	200
Annual Growth Rate:	0.89%

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

Technology

Medical software
Data base user interface and query software
Analytical or scientific software
Project management software
Business intelligence and data analysis software
Data base management system software
Data base reporting software
Development environment software
Electronic mail software
Enterprise resource planning ERP software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Gadsden State Community College
Shelton State Community College
Southern Union State Community College
Enterprise State Community College
George C Wallace Community College
Bishop State Community College
Reid State Technical College



Conduct research dealing with the understanding of human diseases and the improvement of human health. Engage in clinical investigation, research and development, or other related activities.

Education: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Write and publish articles in scientific journals. Write applications for research grants. Plan and direct studies to investigate human or animal disease, preventive methods, and treatments for disease. Follow strict safety procedures when handling toxic materials to avoid contamination. Evaluate effects of drugs, gases, pesticides, parasites, and microorganisms at various levels. Teach principles of medicine and medical and laboratory procedures to physicians, residents, students, and technicians. Prepare and analyze organ, tissue, and cell samples to identify toxicity, bacteria, or microorganisms or to study cell structure. Standardize drug dosages, methods of immunization, and procedures for manufacture of drugs and medicinal compounds. Investigate cause, progress, life cycle, or mode of transmission of diseases or parasites. Confer with health departments, industry personnel, physicians, and others to develop health safety standards and public health improvement programs. Consult with and advise physicians, educators, researchers, and others regarding medical applications of physics, biology, and chemistry. Use equipment such as atomic absorption spectrometers, electron microscopes, flow cytometers, or chromatography systems.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$22.10	Entry	\$45,960
Median	\$30.18	Median	\$62,777
Experienced	\$36.04	Experienced	\$74,969

Alabama Projections

2022 Estimated Employment:	1,350
2032 Projected Employment:	1,560
Average Total Openings:	95
Annual Growth Rate:	1.46%

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

Technology

Analytical or scientific software
Development environment software
Enterprise resource planning ERP software
Geographic information system
Graphics or photo imaging software
Object or component oriented development software
Office suite software
Operating system software
Presentation software
Project management software

4-Year Institutions with Programs

University of South Alabama
University of Alabama at Birmingham
Troy University
Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Schedule tests or procedures for patients, such as lab work or x-rays, based on physician orders. Schedule and confirm patient diagnostic appointments, surgeries, or medical consultations. Compile and record medical charts, reports, or correspondence, using typewriter or personal computer. Answer telephones and direct calls to appropriate staff. Receive and route messages or documents, such as laboratory results, to appropriate staff. Greet visitors, ascertain purpose of visit, and direct them to appropriate staff. Interview patients to complete documents, case histories, or forms, such as intake or insurance forms. Maintain medical records, technical library, or correspondence files. 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. 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. Transcribe recorded messages or practitioners' diagnoses or recommendations into patients' medical records. Perform bookkeeping duties, such as credits or collections, preparing and sending financial statements or bills and keeping financial records. Complete insurance or other claim forms. Prepare correspondence or assist physicians or medical scientists with preparation of reports, speeches, articles, or conference proceedings.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.05	Entry	\$29,232
Median	\$18.03	Median	\$37,501
Experienced	\$21.23	Experienced	\$44,161

Alabama Projections

2022 Estimated Employment:	5,210
2032 Projected Employment:	5,750
Average Total Openings:	625
Annual Growth Rate:	0.98%

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

Technology

Medical software
Word processing software
Accounting software
Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

George C Wallace Community College



Coordinate activities of staff, convention personnel, or clients to make arrangements for group meetings, events, or conventions.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Consult with customers to determine objectives and requirements for events, such as meetings, conferences, and conventions. Monitor event activities to ensure compliance with applicable regulations and laws, satisfaction of participants, and resolution of any problems that arise. Confer with staff at a chosen event site to coordinate details. Review event bills for accuracy and approve payment. Plan and develop programs, agendas, budgets, and services according to customer requirements. 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. Inspect event facilities to ensure that they conform to customer requirements. Maintain records of event aspects, including financial details. Conduct post-event evaluations to determine how future events could be improved. Negotiate contracts with such service providers and suppliers as hotels, convention centers, and speakers. 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. Direct administrative details, such as financial operations, dissemination of promotional materials, and responses to inquiries. Evaluate and select providers of services according to customer requirements. Read trade publications, attend seminars, and consult with other meeting professionals to keep abreast of meeting management standards and trends.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.80	Entry	\$32,874
Median	\$23.62	Median	\$49,133
Experienced	\$28.82	Experienced	\$59,950

Alabama Projections

2022 Estimated Employment:	2,890
2032 Projected Employment:	3,140
Average Total Openings:	335
Annual Growth Rate:	0.83%

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

Technology

Graphics or photo imaging software
Project management software
Word processing software
Customer relationship management CRM software
Data base user interface and query software
Desktop publishing software
Electronic mail software
Geographic information system
Office suite software
Presentation software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Master's degree

OJT: Employees may 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: Interview clients, review records, conduct assessments, or confer with other professionals to evaluate the mental or physical condition of clients or patients. 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. Counsel clients in individual or group sessions to assist them in dealing with substance abuse, mental or physical illness, poverty, unemployment, or physical abuse. Collaborate with counselors, physicians, or nurses to plan or coordinate treatment, drawing on social work experience and patient needs. Monitor, evaluate, and record client progress with respect to treatment goals. 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. Counsel or aid family members to assist them understanding, dealing with, or supporting the client or patient. Modify treatment plans according to changes in client status. 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. Develop or advise on social policy or assist in community development.

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

Hourly Wage		Annual Wage	
Entry	\$12.08	Entry	\$25,120
Median	\$17.72	Median	\$36,848
Experienced	\$20.58	Experienced	\$42,810

Alabama Projections

2022 Estimated Employment:	1,530
2032 Projected Employment:	1,650
Average Total Openings:	120
Annual Growth Rate:	0.76%

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

Technology

Cloud-based data access and sharing software
Document management software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Auburn University
Auburn University at Montgomery
Troy University
University of Alabama
Alabama State University
University of Montevallo
University of Alabama at Birmingham
Alabama A&M University
University of North Alabama
University of South Alabama
Jacksonville State University

2-Year Institution & ETPL Providers

Lawson State Community College



Plan and erect commercial displays, such as those in windows and interiors of retail stores and at trade exhibitions.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. Assemble or set up displays, furniture, or products in store space, using colors, lights, pictures, or other accessories to display the product. Supervise or train staff members on daily tasks, such as visual merchandising. Store, pack, and maintain inventory records of props, products, or display items. Take photographs of displays or signage. Plan commercial displays to entice and appeal to customers. Place prices or descriptive signs on backdrops, fixtures, merchandise, or floor. Change or rotate window displays, interior display areas, or signage to reflect changes in inventory or promotion. Obtain plans from display designers or display managers and discuss their implementation with clients or supervisors. Develop ideas or plans for merchandise displays or window decorations. Consult with advertising or sales staff to determine type of merchandise to be featured and time and place for each display. Arrange properties, furniture, merchandise, backdrops, or other accessories, as shown in prepared sketches. Construct or assemble displays or display components from fabric, glass, paper, or plastic, using hand tools or woodworking power tools, according to specifications. Collaborate with others to obtain products or other display items.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.75	Entry	\$26,512
Median	\$16.26	Median	\$33,823
Experienced	\$20.25	Experienced	\$42,126

Alabama Projections

2022 Estimated Employment:	3,050
2032 Projected Employment:	3,230
Average Total Openings:	380
Annual Growth Rate:	0.58%

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

Technology

Graphics or photo imaging software
Word processing software
Analytical or scientific software
Computer aided design CAD software
Desktop publishing software
Document management software
Electronic mail software
Office suite software
Operating system software
Presentation software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Draw smelted metal samples from furnaces or kettles for analysis, and calculate types and amounts of materials needed to ensure that materials meet specifications. Drain, transfer, or remove molten metal from furnaces, and place it into molds, using hoists, pumps, or ladles. Record production data, and maintain production logs. Operate controls to move or discharge metal workpieces from furnaces. Weigh materials to be charged into furnaces, using scales. Regulate supplies of fuel and air, or control flow of electric current and water coolant to heat furnaces and adjust temperatures. Inspect furnaces and equipment to locate defects and wear. Observe and temperature gauges or metal color and fluidity, and turn fuel valves or adjust controls to maintain required temperatures. Observe operations inside furnaces, using television screens, to ensure that problems do not occur. Remove impurities from the surface of molten metal, using strainers. Kindle fires, and shovel fuel and other materials into furnaces or onto conveyors by hand, with hoists, or by directing crane operators. Sprinkle chemicals over molten metal to bring impurities to the surface. Direct work crews in the cleaning and repair of furnace walls and flooring. Prepare material to load into furnaces, including cleaning, crushing, or applying chemicals, by using crushing machines, shovels, rakes, or sprayers. Scrape accumulations of metal oxides from floors, molds, and crucibles, and sift and store them for reclamation.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.74	Entry	\$32,744
Median	\$20.92	Median	\$43,521
Experienced	\$22.34	Experienced	\$46,460

Alabama Projections

2022 Estimated Employment:	1,050
2032 Projected Employment:	1,150
Average Total Openings:	120
Annual Growth Rate:	0.90%

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

Technology

Office suite software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Teach one or more subjects to students at the middle, intermediate, or junior high school level.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: 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. Coordinate and supervise extracurricular activities, such as clubs, student organizations, and academic contests. 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. Instruct through lectures, discussions, and demonstrations in one or more subjects, such as English, mathematics, or social studies. Prepare, administer, and grade tests and assignments to evaluate students' progress. Establish clear objectives for all lessons, units, and projects, and communicate these objectives to students. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Maintain accurate, complete, and correct student records as required by laws, district policies, and administrative regulations. Observe and evaluate students' performance, behavior, social development, and physical health. Prepare materials and classrooms for class activities. Assign lessons and correct homework. Enforce all administration policies and rules governing students. Confer with parents or guardians, other teachers, counselors, and administrators to resolve students' behavioral and academic problems.

License: Application Fee: \$35.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$45,488
Median	\$***	Median	\$58,491
Experienced	\$***	Experienced	\$60,405

Alabama Projections

2022 Estimated Employment:	11,000
2032 Projected Employment:	11,590
Average Total Openings:	810
Annual Growth Rate:	0.52%

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

Technology

Word processing software
Cloud-based data access and sharing software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Video conferencing software
Web page creation and editing software

4-Year Institutions with Programs

Jacksonville State University
Alabama A & M University
University of Alabama at Birmingham
University of West Alabama
Troy University
Samford University
University of North Alabama
Auburn University
University of Mobile
University of Alabama in Huntsville
University of Alabama

2-Year Institution & ETPL Providers



Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Conduct preventative maintenance and repair, and lubricate machines and equipment. Weld, repair, and fabricate equipment or machinery. Fabricate and dismantle parts, equipment, and machines, using a cutting torch or other cutting equipment. Troubleshoot equipment, electrical components, hydraulics, or other mechanical systems. Align machines or equipment, using hoists, jacks, hand tools, squares, rules, micrometer lasers, or plumb bobs. Replace defective parts of machine, or adjust clearances and alignment of moving parts. Connect power unit to machines or steam piping to equipment, and test unit to evaluate its mechanical operation. Assemble and install equipment, using hand tools and power tools. Position steel beams to support bedplates of machines and equipment, using blueprints and schematic drawings to determine work procedure. Signal crane operator to lower basic assembly units to bedplate, and align unit to centerline. 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. Move machinery and equipment, using hoists, dollies, rollers and trucks. 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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.48	Entry	\$38,430
Median	\$25.08	Median	\$52,170
Experienced	\$28.75	Experienced	\$59,803

Alabama Projections

2022 Estimated Employment:	1,610
2032 Projected Employment:	1,750
Average Total Openings:	145
Annual Growth Rate:	0.86%

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

Technology

Computer aided design CAD software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of West Alabama

2-Year Institution & ETPL Providers

Wallace Community College
Chattahoochee Valley Community College
Northeast Alabama Community College
Snead State Community College
Enterprise State Community College
Coastal Alabama Community College
Southern Union State Community College
Lawson State Community College
Northwest Shoals Community College
Trenholm State Community College
Bevill State Community College
Calhoun Community College
Drake State Technical College
Bishop State Community College
Reid State Technical College
Gadsden State Community College
Shelton State Community College



All assemblers and fabricators not listed separately.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Perform quality checks on products and parts. Package finished products and prepare them for shipment. Shovel, sweep, or otherwise clean work areas. Review work orders and blueprints to ensure work is performed according to specifications. Complete production reports to communicate team production level to management. Maintain production equipment and machinery. Supervise assemblers and train employees on job procedures. Operate machinery and heavy equipment, such as forklifts. Determine work assignments and procedures. Provide assistance in the production of wiring assemblies.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.31	Entry	\$25,597
Median	\$17.40	Median	\$36,192
Experienced	\$21.46	Experienced	\$44,643

Alabama Projections

2022 Estimated Employment:	44,880
2032 Projected Employment:	47,160
Average Total Openings:	5,090
Annual Growth Rate:	0.50%

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

Technology

Computer aided design CAD software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Set up, operate, or tend machines to mix or blend materials, such as chemicals, tobacco, liquids, color pigments, or explosive ingredients.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Weigh or measure materials, ingredients, or products to ensure conformance to requirements. Test samples of materials or products to ensure compliance with specifications, using test equipment. Operate or tend machine 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. Dump or pour specified amounts of materials into machinery or equipment. Observe production or monitor equipment to ensure safe and efficient operation. Stop mixing or blending machines when specified product qualities are obtained and open valves at start pumps to transfer mixtures. Collect samples of materials or products for laboratory testing. Add or mix chemicals or ingredients for processing, using hand tools or other devices. Examine materials, ingredients, or products visually or with hands to ensure conformance to established standards. Record operational or production data on specified forms. Transfer materials, supplies, or products between work areas, using moving equipment or hand tools. Tend accessory equipment, such as pumps or conveyors, to move materials or ingredients through production processes. Read work orders to determine production specifications or information. Compound or process ingredients or dyes, according to formulas. Unload mixtures into containers or onto conveyors for further processing.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.88	Entry	\$30,949
Median	\$21.40	Median	\$44,517
Experienced	\$25.16	Experienced	\$52,328

Alabama Projections

2022 Estimated Employment:	2,270
2032 Projected Employment:	2,380
Average Total Openings:	245
Annual Growth Rate:	0.44%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Repair, rewire, and troubleshoot electrical systems. Research, order, and maintain parts inventory for services and repairs. Test mechanical products and equipment after repair or assembly to ensure proper performance and compliance with manufacturers' specifications. Repair and replace damaged or worn parts. Operate and inspect machines or heavy equipment to diagnose defects. Diagnose faults or malfunctions to determine required repairs, using engine diagnostic equipment such as computerized test equipment and calibration devices. Dismantle and reassemble heavy equipment using hoists and hand tools. Clean, lubricate, and perform other routine maintenance work on equipment and vehicles. Examine parts for damage or excessive wear, using micrometers and gauges. Schedule maintenance for industrial machines and equipment, and keep equipment service records. Read and understand operating manuals, blueprints, and technical drawings. Overhaul and test machines or equipment to ensure operating efficiency. Assemble gear systems, and align frames and gears. Fit bearings to adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment. Weld or solder broken parts and structural members, using electric or gas welders and soldering tools.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.68	Entry	\$40,924
Median	\$27.31	Median	\$56,812
Experienced	\$30.47	Experienced	\$63,385

Alabama Projections

2022 Estimated Employment:	4,650
2032 Projected Employment:	5,100
Average Total Openings:	445
Annual Growth Rate:	0.94%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Mold, shape, form, cast, or carve products such as food products, figurines, tile, pipes, and candles consisting of clay, glass, plaster, concrete, stone, or combinations of materials.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Read work orders or examine parts to determine parts or sections of products to be produced. Trim or remove excess material, using scrapers, knives, or band saws. Brush or spray mold surfaces with parting agents or insert paper into molds to ensure smoothness and prevent sticking or seepage. Engrave or stamp identifying symbols, letters, or numbers on products. Assemble, insert, and adjust wires, tubes, cores, fittings, rods, or patterns into molds, using hand tools and depth gauges. Clean, finish, and lubricate molds and mold parts. Separate models or patterns from molds and examine products for accuracy. Set the proper operating temperature for each casting. Load or stack filled molds in ovens, dryers, or curing boxes, or on storage racks carts. Align and assemble parts to produce completed products, using gauges and hand tools. Operate and adjust controls of heating equipment to melt material or to cure, dry, or bake filled molds. Select sizes and type of molds according to instructions. Patch broken edges or fractures, using clay or plaster. Withdraw cores or other loose mold members after castings solidify. Repair mold defects, such as cracks or broken edges, using patterns, mold boxes, or hand tools.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.90	Entry	\$28,921
Median	\$17.17	Median	\$35,721
Experienced	\$20.06	Experienced	\$41,728

Alabama Projections

2022 Estimated Employment:	890
2032 Projected Employment:	990
Average Total Openings:	125
Annual Growth Rate:	1.00%

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

Technology

Computer aided design CAD software
Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Observe continuous operation of automatic machines to ensure that products meet specifications and to detect jams or malfunctions, making adjustments as necessary. Measure and visually inspect products for surface and dimension defects to ensure conformance to specifications, using precision measuring instruments. Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products. Position and secure workpieces on machines, and start feeding mechanisms. Turn valves and dials of machines to regulate pressure, temperature, and speed and feed rates, and to set cycle times. Remove finished or cured products from dies or molds, using hand tools, air hoses, and other equipment. Stamping identifying information on products when necessary. Skim or pour dross, slag, or impurities from molten metal, using ladles, rakes, hoes, spatulas, or spoons. Trim excess material from parts, using knives, and grind scrap plastic into powder for reuse. Cool products after processing to prevent distortion. Install dies onto machines or presses and coat dies with parting agents, according to work order specifications. Mix and measure compounds, or weigh premixed compounds, and dump them into machine tubs, cavities, or molds. Observe meters and gauges to verify and record temperatures, pressures, and press-cycle times. Spray, smoke, or coat molds with compounds to lubricate or insulate molds, using acetylene torches or sprayers. 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. Adjust equipment and workpiece holding fixtures, such as mold frames, tubs, and cutting tables, to ensure proper functioning.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.87	Entry	\$26,761
Median	\$17.52	Median	\$36,447
Experienced	\$20.82	Experienced	\$43,298

Alabama Projections

2022 Estimated Employment:	6,520
2032 Projected Employment:	7,040
Average Total Openings:	650
Annual Growth Rate:	0.76%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Perform various tasks to arrange and direct individual funeral services, such as coordinating transportation of body to mortuary, interviewing family or other authorized person to arrange details, selecting pallbearers, aiding with the selection of officials for religious rites, and providing transportation for mourners.

Education: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Plan, schedule, or coordinate funerals, burials, or cremations, arranging details such as floral delivery or the time and place of services. Manage funeral home operations, including the hiring, training, or supervision of embalmers, funeral attendants, or other staff. Clean funeral home facilities and grounds. Participate in community activities for funeral home promotion or other purposes. Remove deceased remains from place of death. Consult with families or friends of the deceased to arrange funeral details, such as obituary notice wording, casket selection, or plans for services. Obtain information needed to complete legal documents, such as death certificates or burial permits. Oversee the preparation and care of the remains of people who have died. Contact cemeteries to schedule the opening and closing of graves. Provide information on funeral service options, products, or merchandise, and maintain a casket display area. Offer counsel and comfort to bereaved families or friends. Close caskets and lead funeral corteges to churches or burial sites. Arrange for clergy members to perform needed services. Provide or arrange transportation between sites for the remains, mourners, pallbearers, clergy, or flowers. Perform embalming duties, as necessary.

License: Application Fee: \$230.00; Apprentice Application Fee: \$50.00; License Renewal Fee: \$230.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.66	Entry	\$32,567
Median	\$22.36	Median	\$46,506
Experienced	\$25.93	Experienced	\$53,934

Alabama Projections

2022 Estimated Employment:	530
2032 Projected Employment:	560
Average Total Openings:	65
Annual Growth Rate:	0.53%

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

Technology

Customer relationship management CRM software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Jefferson State Community College
Bishop State Community College



Repair and adjust electrical and mechanical equipment of inboard or inboard-outboard boat engines.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Disassemble and inspect motors to locate defective parts, using mechanic's hand tools and gauges. Mount motors to boats, and operate boats at various speeds on waterways to conduct operational tests. Start motors and monitor performance for signs of malfunctioning, such as smoke, excessive vibration, or misfiring. Document inspection and test results and work performed or to be performed. Replace parts, such as gears, magneto points, piston rings, or spark plugs, and reassemble engines. Idle motors and observe thermometers to determine the effectiveness of cooling systems. Set starter locks and align and repair steering or throttle controls, using gauges, screwdrivers, or wrenches. Adjust carburetor mixtures, electrical point settings, or timing while motors are running in water-filled test tanks. Repair engine mechanical equipment, such as power tilts, bilge pumps, or power take-offs. Inspect and repair or adjust propellers or propeller shafts. Repair or rework parts, using machine tools such as lathes, mills, drills, or grinders. Adjust generators and replace faulty wiring, using hand tools and soldering irons. Perform routine engine maintenance on motorboats, such as changing oil and filters.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.60	Entry	\$30,365
Median	\$19.86	Median	\$41,317
Experienced	\$24.60	Experienced	\$51,172

Alabama Projections

2022 Estimated Employment:	490
2032 Projected Employment:	540
Average Total Openings:	55
Annual Growth Rate:	1.06%

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

Technology

Office suite software
Presentation software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Coastal Alabama Community College
Central Alabama Community College
George C Wallace Community College
Gadsden State Community College
J. F. Drake State Technical College
Lurleen B Wallace Community College
Bishop State Community College
Shelton State Community College



Set up, operate, or tend more than one type of cutting or forming machine tool or robot.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Inspect workpieces for defects, and measure workpieces to determine accuracy of machine operation, using rules, templates, or other measuring instruments. Observe machine operation to detect workpiece defects or machine malfunctions, adjusting machines as necessary. Read blueprints or job orders to determine product specifications and tooling instructions and to plan operational sequences. Set up and operate machines, such as lathes, cutters, shears, borers, millers, grinders, presses, drills, or auxiliary machines, to make metallic and plastic workpieces. Position, adjust, and secure stock material or workpieces against stops, on arbors, or in chucks, fixtures, or automatic feeding mechanisms, manually or using hoists. Select, install, and adjust alignment of drills, cutters, dies, guides, and holding devices, using templates, measuring instruments, and hand tools. 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. Start machines and turn handwheels or valves to engage feeding, cooling, and lubricating mechanisms. Perform minor machine maintenance, such as oiling or cleaning machines, dies, or workpieces, adding coolant to machine reservoirs. Select the proper coolants and lubricants and start their flow. Remove burrs, sharp edges, rust, or scale from workpieces, using files, hand grinders, wire brushes, or power tools. Instruct other workers in machine set-up and operation. Record operational data, such as pressure readings, lengths of strokes, feed rates, or speeds. Extract or lift jammed pieces from machines, using fingers, wire hook or lift bars.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.09	Entry	\$27,234
Median	\$16.67	Median	\$34,665
Experienced	\$20.05	Experienced	\$41,710

Alabama Projections

2022 Estimated Employment:	2,060
2032 Projected Employment:	2,310
Average Total Openings:	235
Annual Growth Rate:	1.19%

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

Technology

Computer aided design CAD software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Southern Union State Community College
Trenholm State Community College
Northwest Shoals Community College
Wallace State Community College
Central Alabama Community College
Gadsden State Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Perform data backups and disaster recovery operations. Maintain and administer computer networks and related computing environments, including computer hardware, systems software, applications software, and configurations. Plan, coordinate, and implement network security measures to protect data, software, and hardware. Operate master consoles to monitor the performance of computer systems and networks and to coordinate computer network access and use. Perform routine network startup and shutdown procedures, and maintain control records. Design, configure, and test computer hardware, networking software and operating system software. Recommend changes to improve systems and network configurations, and determine hardware or software requirements related to such changes. Confer with network users about solutions to existing system problems. Monitor network performance to determine whether adjustments are needed and where changes will be needed in the future. Train people in computer system use. Load computer tapes and disks, and install software and printer paper or forms. Gather data pertaining to customer needs, and use the information to identify, predict, interpret, and evaluate system and network requirements. Analyze equipment performance records to determine the need for repair or replacement. Maintain logs related to network functions, as well as maintenance and repair records. Maintain an inventory of parts for emergency repairs.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$25.68	Entry	\$53,418
Median	\$38.85	Median	\$80,813
Experienced	\$47.79	Experienced	\$99,395

Alabama Projections

2022 Estimated Employment:	5,180
2032 Projected Employment:	5,250
Average Total Openings:	295
Annual Growth Rate:	0.12%

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

Technology

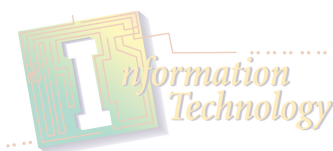
Web platform development software
Development environment software
Data base management system software
Data base user interface and query software
Operating system software
Object or component oriented development software
Project management software
Application server software
Enterprise application integration software
Enterprise resource planning ERP software

4-Year Institutions with Programs

University of Alabama
Troy University
Auburn University
University of Alabama in Huntsville
University of Alabama at Birmingham
Talladega College
Herzing University-Birmingham
University of Mobile
Samford University
Faulkner University
Columbia Southern University

2-Year Institution & ETPL Providers

Coastal Alabama Community College
Central Alabama Community College
Chattahoochee Valley Community College
Enterprise State Community College
Bishop State Community College
Gadsden State Community College
Shelton State Community College
Bevill State Community College
H Councill Trenholm State
J. F. Drake State Technical College
Jefferson State Community College
Northwest Shoals Community College
John C Calhoun State Community College
Lawson State Community College
Lurleen B Wallace Community College
Northeast Alabama Community College
George C Wallace Community College
Southern Union State Community College
Snead State Community College



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: This occupation typically requires a Master's degree

OJT: Employees may 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: Administer post-anesthesia medications or fluids to support patients' cardiovascular systems. Evaluate patient post-surgical or post-anesthesia responses, taking appropriate corrective actions or requesting consultation if complications occur. Perform pre-anesthetic screenings, including physical evaluations and patient interviews, and document results. Select and prescribe post-anesthesia medications or treatments to patients. Select, order, or administer pre-anesthetic medications. Discharge patients from post-anesthesia care. Perform or evaluate the results of diagnostic tests, such as radiographs (x-rays) and electrocardiograms (EKGs). Manage patients' airway or pulmonary status, using techniques such as endotracheal intubation, mechanical ventilation pharmacological support, respiratory therapy, and extubation. Monitor patients' responses, including skin color pupil dilation, pulse, heart rate, blood pressure, respiration, ventilation, or urine output, using invasive and noninvasive techniques. 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. Respond to emergency situations by providing airway management, administering emergency fluids or drugs, or using basic or advanced cardiac life support techniques. Select, order, or administer anesthetics, adjuvant drugs, accessory drugs, fluids or blood products as necessary. Assess patients' medical histories to predict anesthesia response. Develop anesthesia care plans.

License: Initial Application Fee for CRNA: \$175.00;

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$69.01	Entry	\$143,543
Median	\$85.04	Median	\$176,888
Experienced	\$104.64	Experienced	\$217,650

Alabama Projections

2022 Estimated Employment:	1,390
2032 Projected Employment:	1,610
Average Total Openings:	80
Annual Growth Rate:	1.50%

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

Technology

Medical software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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: This occupation typically requires a Master's degree

OJT: Employees may 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: Educate patients about self-management of acute or chronic illnesses, tailoring instructions to patients' individual circumstances. Schedule follow-up visits to monitor patients or evaluate health or illness care. 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. Order, perform, or interpret the results of diagnostic tests, such as complete blood counts (CBCs), electrocardiograms (EKGs), and radiograph (x-rays). 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. Diagnose or treat chronic health care problems, such as high blood pressure and diabetes. Diagnose or treat complex, unstable, comorbid, episodic, or emergency conditions in collaboration with other health care providers as necessary. 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. Detect and respond to adverse drug reactions, with special attention to vulnerable populations such as infants, children, pregnant and lactating women, or older adults. Develop treatment plans, based on scientific rationale, standard of care, and professional practice guidelines. Perform primary care procedures such as suturing, splinting, administering immunizations, taking cultures, and debriding wounds. Perform routine or annual physical examinations. Prescribe medications based on efficacy, safety, and cost as legally authorized.

License: Initial Application Fee for CNS: \$175.00

Outlook: Excellent

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$39.54	Entry	\$82,251
Median	\$48.44	Median	\$100,750
Experienced	\$56.77	Experienced	\$118,083

Alabama Projections

2022 Estimated Employment:	4,540
2032 Projected Employment:	6,810
Average Total Openings:	480
Annual Growth Rate:	4.15%

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

Technology

Medical software
Cloud-based data access and sharing software
Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of South Alabama
Troy University
Auburn University at Montgomery
Auburn University
University of Alabama at Birmingham
University of Alabama in Huntsville
University of Alabama
Jacksonville State University

2-Year Institution & ETPL Providers

Lurleen B Wallace Community College
Coastal Alabama Community College
Southern Union State Community College
Lawson State Community College
Bevill State Community College
Northeast Alabama Community College
Central Alabama Community College
Jefferson State Community College
Snead State Community College
Shelton State Community College



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Administer medications or treatments, such as catheterizations, suppositories, irrigations, enemas, massages, or douches, as directed by a physician or nurse. Apply clean dressings, slings, stockings, or support bandages under direction of nurse or physician. Assist nurses or physicians in the operation of medical equipment or provision of patient care. Change bed linens or make beds. Clean and sanitize patient rooms, bathrooms, examination rooms, or other patient areas. Collect specimens, such as urine, feces, or sputum. Communicate with patients to ascertain feelings or need for assistance or social and emotional support. Document or otherwise report observations of patient behavior, complaints, or physical symptoms to nurses. Feed patients or assist patients to eat or drink. Gather information from caregivers, nurses, or physicians about patient condition, treatment plans, or appropriate activities. Measure and record food and liquid intake or urinary and fecal output. Report changes to medical or nursing staff. Observe or examine patients to detect symptoms that may require medical attention, such as bruises, open wounds, or blood in urine. Position or hold patients in position for surgical preparation. Prepare or serve food trays. 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.

License: Application fee: \$50; Transaction fee: \$3.50

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.22	Entry	\$23,336
Median	\$13.47	Median	\$28,015
Experienced	\$14.99	Experienced	\$31,174

Alabama Projections

2022 Estimated Employment:	23,150
2032 Projected Employment:	24,450
Average Total Openings:	3,500
Annual Growth Rate:	0.55%

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

Technology

Medical software
Business intelligence and data analysis software
Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Gadsden State Community College
H Councill Trenholm State
Lurleen B Wallace Community College
Southern Union State Community College
Snead State Community College
Calhoun Community College
Chattahoochee Valley Community College
George C Wallace Community College
J. F. Drake State Technical College
Reid State Technical College
Lawson State Community College
Coastal Alabama Community College
Shelton State Community College
Bishop State Community College



Review, evaluate, and analyze work environments and design programs and procedures to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. May conduct inspections and enforce adherence to laws and regulations governing the health and safety of individuals. May be employed in the public or private sector.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Recommend measures to help protect workers from potentially hazardous work methods, processes, or materials. Investigate the adequacy of ventilation, exhaust equipment, lighting, or other conditions that could affect employee health, comfort, or performance. Develop or maintain hygiene programs, such as noise surveys, continuous atmosphere monitoring, ventilation surveys, or asbestos management plans. Inspect or evaluate workplace environments, equipment, or practices to ensure compliance with safety standards and government regulations. Collaborate with engineers or physicians to institute control or remedial measures for hazardous or potentially hazardous conditions or equipment. Conduct safety training or education programs and demonstrate the use of safety equipment. Provide new-employee health and safety orientations and develop materials for these presentations. Investigate health-related complaints and inspect facilities to ensure that they comply with public health legislation and regulations. Coordinate "right-to-know" programs regarding hazardous chemicals or other substances. Maintain or update emergency response plans or procedures. Develop or maintain medical monitoring programs for employees. Inspect specified areas to ensure the presence of fire prevention equipment, safety equipment, or first-aid supplies. Conduct audits at hazardous waste sites or industrial sites or participate in hazardous waste site investigations. Collect samples of hazardous materials or arrange for sample collection. Maintain inventories of hazardous materials or hazardous wastes, using waste tracking systems to ensure that materials are handled properly.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$22.75	Entry	\$47,313
Median	\$34.14	Median	\$71,009
Experienced	\$41.68	Experienced	\$86,686

Alabama Projections

2022 Estimated Employment:	1,790
2032 Projected Employment:	2,130
Average Total Openings:	240
Annual Growth Rate:	1.74%

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

Technology

Cloud-based data access and sharing software
Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Project management software
Spreadsheet software
Web platform development software

4-Year Institutions with Programs

Athens State University
Jacksonville State University
University of North Alabama

2-Year Institution & ETPL Providers

Bishop State Community College



Collect data on work environments for analysis by occupational health and safety specialists. Implement and conduct evaluation of programs designed to limit chemical, physical, biological, and ergonomic risks to workers.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Maintain all required environmental records and documentation. Supply, operate, or maintain personal protective equipment. Prepare or calibrate equipment used to collect or analyze samples. Test workplaces for environmental hazards, such as exposure to radiation, chemical or biological hazards, or excessive noise. Prepare or review specifications or orders for the purchase of safety equipment, ensuring that proper features are present and that items conform to health and safety standards. Examine credentials, licenses, or permits to ensure compliance with licensing requirements. Educate the public about health issues or enforce health legislation to prevent disease, to promote health, or to help people understand health protection procedures and regulations. Review records or reports concerning laboratory results, staffing, floor plans, fire inspections, or sanitation to gather information for the development or enforcement of safety activities. Prepare documents to be used in legal proceedings, testifying in such proceedings when necessary. Plan emergency response drills. Maintain logbooks of daily activities, including areas visited or activities performed. Confer with schools, state authorities, or community groups to develop health standards or programs. Collect data regarding potential hazards from new equipment or products linked to green practices. Collect data related to ecological or human health risks at brownfield sites. Examine practices at green building sites to determine whether adherence to green building standards alters risks to workers.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.99	Entry	\$41,572
Median	\$23.74	Median	\$49,372
Experienced	\$28.73	Experienced	\$59,764

Alabama Projections

2022 Estimated Employment:	280
2032 Projected Employment:	330
Average Total Openings:	40
Annual Growth Rate:	1.58%

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

Technology

Cloud-based data access and sharing software
Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of North Alabama
University of South Alabama
University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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: This occupation typically requires a Master's degree

OJT: Employees may 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: Train caregivers in providing for the needs of a patient during and after therapy. Complete and maintain necessary records. Evaluate patients' progress and prepare reports that detail progress. Test and evaluate patients' physical and mental abilities and analyze medical data to determine realistic rehabilitation goals for patients. Select activities that will help individuals learn work and life-management skills within limits of their mental or physical capabilities. Plan, organize, and conduct occupational therapy programs in hospital, institutional, or community settings to help rehabilitate persons with disabilities because of illness, injury or psychological or developmental problems. Recommend changes in patients' work or living environments, consistent with their needs and capabilities. Consult with rehabilitation team to select activity programs or coordinate occupational therapy with other therapeutic activities. 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. Provide training and supervision in therapy techniques and objectives for students or nurses and other medical staff. Design and create, or requisition, special supplies and equipment, such as splints, braces, and computer-aided adaptive equipment. Plan and implement programs and social activities to help patients learn work or school skills and adjust to handicaps. Lay out materials such as puzzles, scissors and eating utensils for use in therapy, and clean and repair these tools after therapy sessions. Advise on health risks in the workplace or on health-related transition to retirement. Conduct research in occupational therapy.

License: Initial License Fee: \$140.00; Annual Renewal Fee: \$140.00; Late Fee: \$50.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$30.48	Entry	\$63,390
Median	\$40.52	Median	\$84,292
Experienced	\$48.07	Experienced	\$99,990

Alabama Projections

2022 Estimated Employment:	1,210
2032 Projected Employment:	1,380
Average Total Openings:	85
Annual Growth Rate:	1.35%

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

Technology

Medical software
Office suite software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

University of South Alabama
Alabama State University
University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Communicate and collaborate with other healthcare professionals involved with the care of a patient. Attend continuing education classes. Attend care plan meetings to review patient progress and update care plans. Observe and record patients' progress, attitudes, and behavior and maintain this information in client records. Maintain and promote a positive attitude toward clients and their treatment programs. Monitor patients' performance in therapy activities, providing encouragement. Select therapy activities to fit patients' needs and capabilities. Instruct, or assist in instructing, patients and families in home programs, basic living skills, or the care and use of adaptive equipment. Evaluate the daily living skills or capacities of clients with physical, developmental, or mental health disabilities. Aid patients in dressing and grooming themselves. Implement, or assist occupational therapists with implementing, treatment plans designed to help clients function independently. 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. 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: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$25.56	Entry	\$53,159
Median	\$30.69	Median	\$63,836
Experienced	\$33.88	Experienced	\$70,465

Alabama Projections

2022 Estimated Employment:	460
2032 Projected Employment:	610
Average Total Openings:	85
Annual Growth Rate:	2.74%

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

Technology

Data base user interface and query software
Electronic mail software
Medical software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Wallace State Community College



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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. Adjust handwheels and depress pedals to control attachments, such as blades, buckets, scrapers, or swing booms. Start engines, move throttles, switches, or levers, or depress pedals to operate machines, such as bulldozers, trench excavators, road graders, or backhoes. Locate underground services, such as pipes or wires, prior to beginning work. Monitor operations to ensure that health and safety standards are met. Align machines, cutterheads, or depth gauge makers with reference stakes and guidelines or ground or position equipment, following hand signals of other workers. 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. Coordinate machine actions with other activities, positioning or moving loads in response to hand or audio signals from crew members. Operate tractors or bulldozers to perform such tasks as clearing land, mixing sludge, trimming backfills, or building roadways or parking lots. Repair and maintain equipment, making emergency adjustments or assisting with major repairs as necessary. Check fuel supplies at sites to ensure adequate availability. Connect hydraulic hoses, belts, mechanical linkages, or power takeoff shafts to tractors. Operate loaders to pull out stumps, rip asphalt or concrete, rough-grade properties, bury refuse, or perform general cleanup.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.75	Entry	\$32,761
Median	\$19.33	Median	\$40,210
Experienced	\$23.56	Experienced	\$49,010

Alabama Projections

2022 Estimated Employment:	10,200
2032 Projected Employment:	11,050
Average Total Openings:	970
Annual Growth Rate:	0.80%

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

Technology

Electronic mail software
Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

International Union of Operating Engineers



Formulate and apply mathematical modeling and other optimizing methods to develop and interpret information that assists management with decisionmaking, policy formulation, or other managerial functions. May collect and analyze data and develop decision support software, services, or products. May develop and supply optimal time, cost, or logistics networks for program evaluation, review, or implementation.

Education: This occupation typically requires a Bachelor's degree

OJT: Employees may 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: Present the results of mathematical modeling and data analysis to management or other end users. Educate staff in the use of mathematical models. Review research literature. Formulate mathematical or simulation models of problems, relating constants and variables, restrictions, alternatives, conflicting objectives, and their numerical parameters. Collaborate with others in the organization to ensure successful implementation of chosen problem solutions. Analyze information obtained from management to conceptualize and define operational problems. Perform validation and testing of models to ensure adequacy, and reformulate models, if necessary. Collaborate with senior managers and decision makers to identify and solve a variety of problems and to clarify management objectives. Define data requirements, and gather and validate information, applying judgment and statistical tests. Study and analyze information about alternative courses of action to determine which plan will offer the best outcomes. Prepare management reports defining and evaluating problems and recommending solutions. Break systems into their components, assign numerical values to each component, and examine the mathematical relationships between them. Specify manipulative or computational methods to be applied to models. Observe the current system in operation, and gather and analyze information about each of the component problems, using a variety of sources. Design, conduct, and evaluate experimental operations. Modify models in cases where models cannot be developed from existing data.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$32.29	Entry	\$67,168
Median	\$51.37	Median	\$106,840
Experienced	\$61.89	Experienced	\$128,729

Alabama Projections

2022 Estimated Employment:	530
2032 Projected Employment:	630
Average Total Openings:	45
Annual Growth Rate:	1.63%

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

Technology

Analytical or scientific software
Application server software
Business intelligence and data analysis software
Cloud-based data access and sharing software
Cloud-based management software
Customer relationship management CRM software
Data base management system software
Data base reporting software
Data base user interface and query software
Development environment software

4-Year Institutions with Programs

University of Montevallo
Troy University
Auburn University
University of Alabama
University of North Alabama
University of Alabama in Huntsville

2-Year Institution & ETPL Providers



Assist ophthalmologists by performing ophthalmic clinical functions. May administer eye exams, administer eye medications, and instruct the patient in care and use of corrective lenses.

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Administer topical ophthalmic or oral medications. Assess refractive conditions of eyes, using retinoscopes. Assist patients to insert or remove contact lenses. Call patients to inquire about their post-operative status or recovery. Clean or sterilize ophthalmic or surgical instruments. Conduct ocular motility tests to measure function of eye muscles. Conduct visual field tests to measure field of vision. Instruct patients in the care and use of contact lenses. Maintain ophthalmic instruments or equipment. Measure and record lens power, using lensometers. Measure visual acuity, including near, distance, pinhole, or dynamic visual acuity, using appropriate tests. Operate ophthalmic equipment, such as autorefractors, phoropters, tomographs, or retinoscopes. Take anatomical or functional ocular measurements of the eye or surrounding tissue, such as axial length measurements. Take and document patients' medical histories. Adjust or make minor repairs to spectacles or eyeglasses.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.46	Entry	\$27,991
Median	\$16.58	Median	\$34,493
Experienced	\$18.53	Experienced	\$38,550

Alabama Projections

2022 Estimated Employment:	1,160
2032 Projected Employment:	1,380
Average Total Openings:	155
Annual Growth Rate:	1.76%

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

Technology

Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Wallace Community College
Jefferson State Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Order and purchase frames and lenses. Measure clients' bridge and eye size, temple length, vertex distance, pupillary distance, and optical centers of eyes, using measuring devices. Verify that finished lenses are ground to specifications. Assist clients in selecting frames according to style and color, and ensure that frames are coordinated with facial and eye measurements and optical prescriptions. Maintain records of customer prescriptions, work orders, and payments. Perform administrative duties, such as tracking inventory and sales, submitting patient insurance information, and performing simple bookkeeping. Recommend specific lenses, lens coatings, and frames to suit client needs. Sell goods such as contact lenses, spectacles, sunglasses, and goods related to eyes, in general. Heat, shape, or bend plastic or metal frames to adjust eyeglasses to fit clients, using pliers and hands. Instruct clients in how to wear and care for eyeglasses. Determine clients' current lens prescriptions, when necessary, using lensometers or lens analyzers and clients' eyeglasses. Show customers how to insert, remove, and care for their contact lenses. Obtain a customer's previous record, or verify a prescription with the examining optometrist or ophthalmologist. Arrange and maintain displays of optical merchandise. Fabricate lenses to meet prescription specifications.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.73	Entry	\$24,392
Median	\$14.71	Median	\$30,607
Experienced	\$17.61	Experienced	\$36,638

Alabama Projections

2022 Estimated Employment:	780
2032 Projected Employment:	840
Average Total Openings:	75
Annual Growth Rate:	0.75%

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

Technology

Accounting software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

George C Wallace Community College
Gadsden State Community College



Diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes and visual system, diagnose problems or impairments, prescribe corrective lenses, and provide treatment. May prescribe therapeutic drugs to treat specific eye conditions.

Education: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Examine eyes, using observation, instruments, and pharmaceutical agents, to determine visual acuity and perception, focus, and coordination and to diagnose diseases and other abnormalities, such as glaucoma or color blindness. Analyze test results and develop a treatment plan. Prescribe, supply, fit and adjust eyeglasses, contact lenses, and other vision aids. Prescribe medications to treat eye diseases if state laws permit. Educate and counsel patients on contact lens care, visual hygiene, lighting arrangements, and safety factors. Consult with and refer patients to ophthalmologist or other health care practitioner if additional medical treatment is determined necessary. Remove foreign bodies from the eye. Provide patients undergoing eye surgeries, such as cataract and laser vision correction, with pre- and post-operative care. Prescribe therapeutic procedures to correct or conserve vision. Provide vision therapy and low-vision rehabilitation.

License: Examination Fee: \$500.00; Renewal Fee: \$160.00; Therapeutic Fee: \$100.00; Alabama Drug Data Base Fee: \$10.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$32.91	Entry	\$68,456
Median	\$53.28	Median	\$110,825
Experienced	\$70.92	Experienced	\$147,519

Alabama Projections

2022 Estimated Employment:	560
2032 Projected Employment:	610
Average Total Openings:	25
Annual Growth Rate:	0.93%

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

Technology

Accounting software
Data base user interface and query software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham

2-Year Institution & ETPL Providers



Operate or tend machines to prepare industrial or consumer products for storage or shipment. Includes cannery workers who pack food products.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Observe machine operations to ensure quality and conformity of filled or packaged products to standards. Adjust machine components and machine tension and pressure according to size or processing angle of product. Tend or operate machine that packages product. Remove finished packaged items from machine and separate rejected items. Regulate machine flow, speed, or temperature. Stop or reset machines when malfunctions occur, clear machine jams, and report malfunctions to a supervisor. Secure finished packaged items by hand tying, sewing, gluing, stapling, or attaching fastener. 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. Inspect and remove defective products and packaging material. Clean and remove damaged or otherwise inferior materials to prepare raw products for processing. Sort, grade, weigh, and inspect products, verifying and adjusting product weight or measurement to meet specifications. Clean, oil, and make minor adjustments or repairs to machinery and equipment, such as opening valves or setting guides. Monitor the production line, watching for problems such as pile-ups, jams, or glue that isn't sticking properly. Stack finished packaged items, or wrap protective material around each item, and pack the items in cartons or containers. Start machine by engaging controls.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.70	Entry	\$26,417
Median	\$15.57	Median	\$32,391
Experienced	\$18.96	Experienced	\$39,445

Alabama Projections

2022 Estimated Employment:	3,000
2032 Projected Employment:	3,190
Average Total Openings:	345
Annual Growth Rate:	0.60%

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

Technology

Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Examine and inspect containers, materials, or products to ensure that product quality and packing specification are met. Mark and label containers, container tags, or products, using marking tools. Measure, weigh, and count products and materials. Record product, packaging, and order information on specified forms and records. Remove completed or defective products or materials, placing them on moving equipment, such as conveyors or in specified areas, such as loading docks. Seal containers or materials, using glues, fasteners, nails, and hand tools. Load materials and products into package processing equipment. Assemble, line, and pad cartons, crates, and containers, using hand tools. Clean containers, materials, supplies, or work areas, using cleaning solutions and hand tools. Transport packages to customers' vehicles. Place or pour products or materials into containers, using hand tools and equipment, or fill containers from spouts or chutes. Obtain, move, and sort products, materials, containers, and orders, using hand tools.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data				Alabama Projections	
Hourly Wage		Annual Wage		2022 Estimated Employment:	8,400
Entry	\$10.39	Entry	\$21,606	2032 Projected Employment:	8,560
Median	\$12.73	Median	\$26,469	Average Total Openings:	1,225
Experienced	\$14.49	Experienced	\$30,136	Annual Growth Rate:	0.19%

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

Technology

Computer aided design CAD software
Enterprise resource planning ERP software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Cover surfaces with dropcloths or masking tape and paper to protect surfaces during painting. Fill cracks, hole or joints with caulk, putty, plaster, or other fillers, using caulking guns or putty knives. Apply primers or sealers 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. Calculate amounts of required materials and estimate costs, based on surface measurements or work orders. Read work orders or receive instructions from supervisors or homeowners to determine work requirements. Erect scaffolding or swing gates, or set up ladders, to work above ground level. Remove fixtures such as pictures, door knobs, lamps, or electric switch covers prior to painting. Wash and treat surfaces with oil, turpentine, mildew remover, or other preparations, and sand rough spots to ensure that finishes will adhere properly. Mix and match colors of paint, stain, or varnish with oil or thinning and drying additives to obtain desired colors and consistencies. Remove old finishes by stripping, sanding, wire brushing, burning, or using water or abrasive blasting. Select and purchase tools or finishes for surfaces to be covered, considering durability, ease of handling, methods of application, and customers' wishes. Smooth surfaces, using sandpaper, scrapers, brushes, steel wool, or sanding machines. Polish final coats to specified finishes. Use special finishing techniques such as sponging, ragging, layering, or faux finishing.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.18	Entry	\$29,485
Median	\$18.52	Median	\$38,514
Experienced	\$22.08	Experienced	\$45,930

Alabama Projections

2022 Estimated Employment:	3,950
2032 Projected Employment:	4,100
Average Total Openings:	325
Annual Growth Rate:	0.38%

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

Technology

Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Gather and analyze research data, such as statutes, decisions, and legal articles, codes, and documents. Call upon witnesses to testify at hearing. Direct and coordinate law office activity, including delivery of subpoenas. Keep and monitor legal volumes to ensure that law library is up-to-date. Prepare affidavits or other documents such as legal correspondence, and organize and maintain documents in paper or electronic filing system. Meet with clients and other professionals to discuss details of case. Arbitrate disputes between parties and assist in the real estate closing process, such as by reviewing title searches. 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. Prepare, edit, or review legal documents, including legislation, briefs, pleadings, appeals, wills, contracts, and real estate closing statements.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.47	Entry	\$34,263
Median	\$23.06	Median	\$47,962
Experienced	\$28.30	Experienced	\$58,863

Alabama Projections

2022 Estimated Employment:	3,990
2032 Projected Employment:	4,210
Average Total Openings:	435
Annual Growth Rate:	0.52%

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

Technology

Office suite software
Word processing software
Accounting software
Cloud-based data access and sharing software
Data base user interface and query software
Document management software
Electronic mail software
Presentation software
Project management software
Spreadsheet software

4-Year Institutions with Programs

Auburn University
Auburn University at Montgomery

2-Year Institution & ETPL Providers

Enterprise State Community College
Bevill State Community College
Shelton State Community College
Northeast Alabama Community College
Gadsden State Community College
Coastal Alabama Community College
George C Wallace Community College
Calhoun Community College



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Administer drugs, orally or by injection, or perform intravenous procedures. 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. 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. Coordinate work with other emergency medical team members or police or fire department personnel. Instruct emergency medical response team about emergency interventions to ensure correct application of procedures. Observe, record, and report to physician the patient's condition or injury, the treatment provided, and reactions to drugs or treatment. Operate equipment, such as electrocardiograms (EKGs), external defibrillators, or bag valve mask resuscitators, in advanced life support environments. Perform emergency cardiac care, such as cardioversion and manual defibrillation. Perform emergency invasive intervention before delivering patient to an acute care facility. Perform emergency pharmacological interventions.

License: License Fee: \$12.00; Renewal Fee: \$40.00; Renewal Expired: \$50.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.79	Entry	\$28,681
Median	\$18.12	Median	\$37,691
Experienced	\$20.26	Experienced	\$42,137

Alabama Projections

2022 Estimated Employment:	1,560
2032 Projected Employment:	1,710
Average Total Openings:	90
Annual Growth Rate:	0.91%

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

Technology

Medical software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Fortis College
Columbia Southern University
Herzing University-Birmingham
University of South Alabama

2-Year Institution & ETPL Providers

Lurleen B Wallace Community College
George C Wallace Community College
Northeast Alabama Community College
Jefferson State Community College
John C Calhoun State Community College
Enterprise State Community College
Southern Union State Community College
Bevill State Community College
H Councill Trenholm State
Northwest Shoals Community College
Coastal Alabama Community College
Gadsden State Community College
Chattahoochee Valley Community College
Lawson State Community College



Sell spare and replacement parts and equipment in repair shop or parts store.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Fill customer orders from stock, and place orders when requested items are out of stock. Assist customers, such as responding to customer complaints and updating them about back-ordered parts. Locate and label parts, and maintain inventory of stock. Pick up and deliver parts. Maintain and clean work and inventory areas. Manage shipments by researching shipping methods or costs and tracking packages. Read catalogs, microfiche viewers, or computer displays to determine replacement part stock numbers and prices. Determine replacement parts required, according to inspections of old parts, customer requests, or customers' descriptions of malfunctions. Receive and fill telephone orders for parts. Prepare sales slips or sales contracts. Receive payment or obtain credit authorization. Advise customers on substitution or modification of parts when identical replacements are not available. Examine returned parts for defects, and exchange defective parts or refund money. Mark and store parts in stockrooms, according to prearranged systems. Discuss use and features of various parts, based on knowledge of machines or equipment.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.83	Entry	\$22,524
Median	\$13.73	Median	\$28,551
Experienced	\$17.86	Experienced	\$37,157

Alabama Projections

2022 Estimated Employment:	***
2032 Projected Employment:	***
Average Total Openings:	635
Annual Growth Rate:	0.44%

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

Technology

Document management software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham
University of North Alabama

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Control traffic. Start machine, engage clutch, and push and move levers to guide machine along forms or guidelines and to control the operation of machine attachments. Inspect, clean, maintain, and repair equipment using mechanics' hand tools, or report malfunctions to supervisors. Operate machines to spread, smooth, level or steel-reinforce stone, concrete, or asphalt on road beds. Operate oil distributors, loaders, chip spreaders, dump trucks, and snow plows. Coordinate truck dumping. Set up and tear down equipment. Operate tamping machines or manually roll surfaces to compact earth fills, foundation forms, and finished road materials, according to grade specifications. Shovel blacktop. Drive machines onto truck trailers, and drive trucks to transport machines and material to and from job sites. Observe distribution of paving material to adjust machine settings or material flow, and indicate low spots for workers to add material. Light burners or start heating units of machines, and regulate screed temperatures and asphalt flow rates. Control paving machines to push dump trucks and to maintain a constant flow of asphalt or other material into hoppers or screeds. Set up forms and lay out guidelines for curbs, according to written specifications, using string, spray paint, and concrete or water mixes. Fill tanks, hoppers, or machines with paving materials.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.45	Entry	\$27,968
Median	\$17.46	Median	\$36,319
Experienced	\$21.48	Experienced	\$44,685

Alabama Projections

2022 Estimated Employment:	730
2032 Projected Employment:	810
Average Total Openings:	70
Annual Growth Rate:	1.09%

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

Technology

Computer aided design CAD software
Electronic mail software
Office suite software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

International Union of Operating Engineers



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: This occupation typically requires a Bachelor's degree

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

Tasks: 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. 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. Implement financial planning recommendations, or refer clients to someone who can assist them with plan implementation. Prepare or interpret for clients information, such as investment performance reports, financial document summaries, or income projections. Guide clients in the gathering of information, such as bank account records, income tax returns, life and disability insurance records, pension plans, or wills. Contact clients periodically to determine any changes in their financial status. 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. Open accounts for clients, and disburse funds from accounts to creditors as agent for clients. Conduct seminars or workshops on financial planning topics, such as retirement planning, estate planning, or the evaluation of severance packages. Inform clients about tax benefit government rebates, or other financial benefits of alternative-fuel vehicle purchases or energy-efficient home construction, improvements, or remodeling. Recommend environmentally responsible investments, such as cleantech, alternative energy, or conservation technologies, companies, or funds. Recommend to clients strategies in cash management, insurance coverage, investment planning, or other areas to help them achieve their financial goals. Review clients' accounts and plans regularly to determine whether life changes, economic changes, environmental concerns, or financial performance indicate a need for plan reassessment.

License: Filing Fee: \$250.00; Application Fee: \$70.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.15	Entry	\$43,995
Median	\$35.96	Median	\$74,793
Experienced	\$69.80	Experienced	\$145,182

Alabama Projections

2022 Estimated Employment:	3,170
2032 Projected Employment:	3,560
Average Total Openings:	245
Annual Growth Rate:	1.15%

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

Technology

Data base user interface and query software
Customer relationship management CRM software
Development environment software
Electronic mail software
Enterprise resource planning ERP software
Object or component oriented development software
Office suite software
Presentation software
Project management software
Spreadsheet software

4-Year Institutions with Programs

University of Alabama
Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Recommend treatment and prevention methods for pest problems to clients. Measure area dimensions required for treatment, calculate fumigant requirements, and estimate cost for service. 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. 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. Direct, or assist other workers in, treatment or extermination processes to eliminate or control rodents, insects, or weeds. Drive truck equipped with power spraying equipment. Post warning signs and lock building doors to secure area to be fumigated. Cut or bore openings in building or surrounding concrete, access infested areas, insert nozzle, and inject pesticide to impregnate ground. Study preliminary reports or diagrams of infested areas and determine treatment type required to eliminate and prevent recurrence of infestation. Set mechanical traps or place poisonous paste or bait in sewers, burrows, or ditches. Clean and remove blockages from infested areas to facilitate spraying procedures and provide drainage, using brooms, mops, shovels, or rakes.

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

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.82	Entry	\$26,663
Median	\$17.31	Median	\$36,001
Experienced	\$20.27	Experienced	\$42,162

Alabama Projections

2022 Estimated Employment:	2,570
2032 Projected Employment:	2,810
Average Total Openings:	365
Annual Growth Rate:	0.91%

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

Technology

Accounting software
Cloud-based data access and sharing software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Fill sprayer tanks with water and chemicals, according to formulas. Mix pesticides, herbicides, or fungicides for application to trees, shrubs, lawns, or botanical crops. Cover areas to specified depths with pesticides, applying knowledge of weather conditions, droplet sizes, elevation-to-distance ratios, and obstructions. Lift, push, and swing nozzles, hoses, and tubes to direct spray over designated areas. 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. Provide driving instructions to truck drivers to ensure complete coverage of designated areas, using hand and horn signals. Plant grass with seed spreaders, and operate straw blowers to cover seeded areas with mixtures of asphalt and straw. Identify lawn or plant diseases to determine the appropriate course of treatment.

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

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.20	Entry	\$31,620
Median	\$18.88	Median	\$39,280
Experienced	\$21.26	Experienced	\$44,212

Alabama Projections

2022 Estimated Employment:	***
2032 Projected Employment:	***
Average Total Openings:	50
Annual Growth Rate:	0.74%

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

Technology

Electronic mail software
Office suite software
Operating system software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Coastal Alabama Community College



Dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. May advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.

Education: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Review prescriptions to assure accuracy, to ascertain the needed ingredients, and to evaluate their suitability. Provide information and advice regarding drug interactions, side effects, dosage, and proper medication storage. Order and purchase pharmaceutical supplies, medical supplies, or drugs, maintaining stock and storing and handling it properly. Maintain records, such as pharmacy files, patient profiles, charge system files, inventories, control records for radioactive nuclei, or registries of poisons, narcotics, or controlled drugs. Provide specialized services to help patients manage conditions, such as diabetes, asthma, smoking cessation, or high blood pressure. Advise customers on the selection of medication brands, medical equipment, or healthcare supplies. Collaborate with other health care professionals to plan, monitor, review, or evaluate the quality or effectiveness of drugs or drug regimens, providing advice on drug applications or characteristics. Compound and dispense medications as prescribed by doctors and dentists, by calculating, weighing, measuring, and mixing ingredients, or oversee these activities. Refer patients to other health professionals or agencies when appropriate. Prepare sterile solutions or infusions for use in surgical procedures, emergency rooms, or patients' homes. Plan, implement, or maintain procedures for mixing, packaging, or labeling pharmaceuticals, according to policy and legal requirements, to ensure quality, security, and proper disposal. Manage pharmacy operation hiring or supervising staff, performing administrative duties, or buying or selling non-pharmaceutical merchandise. Teach pharmacy students serving as interns in preparation for their graduation or licensure. Publish educational information for other pharmacists, doctors, or patients. Offer health promotion or preventive activities, such as training people to use blood pressure devices or diabetes monitors.

License: Application for Examination Fee: \$300.00; License Fee: \$100.00; Controlled Substance License: \$100.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$44.83	Entry	\$93,240
Median	\$62.27	Median	\$129,516
Experienced	\$68.79	Experienced	\$143,082

Alabama Projections

2022 Estimated Employment:	5,520
2032 Projected Employment:	5,880
Average Total Openings:	245
Annual Growth Rate:	0.64%

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

Technology

Medical software
Cloud-based data access and sharing software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Prepack bulk medicines, fill bottles with prescribed medications, and type and affix labels. Receive and store incoming supplies, verify quantities against invoices, check for outdated medications in current inventory, and inform supervisors of stock needs and shortages. Restock intravenous (IV) supplies and add measured drugs nutrients to IV solutions under sterile conditions to prepare IV packs for various uses, such as chemotherapy medication. Receive written prescription or refill requests and verify that information is complete and accurate. Maintain proper storage and security conditions for drugs. Answer telephones, responding to questions or requests. Price and file prescriptions that have been filled. Clean and help maintain equipment or work areas and sterilize glassware, according to prescribed methods. Establish or maintain patient profiles, including lists medications taken by individual patients. Order, label, and count stock of medications, chemicals, or supplies and enter inventory data into computer. Transfer medication from vials to the appropriate number of sterile, disposable syringes, using aseptic techniques. Prepare and process medical insurance claim forms and records. Mix pharmaceutical preparations, according to written prescriptions. Compute charges for medication or equipment dispensed to hospital patients and enter data in computer. Price stock and mark items for sale.

License: Application for Examination Fee: \$60.00; Background Fee: \$40.00; Transaction Fee: \$3.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.40	Entry	\$27,881
Median	\$16.95	Median	\$35,261
Experienced	\$18.36	Experienced	\$38,198

Alabama Projections

2022 Estimated Employment:	7,580
2032 Projected Employment:	8,380
Average Total Openings:	795
Annual Growth Rate:	1.01%

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

Technology

Electronic mail software
Medical software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Reid State Technical College
Jes Health Services
Enterprise State Community College
Lawson State Community College
Northeast Alabama Community College
Jefferson State Community College
Wallace State Community College
Coastal Alabama Community College
Fortis College
Calhoun Community College
Lurleen B Wallace Community College
Shelton State Community College



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Collect fluid or tissue samples, using appropriate collection procedures. Dispose of blood or other biohazard fluids or tissue, in accordance with applicable laws, standards, or policies. Dispose of contaminated sharps, in accordance with applicable laws, standards, and policies. Draw blood from arteries, using arterial collection techniques. Draw blood from capillaries by dermal puncture, such as heel or finger stick methods. Draw blood from veins by vacuum tube, syringe, or butterfly venipuncture methods. Explain fluid or tissue collection procedures to patients. Organize or clean blood-drawing trays, ensuring that all instruments are sterile and all needles, syringes, or related items are of first-time use. Administer subcutaneous or intramuscular injects, in accordance with licensing restrictions. Calibrate or maintain machines, such as those used for plasma collection. Collect specimens at specific time intervals for tests, such as those assessing therapeutic drug levels. Conduct hemoglobin tests to ensure donor iron levels are normal. Conduct standards tests, such as blood alcohol, blood culture, oral glucose tolerance, glucose screening, blood smears, or peak and trough drug levels tests. Enter patient, specimen, insurance, or billing information into computer. Monitor blood or plasma donors during and after procedures to ensure health, safety, and comfort.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.53	Entry	\$26,066
Median	\$15.73	Median	\$32,718
Experienced	\$17.96	Experienced	\$37,365

Alabama Projections

2022 Estimated Employment:	2,700
2032 Projected Employment:	3,030
Average Total Openings:	395
Annual Growth Rate:	1.18%

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

Technology

Electronic mail software
Medical software
Office suite software
Spreadsheet software
Web platform development software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

1 ON 1 TECHNICAL COLLEGE
Victory Professional Development Center
LB Allied Health Training Center



Photograph people, landscapes, merchandise, or other subjects. May use lighting equipment to enhance a subject's appearance. May use editing software to produce finished images and prints. Includes commercial and industrial photographers, scientific photographers, and photojournalists.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Transfer photographs to computers for editing, archiving, and electronic transmission. Write photograph captions. Take pictures of individuals, families, and small groups, either in studio or on location. Adjust apertures, shutter speeds, and camera focus according to a combination of factors, such as lighting, field depth, subject motion, film type, and film speed. Use traditional or digital cameras, along with a variety of equipment, such as tripods, filters, and flash attachments. Create artificial light, using flashes and reflectors. Determine desired images and picture composition, selecting and adjusting subjects, equipment, and lighting to achieve desired effects. Test equipment prior to use to ensure that it is in good working order. Review sets of photographs to select the best work. Estimate or measure light levels, distances, and numbers of exposures needed, using measuring devices and formulas. Manipulate and enhance scanned or digital images to create desired effects, using computers and specialized software. Perform maintenance tasks necessary to keep equipment working properly. Perform general office duties, such as scheduling appointments, keeping books, and ordering supplies. Determine project goals, locations, and equipment needs by studying assignments and consulting with clients or advertising staff. Select and assemble equipment and required background properties according to subjects, materials, and conditions.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.95	Entry	\$24,852
Median	\$17.73	Median	\$36,875
Experienced	\$23.97	Experienced	\$49,859

Alabama Projections

2022 Estimated Employment:	1,820
2032 Projected Employment:	1,910
Average Total Openings:	175
Annual Growth Rate:	0.52%

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

Technology

Graphics or photo imaging software
Web page creation and editing software
Accounting software
Data base user interface and query software
Desktop publishing software
Document management software
Operating system software
Spreadsheet software
Video creation and editing software
Word processing software

4-Year Institutions with Programs

Jacksonville State University
Alabama State University
Athens State University
Auburn University at Montgomery
University of Montevallo
Alabama A&M University
Troy University
University of North Alabama
University of Alabama at Birmingham
University of South Alabama
University of Alabama in Huntsville

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. Administer active or passive manual therapeutic exercises, therapeutic massage, aquatic physical therapy, or heat, light, sound, or electrical modal treatments, such as ultrasound. Communicate with or instruct caregivers or family members on patient therapeutic activities or treatment plans. Attend or conduct continuing education courses, seminars, or in-service activities. Instruct, motivate, safeguard, and assist patients as they practice exercises or functional activities. Confer with physical therapy staff or others to discuss and evaluate patient information for planning, modifying, or coordinating treatment. Measure patients' range-of-joint motion, body parts, or vital signs to determine effects of treatments or for patient evaluations. Secure patients into or onto therapy equipment. Fit patients for orthopedic braces, prostheses, or supportive devices, such as crutches. Train patients in the use of orthopedic braces, prostheses, or supportive devices. Transport patients to and from treatment areas, lifting and transferring them according to positioning requirements. Monitor operation of equipment and record use of equipment and administration of treatment. Clean work area and check and store equipment after treatment. Assist patients to dress, undress, or put on and remove supportive devices, such as braces, splints, or slings. Administer traction to relieve neck or back pain, using intermittent or static traction equipment.

License: Application Fee: \$100.00; Annual Renewal Fee: \$93.00; Expired Renewal Fee: \$193.00; Restoration Fee: \$50.00; Original License Reprint: \$5.00; Directory of Licensees: \$75.00

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.17	Entry	\$39,869
Median	\$28.89	Median	\$60,099
Experienced	\$32.07	Experienced	\$66,696

Alabama Projections

2022 Estimated Employment:	2,060
2032 Projected Employment:	2,660
Average Total Openings:	380
Annual Growth Rate:	2.56%

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

Technology

Data base user interface and query software
Electronic mail software
Medical software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Calhoun Community College
Lurleen B Wallace Community College
Bishop State Community College
Reid State Technical College
H Councill Trenholm State
George C Wallace Community College
Southern Union State Community College
Jefferson State Community College



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: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Inform patients and refer to appropriate practitioners when diagnosis reveals findings outside physical therapy. 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. Evaluate effects of treatment at various stages and adjust treatments to achieve maximum benefit. Administer manual exercises, massage, or traction to help relieve pain, increase patient strength, or decrease or prevent deformity or crippling. Instruct patient and family in treatment procedures to be continued at home. Confer with the patient, medical practitioners, or appropriate others to plan, implement, or assess the intervention program. Review physician's referral and patient's medical records to help determine diagnosis and physical therapy treatment required. Record prognosis, treatment, response, and progress in patient's chart or enter information into computer. Obtain patients' informed consent to proposed interventions. Discharge patient from physical therapy when goals or projected outcomes have been attained and provide for appropriate follow-up care or referrals. Test and measure patient's strength, motor development and function, sensory perception, functional capacity, or respiratory or circulatory efficiency and record data. 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. Direct, supervise, assess, and communicate with supportive personnel.

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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$30.90	Entry	\$64,279
Median	\$46.18	Median	\$96,047
Experienced	\$53.84	Experienced	\$111,987

Alabama Projections

2022 Estimated Employment:	2,730
2032 Projected Employment:	3,240
Average Total Openings:	165
Annual Growth Rate:	1.75%

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

Technology

Medical software
Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham
Alabama State University
University of South Alabama

2-Year Institution & ETPL Providers

Calhoun Community College
Jefferson State Community College



Provide healthcare services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment, and counsel patients. May, in some cases, prescribe medication. Must graduate from an accredited educational program for physician assistants.

Education: This occupation typically requires a Master's degree

OJT: Employees may 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: Examine patients to obtain information about their physical condition. Interpret diagnostic test results for deviations from normal. Make tentative diagnoses and decisions about management and treatment of patients. Obtain, compile, and record patient medical data, including health history, progress notes, and results of physical examination. Administer or order diagnostic tests, such as x-ray, electrocardiogram, and laboratory tests. Prescribe therapy or medication with physician approval. Perform therapeutic procedures, such as injections, immunizations, suturing and wound care, and infection management. Instruct and counsel patients about prescribed therapeutic regimens, normal growth and development, family planning, emotional problems daily living, and health maintenance. Provide physicians with assistance during surgery or complicated medical procedures. Supervise and coordinate activities of technicians and technical assistants. Visit and observe patients on hospital rounds or house calls, updating charts, ordering therapy, and reporting back to physician. Order medical and laboratory supplies and equipment. Verify availability of operating room supplies, medications, and gases. Provide clinical instruction, supervision or training to staff in areas such as anesthesia practices. Collect samples or specimens for diagnostic testing.

License: Application Fee: \$200.00; Criminal Background Check Fee: \$65.00

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$33.02	Entry	\$68,676
Median	\$44.49	Median	\$92,532
Experienced	\$50.64	Experienced	\$105,324

Alabama Projections

2022 Estimated Employment:	770
2032 Projected Employment:	1,020
Average Total Openings:	70
Annual Growth Rate:	2.84%

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

Technology

Electronic mail software
Medical software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of South Alabama
University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

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.

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: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.35	Entry	\$34,002
Median	\$23.29	Median	\$48,435
Experienced	\$27.81	Experienced	\$57,841

Alabama Projections

2022 Estimated Employment:	7,030
2032 Projected Employment:	7,480
Average Total Openings:	665
Annual Growth Rate:	0.63%

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

Technology

Accounting software
Office suite software
Spreadsheet software
Web platform development software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Lawson State Community College
Coastal Alabama Community College
Northwest Shoals Community College
Bishop State Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

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 survivors 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 case. 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.

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

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.52	Entry	\$34,363
Median	\$22.66	Median	\$47,135
Experienced	\$26.92	Experienced	\$55,994

Alabama Projections

2022 Estimated Employment:	12,680
2032 Projected Employment:	13,320
Average Total Openings:	1,050
Annual Growth Rate:	0.49%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Process mapping and design software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Alabama State University
Jacksonville State University

2-Year Institution & ETPL Providers

Lawson State Community College
Wallace State Community College
Southern Union State Community College
Wallace Community College
Jefferson State Community College
Calhoun Community College
Chattahoochee Valley Community College
Northwest Shoals Community College
Northeast Alabama Community College



Gather, analyze, compile, and report information regarding individuals or organizations to clients, or detect occurrences of unlawful acts or infractions of rules in private establishment.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Write reports or case summaries to document investigations. Search computer databases, credit reports, public records, tax or legal filings, or other resources to locate persons or to compile information for investigations. Obtain and analyze information on suspects, crimes, or disturbances to solve cases, to identify criminal activity or to gather information for court cases. Conduct private investigations on a paid basis. Testify at hearings or court trials to present evidence. Question persons to obtain evidence for cases of divorce, child custody, or missing persons or information about individuals' character or financial status. Observe and document activities of individuals to detect unlawful acts or to obtain evidence for cases, using binoculars and still or video camera. Alert appropriate personnel to suspects' locations. Perform undercover operations, such as evaluating the performance or honesty of employees by posing as customers or employees. Investigate companies' financial standings, or locate funds stolen by embezzlers, using accounting skills. Expose fraudulent insurance claims or stolen funds. Confer with establishment officials, security departments, police, or postal officials to identify problems, provide information, or receive instructions. Count cash and review transactions, sales checks, or register tapes to verify amounts or to identify shortages. Conduct personal background investigations, such as pre-employment checks, to obtain information about an individual's character, financial status, or personal history.

License: Application Fee: \$100.00; License Fee: \$300.00; Renewal Fee: \$300.00; Late Renewal Fee: \$200.00; Examination Fee: \$100.00; Certified Trainer Fee: \$500.00; Assistant Trainer Fee: \$250.00; Mailing Label Fee: \$50.00; Law/Rule & Regulation Book: \$50.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.43	Entry	\$34,168
Median	\$21.44	Median	\$44,597
Experienced	\$27.25	Experienced	\$56,671

Alabama Projections

2022 Estimated Employment:	380
2032 Projected Employment:	410
Average Total Openings:	40
Annual Growth Rate:	0.72%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham

2-Year Institution & ETPL Providers

Jefferson State Community College
Southern Union State Community College
Chattahoochee Valley Community College
Lawson State Community College
Wallace State Community College
Northwest Shoals Community College
Northeast Alabama Community College
Calhoun Community College
Wallace Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Prepare and maintain case folder for each assigned inmate or offender. Write reports describing offenders' progress. Inform offenders or inmates of requirements of conditional release, such as office visits, restitution payments, or educational and employment stipulations. Discuss with offenders how such issues as drug and alcohol abuse and anger management problems might have played roles in their criminal behavior. Gather information about offenders' backgrounds by talking to offenders, their families and friends, and other people who have relevant information. Develop rehabilitation programs for assigned offenders or inmates, establishing rules of conduct, goals, and objectives. 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. Arrange for medical, mental health, or substance abuse treatment services according to individual needs or court orders. Provide offenders or inmates with assistance in matters concerning detainees' sentences in other jurisdictions, writs, and applications for social assistance. Arrange for postrelease services, such as employment, housing, counseling, education, and social activities. Recommend remedial action or initiate court action in response to noncompliance with terms of probation or parole. Interview probationers and parolees regularly to evaluate their progress in accomplishing goals and maintaining the terms specified in the probation contracts and rehabilitation plans. Assess the suitability of penitentiary inmates for release under parole and statutory release programs and submit recommendations to parole boards. Investigate alleged parole violations, using interviews, surveillance, and search and seizure. Conduct prehearing and presentencing investigations and testify in court regarding offenders' backgrounds and recommended sentences and sentencing conditions.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.68	Entry	\$36,772
Median	\$23.44	Median	\$48,755
Experienced	\$27.44	Experienced	\$57,085

Alabama Projections

2022 Estimated Employment:	1,100
2032 Projected Employment:	1,130
Average Total Openings:	85
Annual Growth Rate:	0.26%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

Jacksonville State University
Auburn University at Montgomery
Troy University
University of Alabama
Alabama State University
Alabama A&M University
University of Alabama at Birmingham
University of Montevallo
University of South Alabama
Auburn University
University of North Alabama

2-Year Institution & ETPL Providers

Lawson State Community College



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Examine documents, materials, or products and monitor work processes to assess completeness, accuracy, and conformance to standards and specifications. Review documents, such as production schedules, work orders, or staffing tables, to determine personnel or materials requirements or material priorities. 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. Record production data, including volume produced, consumption of raw materials, or quality control measures. Requisition and maintain inventories of materials or supplies necessary to meet production demands. Calculate figures, such as required amounts of labor or materials, manufacturing costs, or wages, using pricing schedules, adding machines, calculators, or computers. Distribute production schedules or work orders to departments. Compile information, such as production rates and progress, materials inventories, materials used, or customer information, so that status reports can be completed. Arrange for delivery, assembly, or distribution of supplies or parts to expedite flow of materials and meet production schedules. Contact suppliers to verify shipment details. Maintain files, such as maintenance records, bills of lading, or cost reports. Plan production commitments or timetables for business units, specific programs, or jobs, using sales forecasts. Establish and prepare product construction directions and locations and information on required tools, materials, equipment, numbers of workers needed, and cost projections.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.23	Entry	\$35,843
Median	\$23.63	Median	\$49,150
Experienced	\$29.55	Experienced	\$61,456

Alabama Projections

2022 Estimated Employment:	2,850
2032 Projected Employment:	3,110
Average Total Openings:	330
Annual Growth Rate:	0.90%

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

Technology

Data base user interface and query software
Enterprise resource planning ERP software
Graphics or photo imaging software
Project management software
Word processing software
Accounting software
Desktop publishing software
Document management software
Electronic mail software
Medical software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Analyze and coordinate the schedule, timeline, procurement, staffing, and budget of a product or service on a per project basis. Lead and guide the work of technical staff. May serve as a point of contact for the client or customer.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Assign duties or responsibilities to project personnel. Communicate with key stakeholders to determine project requirements and objectives. Confer with project personnel to identify and resolve problems. Create project status presentations for delivery to customers or project personnel. Develop or update project plans including information such as objectives, technologies, schedules, funding, and staffing. Identify project needs such as resources, staff, or finances by reviewing project objectives and schedules. Identify, review, or select vendors or consultants to meet project needs. Monitor costs incurred by project staff to identify budget issues. Monitor project milestones and deliverables. Monitor the performance of project team members to provide performance feedback. Negotiate with project stakeholders or suppliers to obtain resources or materials. Plan, schedule, or coordinate project activities to meet deadlines. Prepare and submit budget estimates, progress reports, or cost tracking reports. Produce and distribute project documents. Propose, review, or approve modifications to project plans.

License: Project Designer - \$180

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$29.17	Entry	\$60,671
Median	\$47.40	Median	\$98,585
Experienced	\$59.70	Experienced	\$124,173

Alabama Projections

2022 Estimated Employment:	1,140
2032 Projected Employment:	1,210
Average Total Openings:	90
Annual Growth Rate:	0.61%

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

Technology

Accounting software
Analytical or scientific software
Application server software
Business intelligence and data analysis software
Cloud-based data access and sharing software
Computer aided design CAD software
Content workflow software
Customer relationship management CRM software
Data base user interface and query software
Desktop publishing software

4-Year Institutions with Programs

Troy University
Athens State University
Samford University
Strayer University-Alabama
Jacksonville State University
University of Alabama in Huntsville
Faulkner University
University of North Alabama
Auburn University at Montgomery
University of Alabama at Birmingham
Amridge University

2-Year Institution & ETPL Providers

Central Alabama Community College
Snead State Community College
George C Wallace Community College
Coastal Alabama Community College
Lawson State Community College
Southern Union State Community College
Northeast Alabama Community College
J. F. Drake State Technical College
Chattahoochee Valley Community College
John C Calhoun State Community College
Bishop State Community College
H Councill Trenholm State
Enterprise State Community College



Appraise real estate, exclusively, and estimate its fair value. May assess taxes in accordance with prescribed schedules.

Education: This occupation typically requires a Bachelor'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 hearing. 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.

License: Trainee - Application Fee: \$335.00 / Annual License Fee: \$335.00; State Registered - Application Fee: \$335.00 / Annual License Fee: \$335.00; Certified General - Application Fee: \$375.00 / Annual License Fee: \$335.00 / Washington Registry Fee: \$40.00; Licensed - Application Fee: \$335.00 / Annual License Fee: \$335.00 / Washington Registry Fee: \$40.00; Certified Residential - Application Fee: \$335.00 / Annual License Fee: \$335.00 / Washington Registry Fee: \$40.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.83	Entry	\$37,085
Median	\$28.34	Median	\$58,950
Experienced	\$36.12	Experienced	\$75,139

Alabama Projections

2022 Estimated Employment:	1,280
2032 Projected Employment:	1,340
Average Total Openings:	115
Annual Growth Rate:	0.44%

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

Technology

Data base user interface and query software
Spreadsheet software
Office suite software
Electronic mail software
Presentation software
Operating system software
Word processing software

4-Year Institutions with Programs

Columbia Southern University
Faulkner University
University of Alabama
Auburn University
Alabama A & M University
Tuskegee University
University of West Alabama
University of Alabama at Birmingham
Strayer University-Alabama
University of Montevallo
Huntingdon College

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

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

Tasks: Meet with prospective tenants to show properties, explain terms of occupancy, and provide information about local areas. Direct collection of monthly assessments, rental fees, and deposits and payment of insurance premiums, mortgage, taxes, and incurred operating expenses. Inspect grounds, facilities, and equipment routinely to determine necessity of repairs or maintenance. Investigate complaints, disturbances, and violation and resolve problems, following management rules and regulations. Plan, schedule, and coordinate general maintenance, major repairs, and remodeling or construction projects for commercial or residential properties. Manage and oversee operations, maintenance, administration, and improvement of commercial, industrial, or residential properties. Negotiate the sale, lease, or development of property and complete or review appropriate documents and forms. Maintain records of sales, rental or usage activity, special permits issued, maintenance and operating costs, or property availability. Determine and certify the eligibility of prospective tenants, following government regulations. Prepare detailed budgets and financial reports for properties. Direct and coordinate the activities of staff and contract personnel and evaluate their performance. Maintain contact with insurance carriers, fire and police departments, and other agencies to ensure protection and compliance with codes and regulations. Market vacant space to prospective tenants through leasing agents, advertising, or other methods. Solicit and analyze bids from contractors for repairs, renovations, and maintenance. Review rents to ensure they are in line with rental markets.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.42	Entry	\$38,312
Median	\$23.87	Median	\$49,645
Experienced	\$32.43	Experienced	\$67,460

Alabama Projections

2022 Estimated Employment:	5,230
2032 Projected Employment:	5,570
Average Total Openings:	445
Annual Growth Rate:	0.64%

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

Technology

Data base user interface and query software
Word processing software
Accounting software
Data mining software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Project management software

4-Year Institutions with Programs

University of Alabama
University of Alabama at Birmingham
Auburn University

2-Year Institution & ETPL Providers

Chattahoochee Valley Community College
Central Alabama Community College
Calhoun Community College
Coastal Alabama Community College
Northeast Alabama Community College
Lawson State Community College



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Complete physical checks and monitor patients to detect unusual or harmful behavior and report observations professional staff. Record and maintain patient information, such as vital signs, eating habits, behavior, progress notes, treatments, or discharge plans. Complete administrative tasks, such as entering orders into computer, answering telephone calls, or maintaining medical or facility information. Provide patients with cognitive, intellectual, or developmental disabilities with routine physical, emotional, psychological, or rehabilitation care under the direction of nursing or medical staff. Work as part of a team that may include psychiatrists, psychologists, psychiatric nurses, or social workers. 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. Serve meals or feed patients needing assistance or persuasion. Restrain or aid patients as necessary to prevent injury. Interview patients upon admission and record information. Provide patients with assistance in bathing, dressing, or grooming, demonstrating these skills as necessary. Participate in recreational activities with patients, including card games, sports, or television viewing. Accompany patients to and from wards for medical or dental treatments, shopping trips, or religious or recreational events. Clean and disinfect rooms and furnishings to maintain a safe and orderly environment. Listen and provide emotional support and encouragement to psychiatric patients.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.71	Entry	\$22,270
Median	\$13.30	Median	\$27,664
Experienced	\$14.84	Experienced	\$30,864

Alabama Projections

2022 Estimated Employment:	1,270
2032 Projected Employment:	1,360
Average Total Openings:	205
Annual Growth Rate:	0.66%

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

Technology

Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Care for individuals with mental or emotional conditions or disabilities, following the instructions of physicians or other health practitioners. Monitor patients' physical and emotional well-being and report to medical staff. May participate in rehabilitation and treatment programs, help with personal hygiene, and administer oral or injectable medications.

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Train or instruct new employees on procedures to follow with psychiatric patients. Escort patients to medical appointments. Monitor patients' physical and emotional well-being and report unusual behavior or physical ailments to medical staff. Provide nursing, psychiatric, or personal care to patients with cognitive, intellectual, or developmental disabilities. Observe and influence patients' behavior, communicating and interacting with them and teaching, counseling, or befriending them. Take and record measures of patients' physical condition, using devices such as thermometers or blood pressure gauges. Encourage patients to develop work skills and to participate in social, recreational, or other therapeutic activities that enhance interpersonal skills or develop social relationships. Collaborate with or assist doctors, psychologists, or rehabilitation therapists in working with patients with cognitive, intellectual, or developmental disabilities to treat, rehabilitate, and return patients to the community. Develop or teach strategies to promote client wellness and independence. Restrain violent, potentially violent, or suicidal patients by verbal or physical means as required. Aid patients in performing tasks such as bathing or keeping beds, clothing, or living areas clean. Administer oral medications or hypodermic injections, following physician's prescriptions and hospital procedures. Issue medications from dispensary and maintain records in accordance with specified procedures. Interview new patients to complete admission forms; to assess their mental health status, or to obtain their mental health and treatment history. Lead prescribed individual or group therapy sessions as part of specific therapeutic procedures.

License: Master Level Application Fee: \$260.00; Renewal Fee: \$130.00 plus \$50.00 Continuing Education Fee

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.50	Entry	\$21,839
Median	\$14.37	Median	\$29,899
Experienced	\$17.01	Experienced	\$35,374

Alabama Projections

2022 Estimated Employment:	1,930
2032 Projected Employment:	2,110
Average Total Openings:	180
Annual Growth Rate:	0.90%

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

Technology

Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Gadsden State Community College
George C Wallace Community College
Central Alabama Community College



Plan, direct, or coordinate activities designed to create or maintain a favorable public image or raise issue awareness for their organization or client.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Assign, supervise, and review the activities of public relations staff. Confer with labor relations managers to develop internal communications that keep employees informed of company activities. Design and edit promotional publications, such as brochures. Develop and maintain the company's corporate image and identity which includes the use of logos and signage. Develop, implement, or maintain crisis communication plans. Direct activities of external agencies, establishments, or departments that develop and implement communication strategies and information programs. Draft speeches for company executives and arrange interviews and other forms of contact for them. Establish and maintain effective working relationships with clients, government officials, and media representatives and use these relationships to develop new business opportunities. Evaluate advertising and promotion programs for compatibility with public relations efforts. Facilitate consumer relations or the relationship between parts of the company, such as the managers and employees, or different branch offices. Formulate policies and procedures related to public information programs, working with public relations executives. Identify main client groups and audiences, determine the best way to communicate publicity information to them, and develop and implement a communication plan. Maintain company archives. Manage communications budgets. Manage in-house communication courses.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$25.15	Entry	\$52,304
Median	\$39.33	Median	\$81,806
Experienced	\$54.99	Experienced	\$114,385

Alabama Projections

2022 Estimated Employment:	520
2032 Projected Employment:	550
Average Total Openings:	40
Annual Growth Rate:	0.53%

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

Technology

Cloud-based data access and sharing software
Customer relationship management CRM software
Data base management system software
Data base user interface and query software
Data mining software
Desktop publishing software
Document management software
Electronic mail software
Enterprise resource planning ERP software
Graphics or photo imaging software

4-Year Institutions with Programs

Alabama State University
University of North Alabama
University of Montevallo
University of Alabama in Huntsville
University of Alabama at Birmingham
University of Alabama
Troy University
Jacksonville State University
Auburn University
University of South Alabama
Auburn University at Montgomery

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Determine response requirements and relative priorities of situations, and dispatch units in accordance with established procedures. Record details of calls, dispatches, and messages. Question callers to determine their locations and the nature of their problems to determine type of response needed. 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. Scan status charts and computer screens, and contact emergency response field units to determine emergency units available for dispatch. Relay information and messages to and from emergency sites, to law enforcement agencies, and to all other individuals or groups requiring notification. 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. Maintain access to, and security of, highly sensitive materials. Observe alarm registers and scan maps to determine whether a specific emergency is in the dispatch service area. Maintain files of information relating to emergency calls, such as personnel rosters and emergency call-out and pager files. Monitor various radio frequencies, such as those used by public works departments, school security, and civil defense, to stay apprised of developing situations. Learn material and pass required tests for certification. Read and effectively interpret small-scale maps and information from a computer screen to determine location and provide directions. Answer routine inquiries, and refer calls not requiring dispatches to appropriate departments and agencies. Provide emergency medical instructions to callers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.11	Entry	\$25,197
Median	\$16.42	Median	\$34,145
Experienced	\$19.45	Experienced	\$40,458

Alabama Projections

2022 Estimated Employment:	2,640
2032 Projected Employment:	2,800
Average Total Openings:	285
Annual Growth Rate:	0.58%

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

Technology

Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Plan, direct, or coordinate the activities of buyers, purchasing officers, and related workers involved in purchasing materials, products, and services. Includes wholesale or retail trade merchandising managers and procurement managers.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Maintain records of goods ordered and received. Locate vendors of materials, equipment or supplies, and interview them to determine product availability and terms of sales. Prepare and process requisitions and purchase orders for supplies and equipment. Control purchasing department budgets. Interview and hire staff, and oversee staff training. Review purchase order claims and contracts for conformance to company policy. Analyze market and delivery systems to assess present and future material availability. Develop and implement purchasing and contract management instructions, policies, and procedures. Participate in the development of specifications for equipment, products, or substitute materials. Resolve vendor or contractor grievances and claims against suppliers. Represent companies in negotiating contracts and formulating policies with suppliers. Review, evaluate, and approve specifications for issuing and awarding bids. Direct and coordinate activities of personnel engaged in buying, selling, and distributing materials, equipment, machinery, and supplies. Prepare bid awards requiring board approval. Prepare reports regarding market conditions and merchandise costs.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$37.15	Entry	\$77,279
Median	\$57.42	Median	\$119,434
Experienced	\$70.03	Experienced	\$145,656

Alabama Projections

2022 Estimated Employment:	1,280
2032 Projected Employment:	1,370
Average Total Openings:	105
Annual Growth Rate:	0.67%

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

Technology

Enterprise resource planning ERP software
Data base user interface and query software
Cloud-based data access and sharing software
Electronic mail software
Office suite software
Presentation software
Process mapping and design software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Athens State University
University of Alabama in Huntsville

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.63	Entry	\$38,756
Median	\$23.97	Median	\$49,866
Experienced	\$28.80	Experienced	\$59,895

Alabama Projections

2022 Estimated Employment:	4,200
2032 Projected Employment:	4,470
Average Total Openings:	250
Annual Growth Rate:	0.62%

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

Technology

Medical software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of South Alabama

2-Year Institution & ETPL Providers

Northwest Shoals Community College
Trenholm State Community College
DCH Regional Medical Center
Wallace Community College
Gadsden State Community College
Southern Union State Community College
Jefferson State Community College
Wallace State Community College



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: This occupation typically requires a High school diploma or equivalent

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

Tasks: Sell, for a fee, real estate owned by others. Obtain agreements from property owners to place properties for sale with real estate firms. Monitor fulfillment of purchase contract terms to ensure that they are handled in a timely manner. Compare a property with similar properties that have recently sold to determine its competitive market price. 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. Maintain knowledge of real estate law, local economies, fair housing laws, types of available mortgages, financing options, and government programs. Check work completed by loan officers, attorneys, or other professionals to ensure that it is performed properly. Arrange for financing of property purchases. Appraise property values, assessing income potential when relevant. Maintain awareness of current income tax regulations, local zoning, building and tax laws, and growth possibilities of a property's area. Manage or operate real estate offices, handling associated business details. Supervise agents who handle real estate transactions. Rent properties or manage rental properties. Arrange for title searches of properties being sold.

License: License Fee: \$150.00; Research and Education Fee: \$30.00; Recovery Fund Fee: \$30.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.44	Entry	\$40,430
Median	\$27.25	Median	\$56,680
Experienced	\$36.13	Experienced	\$75,146

Alabama Projections

2022 Estimated Employment:	1,620
2032 Projected Employment:	1,700
Average Total Openings:	145
Annual Growth Rate:	0.47%

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

Technology

Data base user interface and query software
Accounting software
Electronic mail software
Graphics or photo imaging software
Office suite software
Presentation software
Spreadsheet software
Web page creation and editing software
Web platform development software
Word processing software

4-Year Institutions with Programs

Auburn University

2-Year Institution & ETPL Providers

Lawson State Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Contact previous clients for prospecting of referral business. Present purchase offers to sellers for consideration. 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. Interview clients to determine what kinds of properties they are seeking. Prepare documents such as representation contracts, purchase agreements, closing statements, deeds, and leases. Coordinate property closings, overseeing signing of documents and disbursement of funds. Act as an intermediary in negotiations between buyers and sellers, generally representing one or the other. 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 appointments to show homes to prospective buyers. Generate lists of properties that are compatible with buyers' needs and financial resources. Display commercial, industrial, agricultural, and residential properties to clients and explain their features. Arrange for title searches to determine whether clients have clear property titles. Review plans for new construction with clients, enumerating and recommending available options and features. Answer clients' questions regarding construction work, financing, maintenance, repairs, and appraisals.

License: License Fee: \$150.00; Research and Education Fee: \$30.00; Recovery Fund Fee: \$30.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.92	Entry	\$26,873
Median	\$24.89	Median	\$51,779
Experienced	\$33.67	Experienced	\$70,032

Alabama Projections

2022 Estimated Employment:	5,580
2032 Projected Employment:	5,830
Average Total Openings:	500
Annual Growth Rate:	0.44%

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

Technology

Project management software
Word processing software
Accounting software
Customer relationship management CRM software
Data base user interface and query software
Document management software
Electronic mail software
Graphics or photo imaging software
Office suite software
Presentation software

4-Year Institutions with Programs

Auburn University

2-Year Institution & ETPL Providers

Lawson State Community College



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Operate telephone switchboard to answer, screen, or forward calls, providing information, taking messages, or scheduling appointments. 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. Greet persons entering establishment, determine nature and purpose of visit, and direct or escort them to specific destinations. Hear and resolve complaints from customers or the public. File and maintain records. Transmit information or documents to customers, using computer, mail, or facsimile machine. Schedule appointments and maintain and update appointment calendars. Analyze data to determine answers to questions from customers or members of the public. Provide information about establishment, such as location of departments or offices, employees within the organization, or services provided. Keep a current record of staff members' whereabouts and availability. Collect, sort, distribute, or prepare mail, messages, or courier deliveries. Calculate and quote rates for tours, stocks, insurance policies, or other products or services. Take orders for merchandise or materials and send them to the proper departments to be filled. Process and prepare memos, correspondence, travel vouchers, or other documents.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.97	Entry	\$22,821
Median	\$14.04	Median	\$29,203
Experienced	\$15.90	Experienced	\$33,080

Alabama Projections

2022 Estimated Employment:	18,020
2032 Projected Employment:	18,930
Average Total Openings:	2,545
Annual Growth Rate:	0.49%

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

Technology

Word processing software
Accounting software
Customer relationship management CRM software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Collect and dump refuse or recyclable materials from containers into truck. May drive truck.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Make special pickups of recyclable materials, such as food scraps, used oil, discarded computers, or other electronic items. Dump refuse or recyclable materials at disposal sites. Inspect trucks prior to beginning routes to ensure safe operating condition. Refuel trucks or add other fluids, such as oil or brake fluid. Fill out defective equipment reports. Drive trucks, following established routes, through residential streets or alleys or through business or industrial areas. Operate equipment that compresses collected refuse. Operate automated or semi-automated hoisting devices that raise refuse bins and dump contents into openings in truck bodies. Dismount garbage trucks to collect garbage and remount trucks to ride to the next collection point. 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. Tag garbage or recycling containers to inform customers of problems, such as excess garbage or inclusion of items that are not permitted. Clean trucks or compactor bodies after routes have been completed. Organize schedules for refuse collection.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.41	Entry	\$25,803
Median	\$15.02	Median	\$31,245
Experienced	\$17.56	Experienced	\$36,520

Alabama Projections

2022 Estimated Employment:	2,030
2032 Projected Employment:	2,070
Average Total Openings:	255
Annual Growth Rate:	0.20%

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

Technology

Analytical or scientific software
Facilities management software
Data base user interface and query software
Materials requirements planning logistics and supply chain software
Mobile location based services software
Time accounting software
Map creation software
Cloud-based data access and sharing software
Compliance software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires 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: Maintain accurate, detailed reports and records. Monitor, record, and report symptoms or changes in patients' conditions. Record patients' medical information and vital signs. Modify patient treatment plans as indicated by patients' responses and conditions. Consult and coordinate with healthcare team members to assess, plan, implement, or evaluate patient care plans. Order, interpret, and evaluate diagnostic tests to identify and assess patient's condition. Direct or supervise less-skilled nursing or healthcare personnel or supervise a particular unit. Prepare patients for and assist with examinations or treatments. Assess the needs of individuals, families, or communities, including assessment of individuals' home or work environments, to identify potential health or safety problems. Instruct individuals, families, or other groups on topics such as health education, disease prevention, or childbirth and develop health improvement programs. Prepare rooms, sterile instruments, equipment, or supplies and ensure that stock of supplies is maintained. Inform physician of patient's condition during anesthesia. Administer local, inhalation, intravenous, or other anesthetics. Provide health care, first aid, immunizations, or assistance in convalescence or rehabilitation in locations such as schools, hospitals, or industry. Perform physical examinations, make tentative diagnoses, and treat patients en route to hospitals or disaster site triage centers.

License: Initial Application Fee for RN: \$100.00; Biannual Renewal Fee: \$100.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$23.74	Entry	\$49,384
Median	\$30.30	Median	\$63,019
Experienced	\$36.35	Experienced	\$75,602

Alabama Projections

2022 Estimated Employment:	52,030
2032 Projected Employment:	55,370
Average Total Openings:	3,225
Annual Growth Rate:	0.63%

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

Technology

Medical software
Word processing software
Business intelligence and data analysis software
Cloud-based data access and sharing software
Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Presentation software
Project management software

4-Year Institutions with Programs

University of Alabama in Huntsville
Auburn University at Montgomery
Athens State University
University of South Alabama
Jacksonville State University
University of Alabama
University of West Alabama
Auburn University
Troy University
University of North Alabama
University of Alabama at Birmingham

2-Year Institution & ETPL Providers

Gadsden State Community College
Southern Union State Community College
Lawson State Community College
Shelton State Community College
Lurleen B Wallace Community College
Trenholm State Community College
Reid State Technical College
Coastal Alabama Community College
Wallace State Community College
Chattahoochee Valley Community College
Drake State Technical College
Calhoun Community College
Northwest Shoals Community College
Wallace Community College
Bishop State Community College
Northeast Alabama Community College
Bevill State Community College
Central Alabama Community College
Snead State Community College
Jefferson State Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Develop and coordinate educational programs for residents. Supervise, train, and evaluate residence hall staff including resident assistants, participants in work-study programs, and other student workers. Oversee departmental budget. Enforce rules and regulations to ensure the smooth and orderly operation of dormitory programs. Provide emergency first aid and summon medical assistance when necessary. Mediate interpersonal problems between residents. Administer, coordinate, or recommend disciplinary and corrective actions. Communicate with other staff to resolve problems with individual students. Counsel students in the handling of issues such as family, financial, and educational problems. Make regular rounds to ensure that residents and areas are safe and secure. Observe students to detect and report unusual behavior. 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 program plans for individuals or assist in plan development. Hold regular meetings with each assigned unit.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$9.93	Entry	\$20,647
Median	\$12.93	Median	\$26,899
Experienced	\$15.27	Experienced	\$31,761

Alabama Projections

2022 Estimated Employment:	3,050
2032 Projected Employment:	3,250
Average Total Openings:	565
Annual Growth Rate:	0.65%

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

Technology

Word processing software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: 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. Transport patients to the hospital or within the hospital. Perform endotracheal intubation to maintain open airways for patients who are unable to breathe on their own. Monitor cardiac patients, using electrocardiography devices, such as a holter monitor. Set up and operate devices, such as mechanical ventilators, therapeutic gas administration apparatus, environmental control systems, or aerosol generators, following specified parameters of treatment. Provide emergency care, such as artificial respiration, external cardiac massage, or assistance with cardiopulmonary resuscitation. Determine requirements for treatment, such as type, method and duration of therapy, precautions to be taken, or medication and dosages, compatible with physicians' orders. 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. Read prescription, measure arterial blood gases, and review patient information to assess patient condition. Enforce safety rules and ensure careful adherence to physicians' orders. Maintain charts that contain patients' pertinent identification and therapy information. Inspect, clean, test, and maintain respiratory therapy equipment to ensure equipment is functioning safely and efficiently, ordering repairs when necessary. 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. Explain treatment procedures to patients to gain cooperation and allay fears. Relay blood analysis results to a physician.

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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$21.52	Entry	\$44,761
Median	\$27.36	Median	\$56,903
Experienced	\$29.76	Experienced	\$61,903

Alabama Projections

2022 Estimated Employment:	2,640
2032 Projected Employment:	3,030
Average Total Openings:	180
Annual Growth Rate:	1.41%

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

Technology

Medical software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of South Alabama
University of Alabama at Birmingham
Jacksonville State University

2-Year Institution & ETPL Providers

Shelton State Community College
Jefferson State Community College
Wallace State Community College
Wallace Community College
Trenholm State Community College



Sell merchandise, such as furniture, motor vehicles, appliances, or apparel to consumers.

Education: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Greet customers and ascertain what each customer wants or needs. Open and close cash registers, perform tasks such as counting money, separating charge slips, coupons, and vouchers, balancing cash drawers, and making deposits. Maintain knowledge of current sales and promotions, policies regarding payment and exchanges, and security practices. Compute sales prices, total purchases, and receive and process cash or credit payment. Maintain records related to sales. Watch for and recognize security risks and thefts and know how to prevent or handle these situations. Recommend, select, and help locate or obtain merchandise based on customer needs and desires. Answer questions regarding the store and its merchandise. Describe merchandise and explain use, operation, and care of merchandise to customers. Ticket, arrange, and display merchandise to promote sales. Prepare sales slips or sales contracts. Place special orders or call other stores to find desired items. Demonstrate use or operation of merchandise. Clean shelves, counters, and tables. Exchange merchandise for customers and accept returns.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$9.66	Entry	\$20,102
Median	\$12.70	Median	\$26,415
Experienced	\$16.53	Experienced	\$34,385

Alabama Projections

2022 Estimated Employment:	58,920
2032 Projected Employment:	62,440
Average Total Openings:	9,140
Annual Growth Rate:	0.58%

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

Technology

Graphics or photo imaging software
Customer relationship management CRM software
Enterprise resource planning ERP software
Operating system software
Word processing software
Accounting software
Cloud-based data access and sharing software
Computer aided design CAD software
Data base user interface and query software
Desktop publishing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Inspect problem roofs to determine the best repair procedures. Set up scaffolding to provide safe access to roofs. Cement or nail flashing strips of metal or shingle over joints to make them watertight. Install, repair, or replace single-ply roofing systems, using waterproof sheet materials such as modified plastics, elastomeric, or other asphaltic compositions. Cut felt, shingles, or strips of flashing to fit angles formed by walls, vents, or intersecting roof surfaces. Install vapor barriers or layers of insulation on flat roofs. Cover exposed nailheads with roofing cement or caulking to prevent water leakage or rust. Install partially overlapping layers of material over roof insulation surfaces, using chalk lines, gauges on shingling hatchets, or lines on shingles. 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. Remove snow, water, or debris from roofs prior to applying roofing materials. Apply alternate layers of hot asphalt or tar and roofing paper to roofs. Spray roofs, sidings, or walls to bind, seal, insulate, or soundproof sections of structures, using spray guns, air compressors, or heater. 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. Mop or pour hot asphalt or tar onto roof bases. Apply plastic coatings, membranes, fiberglass, or felt over sloped roofs before applying shingles.

License: License Fee: \$150.00; New License Application Fee: \$100.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.67	Entry	\$28,432
Median	\$18.62	Median	\$38,722
Experienced	\$23.16	Experienced	\$48,172

Alabama Projections

2022 Estimated Employment:	1,180
2032 Projected Employment:	1,290
Average Total Openings:	105
Annual Growth Rate:	0.90%

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

Technology

Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Resolve customer complaints regarding sales and service. Represent company at trade association meetings promote products. Plan and direct staffing, training, and performance evaluations to develop and control sales and service programs. Visit franchised dealers to stimulate interest in establishment or expansion of leasing programs. Confer with potential customers regarding equipment needs, and advise customers on types of equipment to purchase. Oversee regional and local sales managers and their staffs. Direct clerical staff to keep records of export correspondence, bid requests, and credit collections, and to maintain current information on tariffs, licenses, and restrictions. Direct foreign sales and service outlets of an organization. Assess marketing potential of new and existing store locations, considering statistics and expenditures. Monitor customer preferences to determine focus of sales efforts. Direct and coordinate activities involving sales of manufacture products, services, commodities, real estate, or other subjects of sale. Determine price schedules and discount rates. Review operational records and reports to project sales and determine profitability. Direct, coordinate, a review sales and service accounting and record-keeping, as well as receiving and shipping. Confer or consult with department heads to plan advertising services and to secure information on equipment and customer specifications.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$32.95	Entry	\$68,529
Median	\$51.71	Median	\$107,560
Experienced	\$74.87	Experienced	\$155,733

Alabama Projections

2022 Estimated Employment:	3,520
2032 Projected Employment:	3,740
Average Total Openings:	285
Annual Growth Rate:	0.60%

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

Technology

Data base user interface and query software
Development environment software
Enterprise resource planning ERP software
Project management software
Analytical or scientific software
Sales and marketing software
Word processing software
Business intelligence and data analysis software
Cloud-based data access and sharing software
Cloud-based management software

4-Year Institutions with Programs

Auburn University
University of Alabama in Huntsville
Alabama A&M University
University of North Alabama
Athens State University
Alabama State University
Jacksonville State University
University of South Alabama
Troy University
University of Montevallo
University of Alabama

2-Year Institution & ETPL Providers

Bevill State Community College
Coastal Alabama Community College
Central Alabama Community College
Shelton State Community College
Bishop State Community College
Enterprise State Community College
Chattahoochee Valley Community College
Calhoun Community College
Drake State Technical College
Trenholm State Community College
Northeast Alabama Community College
Wallace State Community College
Snead State Community College
Lawson State Community College
Southern Union State Community College
Wallace Community College



41-3091 Sales Reps of Services, Except Advertising, Insurance, Financial Services, and Travel

Sell services to individuals or businesses. May describe options or resolve client problems.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Answer customers' questions about services, prices, availability, or credit terms. Attend sales or trade meeting or read related publications to obtain information about market conditions, business trends, regulations, or industry developments. Compute and compare costs of services. Consult with clients after sales or contract signings to resolve problems and provide ongoing support. Contact prospective or existing customers to discuss how services can meet their needs. Create forms or agreements to complete sales. Develop sales presentations or proposals to explain service specifications. Distribute promotional materials at meetings, conferences, or trade shows. Emphasize or recommend service features based on knowledge of customers' needs and vendor capabilities and limitations. Identify prospective customers using business directories, leads from clients, or information from conferences or trade shows. Inform customers of contracts or other information pertaining to purchased services. Maintain customer records using automated systems. Monitor market conditions, innovations, and competitors' services, prices, and sales. Negotiate prices or terms of sales or service agreements. Quote prices, credit terms, contract terms, or fulfillment dates for services.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.19	Entry	\$33,669
Median	\$25.89	Median	\$53,856
Experienced	\$37.97	Experienced	\$78,976

Alabama Projections

2022 Estimated Employment:	12,440
2032 Projected Employment:	13,260
Average Total Openings:	1,280
Annual Growth Rate:	0.64%

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

Technology

Analytical or scientific software
Customer relationship management CRM software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Presentation software
Project management software
Sales and marketing software
Spreadsheet software

4-Year Institutions with Programs

University of Alabama at Birmingham
Columbia Southern University
University of Alabama
Auburn University
Samford University
Jacksonville State University
University of South Alabama
University of Montevallo
Auburn University at Montgomery
Alabama A & M University
Alabama State University

2-Year Institution & ETPL Providers



41-4012 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: This occupation typically requires a High school diploma or equivalent

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

Tasks: Prepare sales contracts and order forms. Negotiate details of contracts and payments. Answer customers' questions about products, prices, availability, product uses, and credit terms. Recommend products to customers, based on customers' needs and interests. Contact regular and prospective customers to demonstrate products, explain product features, and solicit orders. 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 drawings, estimates, and bids that meet specific customer needs. Provide customers with product samples and catalogs. Identify prospective customers by using business directories, following leads from existing clients, participating in organizations and clubs, and attending trade shows and conferences. Arrange and direct delivery and installation of products and equipment. 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. Obtain credit information about prospective customers. Forward orders to manufacturers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.48	Entry	\$36,366
Median	\$28.50	Median	\$59,270
Experienced	\$43.25	Experienced	\$89,961

Alabama Projections

2022 Estimated Employment:	21,180
2032 Projected Employment:	22,320
Average Total Openings:	2,025
Annual Growth Rate:	0.52%

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

Technology

Data base user interface and query software
Enterprise resource planning ERP software
Graphics or photo imaging software
Operating system software
Project management software
Analytical or scientific software
Cloud-based data access and sharing software
Development environment software
Sales and marketing software
Video conferencing software

4-Year Institutions with Programs

Strayer University-Alabama
University of North Alabama
Jacksonville State University
University of Alabama in Huntsville
University of South Alabama
University of Montevallo
Alabama A & M University
University of West Alabama
Columbia Southern University
Oakwood University
Samford University

2-Year Institution & ETPL Providers

Gadsden State Community College



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: This occupation typically requires a Bachelor's degree

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

Tasks: Answer customers' questions about products, prices, availability, or credit terms. Quote prices, credit terms, or other bid specifications. Emphasize product features, based on analyses of customers' needs and on technical knowledge of product capabilities and limitations. Negotiate prices or terms of sales or service agreements. Maintain customer records, using automated systems. Collaborate with colleagues to exchange information, such as selling strategies or marketing information. Prepare sales presentations or proposals to explain product specifications or applications. Provide customers with ongoing technical support. Inform customers of estimate delivery schedules, service contracts, warranties, or other information pertaining to purchased products. Visit establishments to evaluate needs or to promote product or service sales. Complete expense reports, sales reports, or other paperwork. Provide feedback to product design teams so that products can be tailored to clients' needs. Arrange for installation and testing of products or machinery. Compute customer's installation or production costs and estimate savings from new services, products, or equipment. Consult with engineers regarding technical problems with products.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$***
Median	\$***	Median	\$***
Experienced	\$***	Experienced	\$***

Alabama Projections

2022 Estimated Employment:	3,260
2032 Projected Employment:	3,390
Average Total Openings:	305
Annual Growth Rate:	0.40%

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

Technology

Data base user interface and query software
Enterprise resource planning ERP software
Analytical or scientific software
Data base management system software
Office suite software
Accounting software
Cloud-based data access and sharing software
Customer relationship management CRM software
Data mining software
Development environment software

4-Year Institutions with Programs

University of Alabama in Huntsville
University of Alabama
Auburn University
Jacksonville State University
University of South Alabama
University of Montevallo
Auburn University at Montgomery
Alabama A & M University
University of North Alabama
University of Alabama at Birmingham
University of West Alabama

2-Year Institution & ETPL Providers



Set up, operate, or tend wood sawing machines. May operate computer numerically controlled (CNC) equipment. Includes lead sawyers.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Adjust saw blades, using wrenches and rulers, or by turning handwheels or pressing pedals, levers, or panel buttons. Inspect and measure workpieces to mark for cuts and to verify the accuracy of cuts, using rulers, squares, or caliper rules. Examine logs or lumber to plan the best cuts. 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, rip saws, or crozer machines. Inspect stock for imperfections or to estimate grades or qualities of stock or workpieces. Operate panelboards of saw or conveyor systems to move stock through processes or to cut stock to specified dimensions. Mount and bolt sawing blades or attachments to machine shafts. Monitor sawing machines, adjusting speed and tension and clearing jams to ensure proper operation. Select saw blades, types or grades of stock, or cutting procedures to be used, according to work orders or supervisors' instructions. Guide workpieces against saws, saw over workpieces by hand, or operate automatic feeding devices to guide cuts. Adjust bolts, clamps, stops, guides, or table angles or heights, using hand tools. Sharpen blades, or replace defective or worn blades or bands, using hand tools. Count, sort, or stack finished workpieces. Lubricate or clean machines, using wrenches, grease guns, or solvents. Clear machine jams, using hand tools.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.39	Entry	\$27,844
Median	\$16.68	Median	\$34,696
Experienced	\$18.37	Experienced	\$38,202

Alabama Projections

2022 Estimated Employment:	2,700
2032 Projected Employment:	2,980
Average Total Openings:	345
Annual Growth Rate:	0.99%

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

Technology

Document management software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Northwest Shoals Community College
Coastal Alabama Community College
Wallace Community College



Teach one or more subjects to students at the secondary school level.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Establish and enforce rules for behavior and procedures for maintaining order among students. 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. Prepare, administer, and grade tests and assignments to evaluate students' progress. Prepare materials and classrooms for class activities. 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. Assign and grade class work and homework. Observe and evaluate students' performance, behavior, social development, and physical health. Enforce all administration policies and rules governing students. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Prepare students for later grades by encouraging them to explore learning opportunities and to persevere with challenging tasks. Guide and counsel students with adjustments, academic problems, or special academic interests. Instruct and monitor students in the use of equipment and materials to prevent injuries and damage. Prepare for assigned classes, and show written evidence of preparation upon request of immediate supervisor

License: Application Fee: \$35.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$***	Entry	\$45,466
Median	\$***	Median	\$57,929
Experienced	\$***	Experienced	\$59,782

Alabama Projections

2022 Estimated Employment:	16,310
2032 Projected Employment:	17,210
Average Total Openings:	1,115
Annual Growth Rate:	0.54%

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

Technology

Cloud-based data access and sharing software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Alabama State University
University of Montevallo
University of West Alabama
University of Alabama at Birmingham
University of South Alabama
University of North Alabama
Jacksonville State University
Troy University
University of Alabama
University of Alabama in Huntsville
Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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.

License: Filing Fee: \$250.00; Application Fee: \$70.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.12	Entry	\$39,761
Median	\$22.67	Median	\$47,158
Experienced	\$43.29	Experienced	\$90,045

Alabama Projections

2022 Estimated Employment:	3,670
2032 Projected Employment:	4,050
Average Total Openings:	320
Annual Growth Rate:	1.00%

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

Technology

Object or component oriented development software
Operating system software
Customer relationship management CRM software
Enterprise resource planning ERP software
Analytical or scientific software
Cloud-based data access and sharing software
Data base user interface and query software
Development environment software
Electronic mail software
Office suite software

4-Year Institutions with Programs

Samford University
University of Alabama
University of Alabama at Birmingham
Jacksonville State University
Tuskegee University
Miles College
University of West Alabama
Columbia Southern University
Auburn University
Alabama A & M University
University of Alabama in Huntsville

2-Year Institution & ETPL Providers



Install, program, maintain, and repair security and fire alarm wiring and equipment. Ensure that work is in accordance with relevant codes.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Examine systems to locate problems, such as loose connections or broken insulation. Mount and fasten control panels, door and window contacts, sensors, or video cameras, and attach electrical and telephone wiring to connect components. Install, maintain, or repair security systems, alarm devices, or related equipment, following blueprints of electrical layouts and building plans. Inspect installation sites and study work orders, building plans, and installation manuals to determine materials requirements and installation procedures. Adjust sensitivity of units, based on room structures and manufacturers' recommendations, using programming keypads. Test and repair circuits and sensors, following wiring and system specifications. Drill holes for wiring wall studs, joists, ceilings, or floors. Demonstrate systems for customers and explain details, such as the causes and consequences of false alarms. Consult with clients to assess risks and to determine security requirements. Keep informed of new products and developments. Mount raceways and conduits and fasten wires to wood framing, using staplers. Provide customers with cost estimates for equipment installation. Prepare documents, such as invoices or warranties. Order replacement parts. Feed cables through access holes, roof spaces, or cavity walls to reach fixture outlets, positioning and terminating cables, wires, or strapping.

License: Individual Licensing Fee: \$50.00; Renewal Fee: \$45.00; Late Fee: \$25.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.13	Entry	\$37,718
Median	\$24.44	Median	\$50,831
Experienced	\$27.91	Experienced	\$58,054

Alabama Projections

2022 Estimated Employment:	1,230
2032 Projected Employment:	1,310
Average Total Openings:	140
Annual Growth Rate:	0.63%

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

Technology

Computer aided design CAD software
Electronic mail software
Office suite software
Operating system software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Wallace Community College
Bishop State Community College
Northwest Shoals Community College
Drake State Technical College
Bevill State Community College
Shelton State Community College
Trenholm State Community College
Calhoun Community College
Lawson State Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Adapt teaching methods and instructional materials to meet students' varying needs and interests. Conduct classes, workshops, and demonstrations, and provide individual instruction to teach topics and skills, such as cooking, dancing, writing, physical fitness, photography, personal finance, and flying. Monitor students' performance to make suggestions for improvement and to ensure that they satisfy course standards, training requirements, and objectives. Observe students to determine qualifications, limitations, abilities, interests, and other individual characteristics. Instruct students individually and in groups, using various teaching methods, such as lectures, discussions, and demonstrations. Establish clear objectives for all lessons, units, and project and communicate those objectives to students. Instruct and monitor students in the use and care of equipment and materials to prevent injury and damage. Prepare students for further development by encouraging them to explore learning opportunities and to persevere with challenging tasks. Prepare materials and classrooms for class activities. Enforce policies and rules governing students. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate. Prepare instructional program objectives, outlines, and lesson plans. Maintain accurate and complete student records as required by administrative policy. Participate in publicity planning and student recruitment. Plan and supervise class projects, field trips, visits by guest speakers, contests, or other experiential activities, and guide students in learning from those activities.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.98	Entry	\$22,839
Median	\$17.18	Median	\$35,742
Experienced	\$21.45	Experienced	\$44,617

Alabama Projections

2022 Estimated Employment:	8,350
2032 Projected Employment:	8,920
Average Total Openings:	1,085
Annual Growth Rate:	0.67%

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

Technology

Data base user interface and query software
Document management software
Graphics or photo imaging software
Office suite software
Presentation software
Spreadsheet software
Web platform development software
Word processing software

4-Year Institutions with Programs

University of West Alabama
Troy University

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Hire, train, or supervise new employees or apprentices. Fabricate ducts for high efficiency heating, ventilating, and air conditioning (HVAC) systems to maximize efficiency of systems. Perform building commissioning activities by completing mechanical inspections of a building's water, lighting, or heating, ventilating, and air conditioning (HVAC) systems. Verify that heating, ventilating, and air conditioning (HVAC) systems are designed, installed, and calibrated in accordance with green certification standards, such as those of Leaders in Energy and Environmental Design (LEED). 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. Maneuver completed roofing units into position for installation. Inspect individual parts, assemblies, or installations, using measuring instruments, such as calipers, scales, or micrometers. Fasten roof panel edges or machine-made moldings to structures by nailing or welding. Convert blueprints into shop drawings to be followed in the construction or assembly of sheet metal products. Install assemblies, such as flashing, pipes, tubes, heating and air conditioning ducts, furnace casings, rain gutters, or downspouts in supportive frameworks. Select gauges or types of sheet metal or nonmetallic material, according to product specifications. 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. Fabricate or alter parts at construction sites, using shears, hammers, punches, or drills. Trim, file, grind, deburr, buff, or smooth surfaces, seams, or joints of assembled parts, using hand tools or portable power tools.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$13.01	Entry	\$27,064
Median	\$17.57	Median	\$36,538
Experienced	\$22.09	Experienced	\$45,943

Alabama Projections

2022 Estimated Employment:	2,400
2032 Projected Employment:	2,540
Average Total Openings:	240
Annual Growth Rate:	0.57%

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

Technology

Computer aided design CAD software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

George C Wallace Community College



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: This occupation typically requires No formal educational credential

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Arrange to pick up particular customers or groups on a regular schedule. Check the condition of a vehicle's tire brakes, windshield wipers, lights, oil, fuel, water, and safety equipment to ensure that everything is in working order. 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. Comply with traffic regulations to operate vehicles in a safe and courteous manner. Drive shuttle busses, limousines, company cars, or privately owned vehicles to transport passengers. Follow relevant safety regulations and state laws governing vehicle operation and ensure that passengers follow safety regulations. Maintain knowledge of first-aid procedures. Notify dispatchers or company mechanics of vehicle problems. Operate vehicles with specialized equipment, such as wheelchair lifts, to transport and secure passengers with special needs. Perform errands for customers or employers, such as delivering or picking up mail and packages. 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 and drop off passengers at regularly scheduled neighborhood locations, following strict time schedules.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.03	Entry	\$20,865
Median	\$12.46	Median	\$25,912
Experienced	\$15.09	Experienced	\$31,385

Alabama Projections

2022 Estimated Employment:	2,060
2032 Projected Employment:	2,290
Average Total Openings:	320
Annual Growth Rate:	1.09%

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

Technology

Office suite software
Operating system software
Spreadsheet software
Web page creation and editing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Provide skincare treatments to face and body to enhance an individual's appearance. Includes electrologists and laser hair removal specialists.

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Stay abreast of latest industry trends, products, research, and treatments. Sterilize equipment and clean work areas. Keep records of client needs and preferences and the services provided. Demonstrate how to clean and care for skin properly and recommend skin-care regimens. Examine clients' skin, using magnifying lamps or visors when necessary, to evaluate skin condition and appearance. Select and apply cosmetic products, such as creams, lotions, and tonics. Cleanse clients' skin with water, creams, or lotions. 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. Determine which products or colors will improve clients' skin quality and appearance. Perform simple extractions to remove blackheads. Provide facial and body massages. Remove body and facial hair by applying wax. 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: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.36	Entry	\$21,555
Median	\$15.35	Median	\$31,928
Experienced	\$21.12	Experienced	\$43,933

Alabama Projections

2022 Estimated Employment:	840
2032 Projected Employment:	960
Average Total Openings:	135
Annual Growth Rate:	1.35%

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

Technology

Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Lurleen B Wallace Community College
Gadsden State Community College
Snead State Community College



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: This occupation typically requires a Bachelor's degree

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 other agencies and organizations in community to meet community needs and to ensure that services are not duplicated. Prepare and maintain records and reports, such as budgets, personnel records, or training manuals. 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. Establish and oversee administrative procedures to meet objectives set by boards of directors or senior management. Participate in the determination of organizational policies regarding such issues as participant eligibility, program requirements, and program benefits. Research and analyze member or community needs to determine program directions and goals. Speak to community groups to explain and interpret agency purposes, programs, and policies. Recruit, interview, and hire or sign up volunteers and staff. Represent organizations in relations with governmental and media institutions. Plan and administer budgets for programs, equipment, and support services. Analyze proposed legislation, regulations, or rule changes to determine how agency services could be impacted. Act as consultants to agency staff and other community programs regarding the interpretation of program-related federal, state, and county regulations and policies. Direct fundraising activities and the preparation of public relations materials. 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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.25	Entry	\$40,036
Median	\$27.82	Median	\$57,866
Experienced	\$36.16	Experienced	\$75,220

Alabama Projections

2022 Estimated Employment:	3,040
2032 Projected Employment:	3,220
Average Total Openings:	260
Annual Growth Rate:	0.59%

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

Technology

Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of Alabama
University of North Alabama
Alabama A&M University
University of Alabama at Birmingham
Alabama State University
Troy University
Jacksonville State University
Auburn University at Montgomery
Auburn University
Athens State University
University of South Alabama

2-Year Institution & ETPL Providers

Calhoun Community College
Lawson State Community College



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: This occupation typically requires a High school diploma or equivalent

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

Tasks: Assess clients' cognitive abilities and physical and emotional needs to determine appropriate interventions. Develop and implement behavioral management and care plans for clients. Provide information or refer individuals to public or private agencies or community services for assistance. 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. Advise clients regarding food stamps, child care, food, money management, sanitation, or housekeeping. 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. Transport and accompany clients to shopping areas or to appointments, using automobile. Explain rules established by owner or management, such as sanitation or maintenance requirements or parking regulations. Observe and discuss meal preparation and suggest alternate methods of food preparation. Demonstrate use and care of equipment for tenant use. Consult with supervisor concerning programs for individual families. Observe clients' food selections and recommend alternate economical and nutritional food choices. Inform tenants of facilities, such as laundries or playgrounds.

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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.43	Entry	\$21,698
Median	\$14.37	Median	\$29,896
Experienced	\$17.08	Experienced	\$35,527

Alabama Projections

2022 Estimated Employment:	4,080
2032 Projected Employment:	4,320
Average Total Openings:	450
Annual Growth Rate:	0.59%

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

Technology

Data base user interface and query software
Electronic mail software
Medical software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Troy University

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Analyze information to determine, recommend, and plan installation of a new system or modification of an existing system. Analyze user needs and software requirements to determine feasibility of design within time and cost constraints. Confer with data processing or project managers to obtain information on limitations or capabilities for data processing projects. Confer with systems analysts, engineers, programmers and others to design systems and to obtain information on project limitations and capabilities, performance requirements and interfaces. Consult with customers or other departments on project status, proposals, or technical issues, such as software system design or maintenance. Coordinate installation of software system. Design, develop and modify software systems, using scientific analysis and mathematical models to predict and measure outcomes and consequences of design. Determine system performance standards. Develop or direct software system testing or validation procedures, programming, or documentation. Modify existing software to correct errors, adapt it to new hardware, or upgrade interfaces and improve performance. Monitor functioning of equipment to ensure system operates in conformance with specifications. Obtain and evaluate information on factors such as reporting formats required, costs, or security needs to determine hardware configuration. Prepare reports or correspondence concerning project specifications, activities, or status. Recommend purchase of equipment to control dust, temperature, or humidity in area of system installation. Specify power supply requirements and configuration.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$31.25	Entry	\$64,998
Median	\$50.14	Median	\$104,281
Experienced	\$62.81	Experienced	\$130,636

Alabama Projections

2022 Estimated Employment:	16,860
2032 Projected Employment:	20,120
Average Total Openings:	1,305
Annual Growth Rate:	1.78%

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

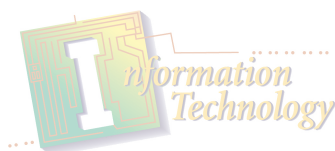
Technology

Web platform development software
Development environment software
Data base user interface and query software
Object or component oriented development software
Operating system software
Data base management system software
Application server software
Enterprise resource planning ERP software
Project management software
Analytical or scientific software

4-Year Institutions with Programs

Alabama State University
University of North Alabama
Strayer University-Alabama
University of Montevallo
University of Alabama at Birmingham
Tuskegee University
South University-Montgomery
Auburn University
University of Mobile
Herzing University-Birmingham
Auburn University at Montgomery

2-Year Institution & ETPL Providers



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: This occupation typically requires a Master's degree

OJT: Employees may 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: 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. Write reports and maintain proper documentation of information, such as client Medicaid or billing records or case notes. 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. Complete administrative responsibilities, such as coordinating paperwork, scheduling case management activities, or writing lesson plans. Educate patients and family members about various topics, such as communication techniques or strategies to cope with or to avoid personal misunderstandings. Participate in conferences, training, continuing education courses, or publish research results to share knowledge of new hearing or speech disorder treatment methods or technologies. Supervise or collaborate with therapy team. Consult with and refer clients to additional medical or educational services. Monitor patients' progress and adjust treatments accordingly. 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. Develop or implement treatment plans for problems such as stuttering, delayed language, swallowing disorder or inappropriate pitch or harsh voice problems, based on own assessments and recommendations of physicians, psychologists, or social workers. Instruct clients in techniques for more effective communication, such as sign language, lip reading, or voice improvement. Teach clients to control or strengthen tongue, jaw, face muscles, or breathing mechanisms. Develop speech exercise programs to reduce disabilities.

License: Application Fee: \$200.00; Renewal Fee: \$100.00

Outlook: Very Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$25.26	Entry	\$52,531
Median	\$32.65	Median	\$67,908
Experienced	\$39.33	Experienced	\$81,803

Alabama Projections

2022 Estimated Employment:	2,430
2032 Projected Employment:	3,040
Average Total Openings:	205
Annual Growth Rate:	2.23%

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

Technology

Medical software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Auburn University
University of Montevallo
University of Alabama
Alabama A&M University
University of South Alabama
Auburn University at Montgomery

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.66	Entry	\$24,247
Median	\$14.54	Median	\$30,252
Experienced	\$17.53	Experienced	\$36,457

Alabama Projections

2022 Estimated Employment:	44,310
2032 Projected Employment:	48,390
Average Total Openings:	7,830
Annual Growth Rate:	0.89%

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

Technology

Word processing software
Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Read specifications or blueprints to determine the locations, quantities, or sizes of materials required. Verify vertical and horizontal alignment of structural steel members, using plumb bobs, laser equipment, transits, or levels. 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. Ride on girders or other structural steel members to position them, or use rope to guide them into position. Fabricate metal parts, such as steel frames, columns, beams, or girders, according to blueprints or instructions from supervisors. Pull, push, or pry structural steel members into approximate positions for bolting into place. Cut, bend, or weld steel pieces, using metal shears, torches, or welding equipment. Fasten structural steel member to hoist cables, using chains, cables, or rope. Assemble hoisting equipment or rigging, such as cables, pulleys or hooks, to move heavy equipment or materials. Force structural steel members into final positions, using turnbuckles, crowbars, jacks, or hand tools. Erect metal or precast concrete components for structures, such as buildings, bridges, dams, towers, storage tanks, fences, or highway guard rails. 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. Dismantle structures or equipment.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.56	Entry	\$34,451
Median	\$23.96	Median	\$49,835
Experienced	\$27.09	Experienced	\$56,343

Alabama Projections

2022 Estimated Employment:	1,320
2032 Projected Employment:	1,420
Average Total Openings:	125
Annual Growth Rate:	0.74%

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

Technology

Electronic mail software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

OJT: Employees may 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: Assess individuals' degree of drug dependency by collecting and analyzing urine samples. Train or supervise student interns or new staff members. Counsel clients or patients, individually or in group sessions, to assist in overcoming dependencies, adjusting to life, or making changes. Complete and maintain accurate records or reports regarding the patients' histories and progress, services provided, or other required information. 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. 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. Intervene as an advocate for clients or patients to resolve emergency problems in crisis situations. Provide clients or family members with information about addiction issues and about available services or programs, making appropriate referrals when necessary. Modify treatment plans to comply with changes in client status. Coordinate counseling efforts with mental health professionals or other health professionals, such as doctors, nurses, or social workers. Attend training sessions to increase knowledge and skills. Plan or implement follow-up or aftercare programs for clients to be discharged from treatment programs. Counsel family members to assist them in understanding, dealing with, and supporting clients or patients. Participate in case conferences or staff meetings.

License: Application Review Fee: \$25.00; License Fee: \$150.00; Renewal Fee: \$150.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.81	Entry	\$32,884
Median	\$20.73	Median	\$43,118
Experienced	\$26.57	Experienced	\$55,264

Alabama Projections

2022 Estimated Employment:	5,870
2032 Projected Employment:	6,650
Average Total Openings:	590
Annual Growth Rate:	1.26%

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

Technology

Spreadsheet software
Office suite software
Electronic mail software
Presentation software
Word processing software

4-Year Institutions with Programs

University of Alabama at Birmingham

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Maintain a proper sterile field during surgical procedures. Prepare patients for surgery, including positioning patients on the operating table and covering them with sterile surgical drapes to prevent exposure. 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. Count sponges, needles, and instruments before and after operation. Hand instruments and supplies to surgeons and surgeons' assistants, hold retractors and cut sutures, and perform other tasks as directed by surgeon during 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. Wash and sterilize equipment, using germicides and sterilizers. Prepare, care for, and dispose of tissue specimens taken for laboratory analysis. Prepare dressings or bandages and apply or assist with their application following surgery. Operate, assemble, adjust, or monitor sterilizers, lights, suction machines, or diagnostic equipment to ensure proper operation. Observe patients' vital signs to assess physical condition. Maintain supply of fluids, such as plasma, saline, blood, or glucose, for use during operations. Maintain files and records of surgical procedures.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.44	Entry	\$32,122
Median	\$19.28	Median	\$40,102
Experienced	\$23.54	Experienced	\$48,966

Alabama Projections

2022 Estimated Employment:	2,360
2032 Projected Employment:	2,510
Average Total Openings:	160
Annual Growth Rate:	0.63%

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

Technology

Medical software
Office suite software
Operating system software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Jefferson State Community College
Bevill State Community College
Gadsden State Community College
Calhoun Community College
Lurleen B Wallace Community College
Coastal Alabama Community College
Wallace Community College
Southern Union State Community College



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: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

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. Research and combine existing property information to describe property boundaries in relation to adjacent properties, taking into account parcel splits, combinations, or land boundary adjustments. Calculate latitudes, longitudes, angles, areas, or other information for mapmaking, using survey field notes or reference tables. Compare topographical features or contour lines with images from aerial photographs, old maps, or other reference materials to verify the accuracy of their identification. Trace contour or topographic details to generate maps that denote specific land or property locations or geographic attributes

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$14.56	Entry	\$30,294
Median	\$18.16	Median	\$37,765
Experienced	\$24.86	Experienced	\$51,704

Alabama Projections

2022 Estimated Employment:	1,150
2032 Projected Employment:	1,180
Average Total Openings:	140
Annual Growth Rate:	0.26%

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

Technology

Computer aided design CAD software
Data base user interface and query software
Development environment software
Graphics or photo imaging software
Web platform development software
Cloud-based data access and sharing software
Electronic mail software
Geographic information system
Object or component oriented development software
Office suite software

4-Year Institutions with Programs

Troy University

2-Year Institution & ETPL Providers



Determine tax liability or collect taxes from individuals or business firms according to prescribed laws and regulations.

Education: This occupation typically requires a Bachelor'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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Answer questions from taxpayers and assist them in completing tax forms. 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. Confer with taxpayers or their representatives to discuss the issues, laws, and regulations involved in returns, and to resolve problems with returns. Contact taxpayers by mail or telephone to address discrepancies and to request supporting documentation. Send notices to taxpayers when accounts are delinquent. Notify taxpayers of any overpayment or underpayment, and either issue a refund or request further payment. Review filed tax returns to determine whether claimed tax credits and deductions are allowed by law. Review selected tax returns to determine the nature and extent of audits to be performed on them. Enter tax return information into computers for processing. Examine accounting systems and records to determine whether accounting methods used were appropriate and in compliance with statutory provisions. Impose payment deadlines on delinquent taxpayers and monitor payments to ensure that deadlines are met. 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. Examine and analyze tax assets and liabilities to determine resolution of delinquent tax problems.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.27	Entry	\$35,932
Median	\$26.31	Median	\$54,725
Experienced	\$34.12	Experienced	\$70,973

Alabama Projections

2022 Estimated Employment:	890
2032 Projected Employment:	920
Average Total Openings:	70
Annual Growth Rate:	0.36%

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

Technology

Business intelligence and data analysis software
Accounting software
Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

University of West Alabama
University of South Alabama
Troy University
Auburn University at Montgomery
Auburn University
Alabama State University
University of Alabama at Birmingham
University of Alabama
Jacksonville State University
University of North Alabama
University of Alabama in Huntsville

2-Year Institution & ETPL Providers



Prepare tax returns for individuals or small businesses.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Answer questions and provide future tax planning to clients. Explain federal and state tax laws to individuals and companies. Schedule appointments with clients. Compute taxes owed or overpaid, using adding machines or personal computers, and complete entries on forms, following tax form instructions and tax tables. Prepare or assist in preparing simple to complex tax returns for individuals or small businesses. Use all appropriate adjustments, deductions, and credits to keep clients' taxes to a minimum. 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. 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. Calculate form preparation fees according to return complexity and processing time required. Check data input or verify totals on forms prepared by others to detect errors in arithmetic, data entry, or procedures.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.83	Entry	\$22,529
Median	\$13.64	Median	\$28,362
Experienced	\$16.65	Experienced	\$34,627

Alabama Projections

2022 Estimated Employment:	830
2032 Projected Employment:	860
Average Total Openings:	95
Annual Growth Rate:	0.34%

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

Technology

Accounting software
Data base user interface and query software
Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

J. F. Drake State Technical College
Bevill State Community College
Coastal Alabama Community College
Jefferson State Community College
Northwest Shoals Community College
Lawson State Community College
Southern Union State Community College
George C Wallace Community College
Lurleen B Wallace Community College
Snead State Community College
Bishop State Community College
Gadsden State Community College
H Councill Trenholm State
Reid State Technical College
Central Alabama Community College



Install, set up, rearrange, or remove switching, distribution, routing, and dialing equipment used in central offices or headends. Service or repair telephone, cable television, Internet, and other communications equipment on customers' property. May install communications equipment or communications wiring in buildings.

Education: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Note differences in wire and cable colors so that work can be performed correctly. Test circuits and components of malfunctioning telecommunications equipment to isolate sources of malfunctions, using test meters, circuit diagrams, polarity probes, and other hand tools. Test repaired, newly installed, or updated equipment to ensure that it functions properly and conforms to specifications, using test equipment and observation. Drive crew trucks to and from work areas. Inspect equipment on a regular basis to ensure proper functioning. Repair or replace faulty equipment, such as defective and damaged telephones, wires, switching system components, and associated equipment. Remove and remake connections to change circuit layouts, following work orders or diagrams. Demonstrate equipment to customers and explain its use, responding to any inquiries or complaints. Analyze test readings, computer printouts, and trouble reports to determine equipment repair needs and required repair methods. Adjust or modify equipment to enhance equipment performance or to respond to customer requests. Request support from technical service centers when on-site procedures fail to solve installation or maintenance problems. Remove loose wires and other debris after work is completed. Assemble and install communication equipment such as data and telephone communication lines, wiring, switching equipment, wiring frames, power apparatus, computer systems, and networks. Communicate with bases, using telephones or two-way radios to receive instructions or technical advice, or to report equipment status. Collaborate with other workers to locate and correct malfunctions.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.68	Entry	\$38,860
Median	\$28.54	Median	\$59,369
Experienced	\$34.80	Experienced	\$72,393

Alabama Projections

2022 Estimated Employment:	2,960
2032 Projected Employment:	3,240
Average Total Openings:	340
Annual Growth Rate:	0.88%

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

Technology

Computer aided design CAD software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Install and repair telecommunications cable, including fiber optics.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Travel to customers' premises to install, maintain, or repair audio and visual electronic reception equipment or accessories. Inspect or test lines or cables, recording and analyzing test results, to assess transmission characteristics and locate faults or malfunctions. Splice cables, using hand tools, epoxy, or mechanical equipment. Measure signal strength at utility poles, using electronic test equipment. Set up service for customers, installing, connecting, testing, or adjusting equipment. Place insulation over conductors, or seal splices with moisture-proof covering. Access specific areas to string lines, or install terminal boxes, auxiliary equipment, or appliances, using bucket trucks, climbing poles or ladders, or entering tunnels, trenches, or crawl spaces. String cables between structures and lines from poles, towers, or trenches, and pull lines to proper tension. Install equipment such as amplifiers or repeaters to maintain the strength of communications transmissions. Lay underground cable directly in trenches, or string it through conduits running through trenches. Clean or maintain tools or test equipment. Explain cable service to subscribers after installation, and collect any installation fees due. Compute impedance of wires from poles to houses to determine additional resistance needed for reducing signals to desired levels. Use a variety of construction equipment to complete installations, such as digger derricks, trenchers, or cable plows. Dig trenches for underground wires or cables.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.88	Entry	\$37,193
Median	\$23.01	Median	\$47,861
Experienced	\$29.73	Experienced	\$61,837

Alabama Projections

2022 Estimated Employment:	1,850
2032 Projected Employment:	2,080
Average Total Openings:	195
Annual Growth Rate:	1.17%

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

Technology

Cloud-based data access and sharing software
Computer aided design CAD software
Electronic mail software
Office suite software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Repair and replace tires.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Unbolt and remove wheels from vehicles, using lug wrenches or other hand or power tools. Identify tire size and apply and inflate tires accordingly. Assist mechanics and perform various mechanical duties, such as changing oil or checking and replacing batteries. Clean and tidy up the shop. Place wheels on balancing machines to determine counterweights required to balance wheels. Raise vehicles, using hydraulic jacks. Remount wheels onto vehicles. Locate punctures in tubeless tires by visual inspection or by immersing inflated tires in water baths and observing air bubbles. Reassemble tires onto wheels. Replace valve stems and remove puncturing objects. Hammer required counterweights onto rims of wheels. Rotate tires to different positions on vehicles, using hand tools. Inspect tire casings for defects, such as holes or tears. Seal punctures in tubeless tires by inserting adhesive material and expanding rubber plugs into punctures, using hand tools. Glue tire patches over ruptures in tire casings, using rubber cement.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.12	Entry	\$23,121
Median	\$13.87	Median	\$28,847
Experienced	\$16.14	Experienced	\$33,567

Alabama Projections

2022 Estimated Employment:	1,920
2032 Projected Employment:	1,990
Average Total Openings:	220
Annual Growth Rate:	0.38%

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

Technology

Electronic mail software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Postsecondary non-degree award

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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Fit and assemble parts to make, repair, or modify dies, jigs, gauges, and tools, using machine tools, hand tools, or welders. Study blueprints, sketches, models, or specifications to plan sequences of operations for fabricating tools, dies, or assemblies. Verify dimensions, alignments, and clearances of finished parts for conformance to specifications, using measuring instruments such as calipers, gauge blocks, micrometers, or dial indicators. Visualize and compute dimensions, sizes, shapes, and tolerances of assemblies, based on specifications. Set up and operate conventional or computer numerically controlled machine tools such as lathes, milling machine or grinders to cut, bore, grind, or otherwise shape parts to prescribed dimensions and finishes. File, grind, shim and adjust different parts to properly fit them together. Conduct test runs with completed tools or dies to ensure that parts meet specifications, making adjustments as necessary. Inspect finished dies for smoothness, contour conformity, and defects. Smooth and polish flat and contoured surfaces of parts or tools, using scrapers, abrasive stones, files, emery cloths, or power grinders. Lift, position, and secure machined parts on surface plates or worktables, using hoists, vises, v-blocks, or angle plates. Measure, mark, and scribe metal or plastic stock to lay out machining, using instruments such as protractors, micrometers, scribes, or rulers. Cut, shape, and trim blanks or blocks to specified lengths or shapes, using power saws, power shears, rules, and hand tools. Design jigs, fixtures, and templates for use as work aids in the fabrication of parts or products. Select metals to be used from a range of metals and alloys, based on properties such as hardness or heat tolerance. Set up and operate drill presses to drill and tap holes in parts for assembly.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$20.45	Entry	\$42,542
Median	\$27.60	Median	\$57,408
Experienced	\$30.52	Experienced	\$63,489

Alabama Projections

2022 Estimated Employment:	980
2032 Projected Employment:	1,010
Average Total Openings:	105
Annual Growth Rate:	0.31%

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

Technology

Computer aided design CAD software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Project management software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Athens State University

2-Year Institution & ETPL Providers

Lawson State Community College
Bevill State Community College
George C Wallace Community College
H Councill Trenholm State
Bishop State Community College
Shelton State Community College
Southern Union State Community College
Northwest Shoals Community College
Gadsden State Community College
Enterprise State Community College
Coastal Alabama Community College
Northeast Alabama Community College
J. F. Drake State Technical College
Calhoun Community College



Escort individuals or groups on sightseeing tours or through places of interest, such as industrial establishments, public buildings, and art galleries.

Education: This occupation typically requires a High school diploma or 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Research various topics, including site history, environmental conditions, and clients' skills and abilities to plan appropriate expeditions, instruction, and commentary. Train other guides and volunteers. Conduct educational activities for school children. Escort individuals or groups on cruises, sightseeing tours, or through places of interest, such as industrial establishments, public buildings, or art galleries. Describe tour points of interest to group members, and respond to questions. Monitor visitors' activities to ensure compliance with establishment or tour regulations and safety practices. Greet and register visitors, and issue any required identification badge or safety devices. Distribute brochures, show audiovisual presentations, and explain establishment processes and operations at tour sites. Provide directions and other pertinent information to visitors. Provide for physical safety of groups, performing such activities as providing first aid or directing emergency evacuations. Provide information about wildlife varieties and habitats, as well as any relevant regulations, such as those pertaining to hunting and fishing. Collect fees and tickets from group members. Teach skills, such as proper climbing methods, and demonstrate and advise on the use of equipment. Select travel routes and sites to be visited based on knowledge of specific areas. Solicit tour patronage and sell souvenirs.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$10.02	Entry	\$20,848
Median	\$14.24	Median	\$29,614
Experienced	\$21.12	Experienced	\$43,936

Alabama Projections

2022 Estimated Employment:	520
2032 Projected Employment:	580
Average Total Openings:	120
Annual Growth Rate:	1.21%

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

Technology

Web page creation and editing software
Data base user interface and query software
Spreadsheet software
Office suite software
Electronic mail software
Presentation software
Word processing software
Data base user interface and query software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Bachelor's degree

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

Tasks: Coordinate recruitment and placement of training program participants. Evaluate training materials prepared by instructors, such as outlines, text, or handouts. Develop alternative training methods if expected improvements are not seen. Assess training needs through surveys, interviews with employees, focus groups, or consultation with managers, instructors, or customer representatives. Select and assign instructors to conduct training. Devise programs to develop executive potential among employees in lower-level positions. Negotiate contracts with clients for desired training outcomes, fees, or expenses. Refer trainees to employer relations representatives, to locations offering job placement assistance, or to appropriate social services agencies, if warranted. Develop or implement training programs related to efficiency, recycling, or other issues with environmental impacts. Evaluate modes of training delivery, such as in-person or virtual, to optimize training effectiveness, training costs, or environmental impacts. Design, plan, organize, or direct orientation and training programs for employees or customers. Obtain, organize, or develop training procedure manuals, guides, or course materials, such as handouts or visual materials. Monitor training costs and prepare budget reports to justify expenditures. Supervise, evaluate, or refer instructors to skill development classes. Keep up with developments in area of expertise by reading current journals, books, or magazine articles.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$19.64	Entry	\$40,854
Median	\$31.21	Median	\$64,922
Experienced	\$41.27	Experienced	\$85,837

Alabama Projections

2022 Estimated Employment:	2,750
2032 Projected Employment:	2,970
Average Total Openings:	260
Annual Growth Rate:	0.75%

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

Technology

Web platform development software
Graphics or photo imaging software
Data base management system software
Enterprise resource planning ERP software
Video conferencing software
Analytical or scientific software
Cloud-based data access and sharing software
Customer relationship management CRM software
Data base user interface and query software
Desktop publishing software

4-Year Institutions with Programs

Jacksonville State University
University of West Alabama
University of Montevallo
University of Alabama
University of North Alabama
Alabama State University
Auburn University at Montgomery
Athens State University
Auburn University
Troy University

2-Year Institution & ETPL Providers



Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. Includes logistics managers.

Education: This occupation typically requires a High school diploma or equivalent

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 condition 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 product 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 department 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.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$33.64	Entry	\$69,972
Median	\$48.48	Median	\$100,838
Experienced	\$63.00	Experienced	\$131,032

Alabama Projections

2022 Estimated Employment:	1,050
2032 Projected Employment:	1,180
Average Total Openings:	100
Annual Growth Rate:	1.21%

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

Technology

Data base user interface and query software
Computer aided design CAD software
Enterprise resource planning ERP software
Project management software
Electronic mail software
Office suite software
Presentation software
Process mapping and design software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Auburn University
Athens State University

2-Year Institution & ETPL Providers

Lawson State Community College



Using sophisticated climbing and rigging techniques, cut away dead or excess branches from trees or shrubs to maintain right-of-way for roads, sidewalks, or utilities, or to improve appearance, health, and value of tree. Prune or treat trees or shrubs using handsaws, hand pruners, clippers, and power pruners. Works off the ground in the tree canopy and may use truck-mounted lifts.

Education: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Supervise others engaged in tree trimming work and train lower-level employees. Operate boom trucks, loader stump chippers, brush chippers, tractors, power saws, trucks, sprayers, and other equipment and tools. Climb trees, using climbing hooks and belts, or climb ladders to gain access to work areas. Clean, sharpen, and lubricate tools and equipment. Cut away dead and excess branches from trees, or clear branches around power lines, using climbing equipment or buckets of extended truck booms, or chainsaws, hooks, handsaws, shears, and clippers. Trim, top, and reshape trees to achieve attractive shapes or to remove low-hanging branches. Prune, cut down, fertilize, and spray trees as directed by tree surgeons. Hoist tools and equipment to tree trimmers, and lower branches with ropes or block and tackle. Operate shredding and chipping equipment, and feed limbs and brush into the machines. Load debris and refuse onto trucks and haul it away for disposal. Inspect trees to determine if they have diseases or pest problems. Cable, brace, tie, bolt, stake, and guy trees and branches to provide support. Collect debris and refuse from tree trimming and removal operations into pile using shovels, rakes, or other tools. Provide information to the public regarding trees, such as advice on tree care. Clear sites, streets, and grounds of woody and herbaceous materials, such as tree stumps and fallen tree and limbs.

License: Examination Fee: \$75.00; Permit Fee: \$175.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$16.45	Entry	\$34,217
Median	\$20.01	Median	\$41,613
Experienced	\$22.43	Experienced	\$46,649

Alabama Projections

2022 Estimated Employment:	980
2032 Projected Employment:	1,050
Average Total Openings:	135
Annual Growth Rate:	0.70%

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

Technology

Electronic mail software
Spreadsheet software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



Instruct individual students or small groups of students in academic subjects to support formal class instruction or to prepare students for standardized or admissions tests.

Education: This occupation typically requires Some college, no 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Travel to students' homes, libraries, or schools to conduct tutoring sessions. Schedule tutoring appointments with students or their parents. Research or recommend textbooks, software, equipment, or other learning materials to complement tutoring. Prepare and facilitate tutoring workshops, collaborative projects, or academic support sessions for small groups of students. Participate in training and development sessions to improve tutoring practices or learn new tutoring techniques. Organize tutoring environment to promote productivity and learning. Monitor student performance or assist students in academic environments, such as classrooms, laboratories, or computing centers. Provide feedback to students, using positive reinforcement techniques to encourage, motivate, or build confidence in students. Prepare lesson plans or learning modules for tutoring sessions according to students' needs and goals. Maintain records of students' assessment results, progress, feedback, or school performance, ensuring confidentiality of all records. Identify, develop, or implement intervention strategies, tutoring plans, or individualized education plans (IEPs) for students. Develop teaching training materials, such as handouts, study materials, or quizzes. Communicate students' progress to students, parents, or teachers in written progress reports, in person, by phone, or by email. Collaborate with students, parents, teachers, school administrators, or counselors to determine student needs, develop tutoring plans, or assess student progress. Assess students' progress throughout tutoring sessions.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.38	Entry	\$23,671
Median	\$16.10	Median	\$33,491
Experienced	\$18.80	Experienced	\$39,098

Alabama Projections

2022 Estimated Employment:	1,330
2032 Projected Employment:	1,410
Average Total Openings:	240
Annual Growth Rate:	0.61%

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

Technology

Office suite software
Presentation software
Spreadsheet software
Video conferencing software
Web page creation and editing software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a Doctoral or professional degree

OJT: Employees may 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: Advise animal owners regarding sanitary measures, feeding, general care, medical conditions, or treatment options. Attend lectures, conferences, or continuing education courses. Perform administrative or business management tasks, such as scheduling appointments, accepting payments from clients, budgeting, or maintaining business records. Counsel clients about the deaths of their pets or about euthanasia decisions for their pets. Examine animals to detect and determine the nature of diseases or injuries. 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. 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. Train or supervise workers who handle or care for animals. Provide care to a wide range of animals or specialize in a particular species, such as horses or exotic birds. Euthanize animals. Establish or conduct quarantine or testing procedures that prevent the spread of diseases to other animals or to humans and that comply with applicable government regulations. 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

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$31.10	Entry	\$64,690
Median	\$46.72	Median	\$97,173
Experienced	\$69.58	Experienced	\$144,725

Alabama Projections

2022 Estimated Employment:	1,270
2032 Projected Employment:	1,460
Average Total Openings:	60
Annual Growth Rate:	1.36%

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

Technology

Data base user interface and query software
Document management software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

Auburn University

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Place orders to restock inventory of hospital or laboratory supplies. Monitor animals recovering from surgery and notify veterinarians of any unusual changes or symptoms. Administer anesthetics during surgery and monitor the effects on animals. Clean, maintain, and sterilize instruments or equipment. Administer medication, immunizations, or blood plasma to animals as prescribed by veterinarians. Provide emergency first aid to sick injured animals. Clean and maintain kennels, animal holding areas, examination or operating rooms, or animal loading or unloading facilities to control the spread of disease. Hold or restrain animals during veterinary procedures. Perform routine laboratory tests or diagnostic tests, such as taking or developing x-rays. Fill medication prescriptions. Collect laboratory specimens, such as blood, urine, or feces, for testing. Examine animals to detect behavioral changes or clinical symptoms that could indicate illness or injury. Assist veterinarians in examining animals to determine the nature of illnesses or injuries. Prepare surgical equipment and pass instruments or materials to veterinarians during surgical procedures. Perform enemas, catheterizations, ear flushes, intravenous feedings, or gavages.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$9.89	Entry	\$20,578
Median	\$13.65	Median	\$28,397
Experienced	\$14.59	Experienced	\$30,338

Alabama Projections

2022 Estimated Employment:	1,590
2032 Projected Employment:	1,830
Average Total Openings:	355
Annual Growth Rate:	1.45%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires 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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Maintain controlled drug inventory and related log books. Supervise or train veterinary students or other staff members. Monitor medical supplies and place orders when inventory is low. Restrain animals during exams or procedures. Discuss medical health of pets with clients, such as post-operative status. Schedule appointments and procedures for animals. 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. Prepare and administer medications, vaccines, serums, or treatments, as prescribed by veterinarians. 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. Administer emergency first aid, such as performing emergency resuscitation or other life saving procedures. Collect, prepare, and label samples for laboratory testing, culture, or microscopic examination. Clean and sterilize instruments, equipment, or material. Provide veterinarians with the correct equipment or instruments, as needed. Fill prescriptions, measuring medications and labeling containers.

License: Application Fee: \$100.00 plus the cost of national examination; License Renewal Fee: \$75.00

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$11.66	Entry	\$24,261
Median	\$14.46	Median	\$30,082
Experienced	\$17.60	Experienced	\$36,601

Alabama Projections

2022 Estimated Employment:	1,680
2032 Projected Employment:	1,920
Average Total Openings:	185
Annual Growth Rate:	1.36%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Jefferson State Community College
Lurleen B Wallace Community College
Coastal Alabama Community College



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: This occupation typically requires a Bachelor'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. A recognized apprenticeship program may be associated with these occupations.

Tasks: Design, build, or maintain Web sites, using authoring or scripting languages, content creation tools, management tools, and digital media. Perform or direct Web site updates. Confer with management or development teams to prioritize needs, resolve conflicts, develop content criteria, or choose solutions. Back up files from Web sites to local directories for instant recovery in case of problems. Evaluate code to ensure that it is valid, is properly structured, meets industry standards, and is compatible with browsers, devices, or operating systems. 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. Develop databases that support Web applications and Web sites. Renew domain name registrations. Collaborate with management or users to develop e-commerce strategies and to integrate these strategies with Web sites. Write supporting code for Web applications or Web sites. Communicate with network personnel or Web site hosting agencies to address hardware or software issues affecting Web sites. Perform Web site tests according to planned schedules, or after any Web site or product revision. Select programming languages, design tools, or applications. Respond to user email inquiries, or set up automated systems to send responses.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$17.69	Entry	\$36,793
Median	\$25.80	Median	\$53,665
Experienced	\$31.58	Experienced	\$65,681

Alabama Projections

2022 Estimated Employment:	3,360
2032 Projected Employment:	3,920
Average Total Openings:	280
Annual Growth Rate:	1.55%

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

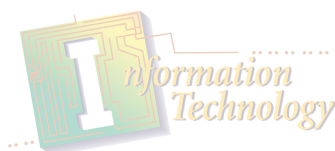
Technology

Web platform development software
Development environment software
Data base management system software
Object or component oriented development software
Operating system software
Data base user interface and query software
Application server software
Enterprise application integration software
Graphics or photo imaging software
Analytical or scientific software

4-Year Institutions with Programs

Auburn University at Montgomery
Alabama State University
University of South Alabama
Tuskegee University
Auburn University
University of Montevallo

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Collect or prepare measurement, weight, or identification labels and attach them to products. Document quantity, quality, type, weight, test result data, and value of materials or products to maintain shipping, receiving and production records and files. Compare product labels, tags, or tickets, shipping manifests, purchase order and bills of lading to verify accuracy of shipment contents, quality specifications, or weights. Count or estimate quantities of materials, parts, or products received or shipped. Weigh or measure materials, equipment, or products to maintain relevant records, using volume meters, scales, rules, or calipers. Communicate with customers and vendors to exchange information regarding products, materials, and services. Collect product samples and prepare them for laboratory analysis or testing. Unload or unpack incoming shipments. Operate scalehouse computers to obtain weight information about incoming shipments such as those from waste haulers. Fill orders for products and samples, following order tickets, and forward or mail items. Sort products or materials into predetermined sequences or groupings for display, packing, shipping, or storage. Signal or instruct other workers to weigh, move, or check products. Store samples of finished products in labeled carton and record their location. Remove from stock products or loads not meeting quality standards, and notify supervisors or appropriate departments of discrepancies or shortages. Maintain, monitor, and clean work area such as recycling collection sites, drop boxes, counters and windows, and areas around scale houses.

License: License/Renewal Fee: \$20.00

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.82	Entry	\$32,909
Median	\$21.94	Median	\$45,628
Experienced	\$23.30	Experienced	\$48,471

Alabama Projections

2022 Estimated Employment:	680
2032 Projected Employment:	680
Average Total Openings:	85
Annual Growth Rate:	0.10%

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

Technology

Data base user interface and query software
Electronic mail software
Enterprise resource planning ERP software
Office suite software
Presentation software
Spreadsheet software
Word processing software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Weld components in flat, vertical, or overhead positions. Operate safety equipment and use safe work habits. Examine workpieces for defects and measure workpieces with straightedges or templates to ensure conformance with specifications. Recognize, set up, and operate hand and power tools common to the welding trade, such as shielded metal arc and gas metal arc welding equipment. Weld separately or in combination, using aluminum, stainless steel, cast iron, and other alloys. Select and install torches, torch tips, filler rods, and flux, according to welding chart specifications or types and thicknesses of metals. Ignite torches or start power supplies and strike arcs by touching electrodes to metals being welded, completing electrical circuits. Connect and turn regulator valves to activate and adjust gas flow and pressure so that desired flames are obtained. Determine required equipment and welding methods, applying knowledge of metallurgy, geometry, and welding techniques. Monitor the fitting, burning, and welding processes to avoid overheating of parts or warping, shrinking, distortion, or expansion of material. Mark or tag material with proper job number, piece marks, and other identifying marks as required. Chip or grind off excess weld, slag, or spatter, using hand scrapers or power chippers, portable grinders, or arc-cutting equipment. Prepare all material surfaces to be welded, ensuring that there is no loose or thick scale, slag, rust, moisture, grease, or other foreign matter. Preheat workpieces prior to welding or bending, using torches or heating furnaces. Align and clamp workpieces together, using rules, squares, or hand tools, or position items in fixtures, jigs, or vises.

License: None.

Outlook: Good

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$15.68	Entry	\$32,614
Median	\$22.00	Median	\$45,755
Experienced	\$25.36	Experienced	\$52,757

Alabama Projections

2022 Estimated Employment:	10,120
2032 Projected Employment:	11,180
Average Total Openings:	1,135
Annual Growth Rate:	1.00%

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

Technology

Data base user interface and query software
Electronic mail software
Office suite software
Operating system software
Spreadsheet software

4-Year Institutions with Programs

University of West Alabama

2-Year Institution & ETPL Providers

Jefferson State Community College
Central Alabama Community College
Shelton State Community College
Bishop State Community College
George C Wallace Community College
Lurleen B Wallace Community College
Enterprise State Community College
H Councill Trenholm State
J. F. Drake State Technical College
Coastal Alabama Community College
Snead State Community College
Lawson State Community College
Northwest Shoals Community College
Calhoun Community College
Northeast Alabama Community College
Bevill State Community College
Southern Union State Community College
Gadsden State Community College
Reid State Technical College



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: This occupation typically requires a High school diploma or equivalent

OJT: Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.

Tasks: Start machines, adjust controls, and make trial cuts to ensure that machinery is operating properly. 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. Adjust machine tables or cutting devices and set controls on machines to produce specified cuts or operations. Monitor operation of machines and make adjustments to correct problems and ensure conformance to specifications. Set up, program, operate, or tend computerized or manual woodworking machines, such as drill presses, lathe shapers, routers, sanders, planers, or wood-nailing machines. Select knives, saws, blades, cutter heads, cams, bits, or belts, according to workpiece, machine functions, or product specifications. Examine finished workpiece for smoothness, shape, angle, depth-of-cut, or conformity to specifications and verify dimensions, visually and using hands, rules, calipers, templates, or gauges. Install and adjust blades, cutterheads, boring-bits, or sanding-belts, using hand tools and rules. Inspect and mark completed workpieces and stack them on pallets, boxes, or on conveyors so that they can be moved to the next workstation. Push or hold workpieces against, under, or through cutting, boring, or shaping mechanisms. Change alignment and adjustment of sanding, cutting, or boring machine guides to prevent defects in finished products, using hand tools. Inspect pulleys, drive belts, guards, or fences on machines to ensure that machines will operate safely. 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.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$12.09	Entry	\$25,143
Median	\$14.92	Median	\$31,033
Experienced	\$17.49	Experienced	\$36,387

Alabama Projections

2022 Estimated Employment:	2,690
2032 Projected Employment:	2,950
Average Total Openings:	285
Annual Growth Rate:	0.93%

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

Technology

Graphics or photo imaging software
Operating system software
Computer aided design CAD software
Computer aided manufacturing CAM software
Desktop publishing software
Document management software
Electronic mail software
Object or component oriented development software
Office suite software
Presentation software

4-Year Institutions with Programs

2-Year Institution & ETPL Providers

Northwest Shoals Community College
Coastal Alabama Community College
Wallace Community College



Originate and prepare written material, such as scripts, stories, advertisements, and other material.

Education: This occupation typically requires a Bachelor's degree

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

Tasks: Discuss with the client the product, advertising themes and methods, and any changes that should be made in advertising copy. Present drafts and ideas to clients. Vary language and tone of messages based on product and medium. Develop advertising campaigns for a wide range of clients, working with an advertising agency's creative director and art director to determine the best way to present advertising information. Write articles, bulletins, sales letters, speeches, and other related informative, marketing and promotional material. Conduct research and interviews to determine which of a product's selling features should be promoted. Invent names for products and write the slogans that appear on packaging, brochures and other promotional material. Review advertising trends, consumer surveys, and other data regarding marketing of goods and services to determine the best way to promote products. Collaborate with other writers on specific projects. Conduct research to obtain factual information and authentic detail, using sources such as newspaper accounts, diaries, and interviews. Consult with sales, media and marketing representatives to obtain information on product or service and discuss style and length of advertising written material. Edit or rewrite existing written material as necessary, and submit written material for approval by supervisor, editor, or publisher. Follow appropriate procedures to get copyrights for completed work. Plan project arrangements or outlines, and organize material accordingly. Prepare works in appropriate format for publication, and send them to publishers or producers.

License: None.

Outlook: Satisfactory

Alabama Employment Outlook

Alabama Wage Data

Hourly Wage		Annual Wage	
Entry	\$18.35	Entry	\$38,160
Median	\$28.22	Median	\$58,697
Experienced	\$47.77	Experienced	\$99,357

Alabama Projections

2022 Estimated Employment:	1,580
2032 Projected Employment:	1,630
Average Total Openings:	160
Annual Growth Rate:	0.31%

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

Technology

Graphics or photo imaging software
Web platform development software
Cloud-based data access and sharing software
Office suite software
Video creation and editing software
Web page creation and editing software
Word processing software
Data base management system software
Data base user interface and query software
Data mining software

4-Year Institutions with Programs

Auburn University
University of Alabama in Huntsville
Troy University
Auburn University at Montgomery
University of South Alabama
University of Montevallo
University of North Alabama
University of Alabama
University of Alabama at Birmingham
Alabama State University
Jacksonville State University

2-Year Institution & ETPL Providers

Gadsden State Community College

