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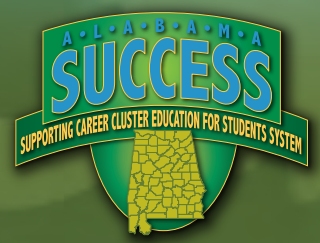
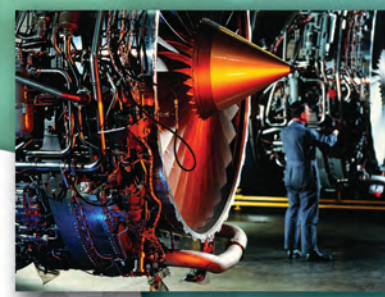
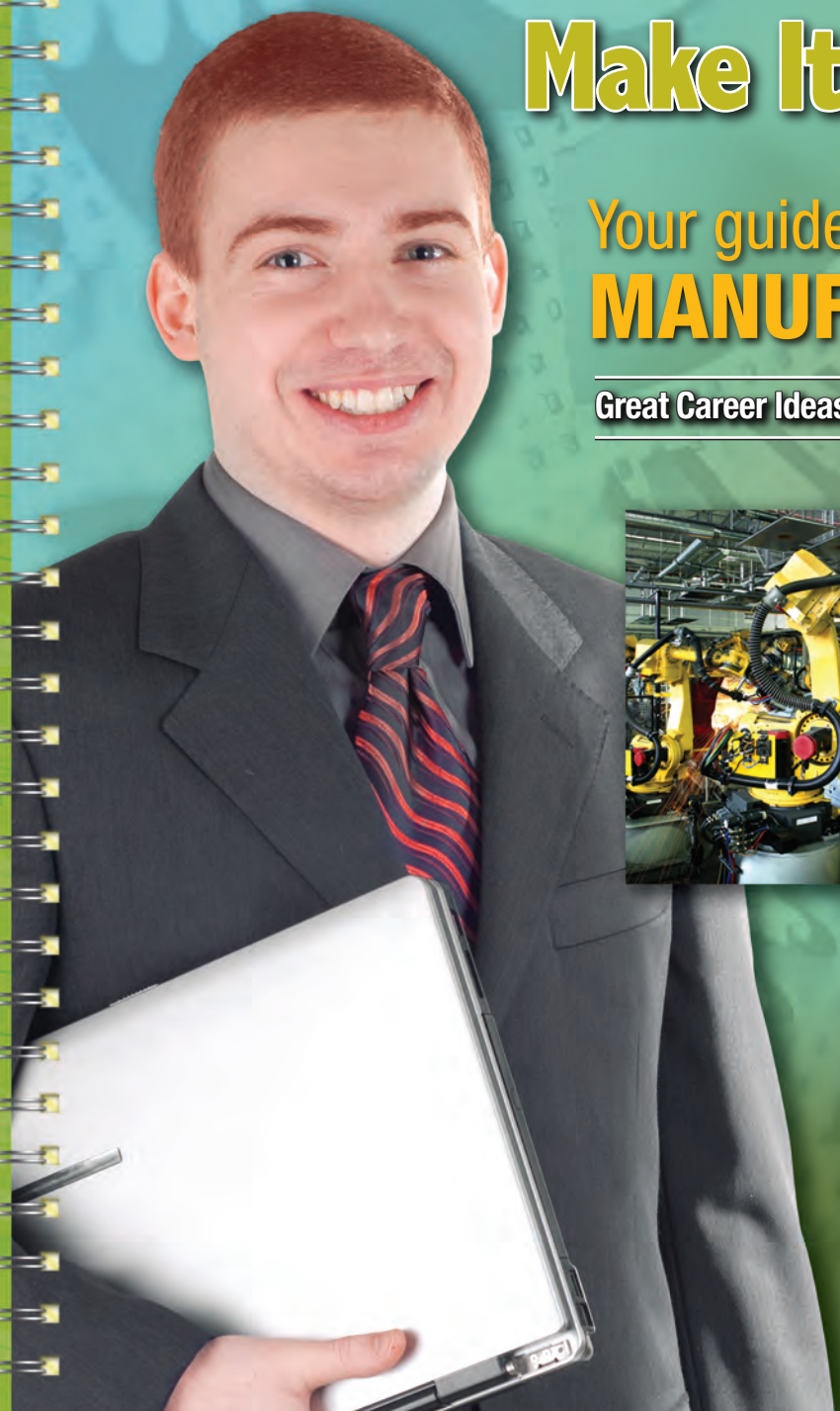


ALABAMA
SUCCESS
EDUCATION & CAREER PLANNER

Make It to the Top

Your guide to careers in
MANUFACTURING

Great Career Ideas • Creating Your Plan • College Resources



A message from . . .



Robert Bentley,
Governor of Alabama

The investments we make in our students today will help shape their futures for years to come. Our students are destined to become high-performing professionals in all sectors of the workforce.

Alabama SUCCESS is an initiative designed to help students access valuable information about current careers, postsecondary learning, and financial literacy resources.

Our goal is to give students the opportunities they need to prepare themselves for success. We want our students to be well-equipped for top careers in Alabama's workforce - which has a growing influence on the global marketplace.

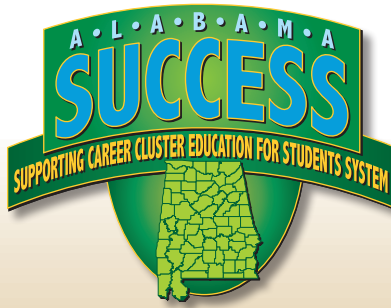
This Alabama SUCCESS guide is a great resource to assist in preparing for a bright and successful future.



Dr. Thomas R. Bice,
Alabama State
Superintendent of
Education

Alabama SUCCESS is an invaluable resource designed specifically for students. By

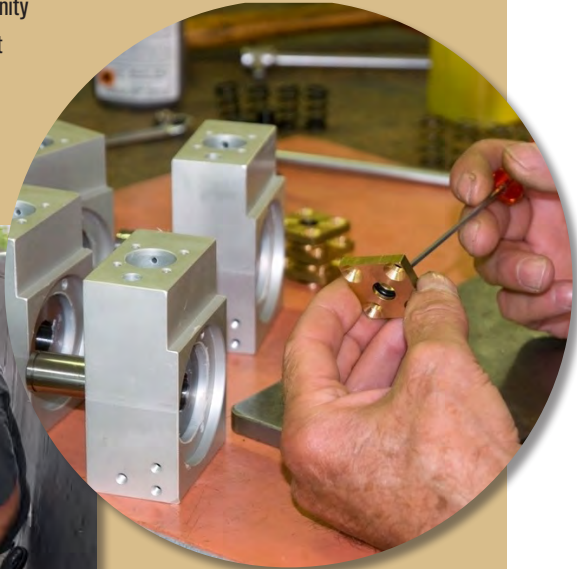
learning about actual career fields and the education and experience required for specific jobs, you will be better able to figure out what you want to do after high school and what you need to do to achieve your goals.



ATTENTION, PARENTS

This guide is part of a series created to help students in Alabama learn more about careers, salaries, and the steps they need to take to reach their goals. By connecting what they learn in the classroom to real jobs that interest them, Alabama students will graduate better prepared for life and work. You can help your child use this guide by:

- ◆ Talking to your child about what careers interest him or her—and why
- ◆ Sharing your work experiences—pro and con—with your child
- ◆ Asking people in your community who work in jobs that interest your child to talk about their careers or to let your child visit their workplace.





What Employers Want



**George Clark, President
Manufacture Alabama, Montgomery**

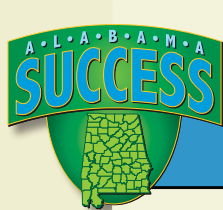
“In manufacturing, there has always been a need to understand the basics of math and science. Both subjects are so very important to manufacturing. But to really go after a career in manufacturing, you have to couple those math and science skills with problem solving. And not just problem solving, but problem solving in a group setting. No matter what you are producing, manufacturing is always a team effort.

Also, a lot of manufacturing work today is computerized, and the need for students to develop a basic knowledge of computer and mechanical skills will only increase over time.

Luckily, there are plenty of courses at Alabama community colleges that give students not just knowledge, but the practical experience that is so essential to mastering manufacturing. Just about everyone in Alabama is within driving distance of one of these opportunities. Our educational network affords students the best of opportunities.”

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CLUSTER

MANUFACTURING

PATHWAY

Production

Maintenance, Installation, and Repair

SAMPLE OCCUPATION

Model Maker, Metal, and Plastic

Medical Equipment Repairer

Manufacturing

Despite recent economic struggles, the United States remains one of the largest manufacturing economies in the world. But tough times have caused many manufacturing facilities to look for ways to run their businesses more efficiently. For employees, that means opportunities continue to emerge in the areas of operations management and maintenance. Other career possibilities for manufacturing include production management, line supervision, and inventory control.

CLUSTER PROFILE



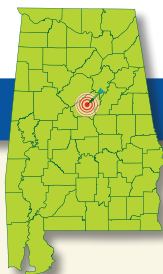
YOU DECIDE

Does the Manufacturing career cluster fit you, your talents, and your dreams? Take this quick quiz to find out.

- 1** Do you enjoy working with others?
WHY IT MATTERS: There are plenty of interesting jobs in the field of manufacturing, and they all require teamwork.
- 2** Do your favorite subjects include science and math?
WHY IT MATTERS: To succeed in manufacturing, you need to understand and enjoy math and science.
- 3** Are you up for a challenge?
WHY IT MATTERS: Manufacturing operations are often complex. Success in the field requires workers to constantly strive to take their skills to the next level.
- 4** Do you like working with computers?
WHY IT MATTERS: Manufacturing machinery is becoming more and more computerized.
- 5** Do you enjoy problem solving?
WHY IT MATTERS: The essence of manufacturing is problem solving.



If you answered “yes” to most of these questions, Manufacturing could be right for you.



YOUNG PROFESSIONAL PROFILE

NAME: Jeremy McAbee

EDUCATION: Hoover High School, Hoover; Auburn University, Auburn—Electrical Engineering, Bachelor of Science Degree

At the age of 23, Hartselle, native Jeremy McAbee had a business management degree and a steady job as manager of an auto parts store. But he soon realized that the retail business was not for him.

“I was never one to want to be sitting at a desk,” he says.

That’s when McAbee began working on his associate’s degree in process technology at Calhoun Community College in Decatur. There, he got the hands-on, action-oriented experience he was looking for.

“My teachers at Calhoun were all retired engineers,” he explains. “They trained us so that when we walked on the floor, we were as prepared and educated as someone who had been in the field for 10 years.”

Now 25, McAbee is loving his job working maintenance for Toray Carbon Fibers America, Inc. in Decatur. “What I like about manufacturing is that every day is different,” he says. “You really get paid to be a problem solver.”



LEARN MORE

Explore Manufacturing education and career options in Alabama at the website of Dream It, Do It, www.dreamit-doit.com/tvalley, a web-based campaign designed by to help people learn more about manufacturing careers. The data compiled on the website is based on research that was done by the National Association of Manufacturers, www.nam.org.



MAKE A PLAN

Sit down with your parents and counselor and create a plan.

Map out an Alabama Education Plan (sample at right) based on your interests, strengths, and possible career goals.

Your plan outlines the courses and electives you'll take in high school, plus related clubs and career preparation. Your counselor will work with you to determine the learning experiences needed for you to complete your plan, such as using distance learning or earning college credit from your local community college.

Here's a sample Alabama Education Plan for you to use as a guide.

SAMPLE* Alabama Education Plan

Name: Jordan Smith
School: Central High School
Diploma Option: Advanced Career and Technical Endorsement
Cluster: Manufacturing
Pathway: Maintenance, Installation and Repair
Career Goal: General Machinist
Postsecondary Goal: Associate in Applied Technology Degree



	Math	English	Science	Social Studies	Other Optional Courses	Sampling of Career and Technical Education Courses in Pathway
9th Grade	Algebra I	English 9	Physical Science	World History 1500–Present	<ul style="list-style-type: none"> Health Fine Arts Computer Applications Physical Education Foreign Language I** Foreign Language II** CTE Course I—Foundations of Engineering CTE Course II 	<ul style="list-style-type: none"> Architecture, Construction & Manufacturing Introduction to Computer Numerical Control**** Intermediate Computer Numerical Control Introduction to Manufacturing Computer-Aided Design and Computer-Aided Manufacturing I & II**** Introduction to Robotics Robotics Applications
10th Grade	Geometry	English 10	Biology	United States History to 1877		<ul style="list-style-type: none"> Introduction to Welding**** Gas Metal Arc Welding Flux Cored Arc Welding Gas Tungsten Arc Welding I & II Safety and Health Regulations Introduction to Precision Machining**** Introduction to Lathe** Introduction to Milling, Drill Press, and Surface Grinder** Intermediate Lathe and Bench work Intermediate Mill and Surface Grinder Introduction to Manufacturing
11th Grade	Algebra II with Trigonometry	English 11	Chemistry	United States History to Present		
12th Grade	Pre-Calculus or Calculus	English 12	Physics	Government and Economics		
Community College	General Education Requirements <ul style="list-style-type: none"> Basic CNC**** Drill Press and Power Saws I**** Precision Grinding Machines I**** Introduction to Machine Shop I**** Introduction to Cabinetmaking**** Cabinetmaking and Millwork**** Principles of Industrial Maintenance Welding and Metal Cutting**** 				Required and CTE Courses <ul style="list-style-type: none"> Applied Welding II with Carbon Arc Cutting Applied Welding III Groove Welds and Inspection Applied Welding IV Advanced Groove Welds and Testing Gas Metal Arc Welding Flux Cored Arc Welding 	<ul style="list-style-type: none"> Gas Tungsten Arc Welding I & II Safety and Health Regulations Introduction to Precision Machining**** Introduction to Lathe**** Introduction to Milling, Drill Press, and Surface Grinder**** Introduction to Manufacturing
Higher Education						
Education and Career Assessments: 8th Grade: Interest inventory and education plan initiated for all learners 11th Grade: College placement assessment Career Learning Experiences: Career preparation—paid and unpaid, internships, job shadowing						Co-Curricular Experiences: Technology Student Association (TSA) Extracurricular Experiences: Science Olympiad Service Learning Experiences: Service as event staff at “Cars for Cure” cancer-research car-show fundraiser

ARTICULATION AGREEMENT

is a fancy term for a simple education agreement that can streamline your road to a successful career.

Statewide articulation agreements link all high schools and two-year colleges in Alabama. They provide credit at two-year colleges for coursework mastered at the high school level.

*This is a sample plan and should not be considered a definitive plan for any student interested in this career cluster.
 Alabama First Choice diploma requires 2 years of the same foreign language. **Statewide articulated course

Articulation agreements can take you down your career pathway as well. In many cases, students transferring from two-year to four-year colleges and universities can complete four-year general studies core course requirements before they transfer.



Get Career Credentials

If you're a student in a career and technical education (CTE) program, you may have the option of earning a Career Readiness Certificate along with your high school diploma. The nationally recognized certificate shows you're proficient in applied math, reading for information, and locating information—skills employers highly value. Ask your school counselor about the statewide program; if it's not in your high school now, it will be implemented soon.



CAREER IDEAS

Need-to-know facts and figures about real Alabama jobs, salaries, and education options available in the Manufacturing cluster.

The 12 careers highlighted on the next page are a sampling of occupations in the **Manufacturing** cluster in Alabama. The charts include occupation name, description, plus wages for workers just starting out in the profession, average wages for those in the occupation, and the wages earned by experienced workers in the job (see “How to Read Job Charts”). The bar below the occupation’s name contains the Standard Occupational Code (SOC); use the SOC to look up more information about the career in online databases such as O*NET (see below). The bars are also color-coded to indicate the minimum level of education required for each profession.

For further information on occupations in all career clusters, go to the O*NET database at www.online.onetcenter.org.

How to Read Job Charts

- Starting Hourly Wage
- Average Hourly Wage
- Experienced Hourly Wage
- Occupation Name
- SOC Number
- Minimum Education Level (indicated by color bar)
- Occupation Description

EDUCATION LEVELS

- On-the-Job Training
- Work Experience in a Related Occupation
- Postsecondary Vocational Training
- Associate’s Degree
- Bachelor’s Degree
- Master’s Degree
- Doctoral Degree

Source: Alabama Department of Industrial Relations, Labor Market Information Division.



Check Out These Three COOL CAREERS

Underwater Robotic Welder

WHAT: Program or operate high-tech, automated welding tools sent underwater to repair bridges, pipelines, tunnels, oil platforms, and vessels.

WHO: Underwater robotic welders work in diving suits or on deck as welding engineers or technicians. Open water welders have special training, strength and coordination, and an adventurous spirit.



Robotics Operator

WHAT: Use computer-based design and manufacturing programs to ensure that an operating facility runs like a well-oiled machine. Whether in packaging or welding, robotics is vital to manufacturing; therefore, so are robotics operators.

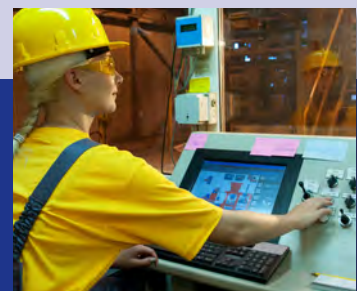
WHO: Robotics operators are detail-oriented and have excellent design skills. There are plenty of high-tech manufacturing jobs available in Alabama.



Multicraft Automotive Technician

WHAT: Work as a highly skilled technician at one of the more than 200 auto production plants in Alabama.

WHO: Multicraft automotive technicians are skilled in electronics, hydraulics, programmable logic controllers, welding, machine tool technology, and robotics, as well as problem solving and team building.





\$19.48
\$33.08
\$43.71

Occupational Health and Safety Specialist and Technician

SOC: 29-9011

Observe and analyze work environments and design programs to prevent disease or injury.



\$13.94
\$25.41
\$41.65

Purchasing Agent Except Retail (Wholesale and Farm Products)

SOC: 13-1023

Purchase machinery, equipment, tools, parts, supplies, services, and materials for manufacturing.



\$22.97
\$26.18
\$30.30

Chemical Plant and System Operator

SOC: 51-8091

Control a chemical process or system of machines throughout the manufacturing process.



\$16.17
\$25.93
\$41.42

First-Line Supervisor/Manager of Mechanics, Installers, and Repairers

SOC: 49-1011

Monitor work performance, inventories, and shop conditions. Schedule around the skills of personnel.



\$20.70
\$28.26
\$35.13

Power Plant Operator

SOC: 51-8013

Control the flow of machine-generated electricity from the plant to the community and other industrial plants.



\$14.16
\$24.22
\$39.75

First-Line Supervisor/Manager of Production and Operations Workers

SOC: 51-1011

Supervise inspectors, precision workers, machinists, assemblers, plant and system operators, and other workers.



\$14.18
\$22.17
\$35.14

Industrial Engineering Technician

SOC: 17-3026

Solve problems of industrial layout or manufacturing production.



\$13.81
\$25.15
\$31.61

Telecommunications Equipment Installer and Repairer

SOC: 49-2022

Work on switching and dialing equipment and service all communication equipment.



\$12.12
\$21.16
\$29.93

Radio Mechanic

SOC: 49-2021

Repair and maintain transmitting and receiving equipment.



\$12.53
\$19.20
\$34.50

Mechanical Engineering Technician

SOC: 17-3027

Modify, develop, and test machinery and equipment directed by engineering staff or physical scientists.



\$16.15
\$27.99
\$41.19

Commercial and Industrial Designer

SOC: 27-1021

Develop designs for manufactured products based on market research.



\$12.73
\$18.91
\$28.03

Electrical and Electronics Repairer

SOC: 49-2094

Install and repair electronic equipment. Monitor and adjust industrial controls for manufacturing facilities.

Think Again

Now is the time to take a fresh look at Manufacturing careers you may not have considered before.



MYTH: Manufacturing jobs are only for men.

FACTS: One of the first things you'll notice in a plant is the number of women in responsible positions. It really doesn't make a difference what field you go into. Whether in chemical, automotive, or some other manufacturing sector, more and more women are entering the workforce. Women are welding in shipyards, working as plant managers, operating control rooms, and managing the flow of steel and various chemicals throughout the plant.

Reality Check

What It Costs to Live on Your Own in Alabama

Estimated 2009–2010 monthly expenses for a 22-year-old living in Birmingham.

Note: Keep in mind that your paycheck will be reduced by about 30 percent to cover taxes, retirement, and insurance. What's left is known as your "take-home pay." Subtract 30 percent from the salaries shown on page 5 to get a more accurate take-home amount.

Cable and Internet:
\$90



Cell phone:
\$70



Rent and utilities:
\$700–\$800
(1-bedroom)



Groceries:
\$200–\$250



Gasoline:
\$124
(1,000 miles @ \$3.10 per gallon, 25 MPG)



Car insurance:
\$30–\$95
(6-month policy)



Monthly total:
\$1,310–\$1,654

Yearly total:
\$15,742–\$19,851



Car payment:
\$350–\$450
(Used 2010/2011 4-door)

Sources: Rent: www.rentbits.com/rb/t/rental-rates/birmingham-al
Car: www.carsdirect.com
Cell phone: www.att.com, www.bellsouth.net, www.bycomcast.net, www.whitefence.com
Groceries: www.wkrg.com/consumer/article/alabamians-paying-more-for-groceries/23889
Cable and Internet: www.birmingham.mybriighthouse.com
Car insurance: www.progressive.com
Gas: www.gasbulldly.com



POSTSECONDARY PROGRAMS

Take It to the Next Level

Check It OUT

Most Alabama schools offer this student organization related to the **Manufacturing** career cluster:



SkillsUSA • www.skillsusa.org

SkillsUSA is a partnership of students, teachers, and industry working to ensure American has a skilled workforce.

Programs include student competitions and employer-driven training in all career and technical education areas.

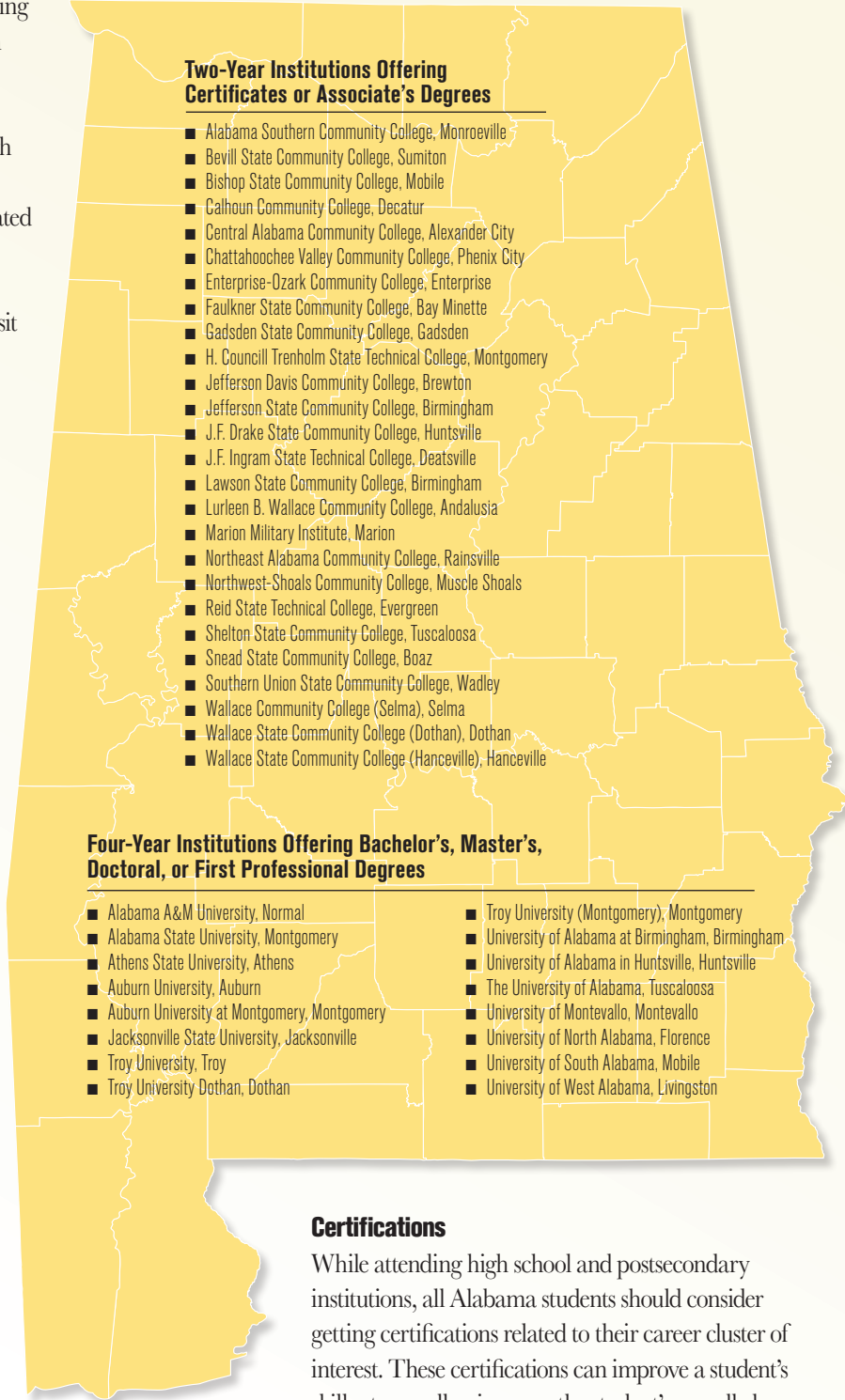


CARCAM Consortium for Alabama Regional Center for Automotive Manufacturing • www.carcam.org

The CARCAM consortium is comprised of faculty and administrators from five two-year colleges in Alabama. The goals of the consortium are to recruit, retain, and prepare students for careers in automotive manufacturing, as well as provide professional development for instructors of automotive manufacturing technology programs at secondary and postsecondary levels in Alabama.

In Alabama, the learning doesn't stop with high school graduation.

Here is a list of public postsecondary (after high school) institutions that may offer programs related to this cluster. For Web links to these two- and four-year institutions, visit www.ache.alabama.gov/Colleges&Universities/Directory.htm.



Two-Year Institutions Offering Certificates or Associate's Degrees

- Alabama Southern Community College, Monroeville
- Bevill State Community College, Sumiton
- Bishop State Community College, Mobile
- Calhoun Community College, Decatur
- Central Alabama Community College, Alexander City
- Chattahoochee Valley Community College, Phenix City
- Enterprise-Ozark Community College, Enterprise
- Faulkner State Community College, Bay Minette
- Gadsden State Community College, Gadsden
- H. Council Trenholm State Technical College, Montgomery
- Jefferson Davis Community College, Brewton
- Jefferson State Community College, Birmingham
- J.F. Drake State Community College, Huntsville
- J.F. Ingram State Technical College, Deatsville
- Lawson State Community College, Birmingham
- Lurleen B. Wallace Community College, Andalusia
- Marion Military Institute, Marion
- Northeast Alabama Community College, Rainsville
- Northwest-Shoals Community College, Muscle Shoals
- Reid State Technical College, Evergreen
- Shelton State Community College, Tuscaloosa
- Snead State Community College, Boaz
- Southern Union State Community College, Wadley
- Wallace Community College (Selma), Selma
- Wallace State Community College (Dothan), Dothan
- Wallace State Community College (Hanceville), Hanceville

Four-Year Institutions Offering Bachelor's, Master's, Doctoral, or First Professional Degrees

- Alabama A&M University, Normal
- Alabama State University, Montgomery
- Athens State University, Athens
- Auburn University, Auburn
- Auburn University at Montgomery, Montgomery
- Jacksonville State University, Jacksonville
- Troy University, Troy
- Troy University Dothan, Dothan
- Troy University (Montgomery), Montgomery
- University of Alabama at Birmingham, Birmingham
- University of Alabama in Huntsville, Huntsville
- The University of Alabama, Tuscaloosa
- University of Montevallo, Montevallo
- University of North Alabama, Florence
- University of South Alabama, Mobile
- University of West Alabama, Livingston

Certifications

While attending high school and postsecondary institutions, all Alabama students should consider getting certifications related to their career cluster of interest. These certifications can improve a student's skill set, as well as increase the student's overall chance of gaining employment in the field.



GETTING READY



GRADE 9 FRESHMAN YEAR

- ◆ Research your career options based on your interests, talents, and goals.
- ◆ Choose a career cluster.
- ◆ Create an Alabama Education Plan (see page 3).
- ◆ Do your best work in all your classes. Course selection and grades really do count when you are applying to colleges and training programs.
- ◆ Keep a folder or portfolio of your activities, awards, accomplishments, and work experience, and add to it during your high school career.

GRADE 10 SOPHOMORE YEAR

- ◆ Continue building the strongest possible academic record.
- ◆ Consider taking the PLAN (pre-ACT) if you plan to apply to a two-year college or university in the future.
- ◆ Consider taking the PSAT (preliminary SAT/National Merit Scholarship Test) if you plan to apply to a two-year college or university in the future.
- ◆ Use the information in your portfolio to create a resume.
- ◆ Apply for summer jobs, internships, or volunteer activities related to your career cluster.

GRADE 11 JUNIOR YEAR

- ◆ Take the PSAT/NMSQT.
- ◆ Use resources available at your school (books, online tools, college fairs, etc.) to research postsecondary education options related to your career goals.
- ◆ Register to take either the ACT or the SAT I and SAT II Subject Tests. There are testing dates every month from January through June. Registration deadlines are approximately four weeks before each testing date.
- ◆ Apply for summer jobs, internships, and volunteer activities related to your career goals.
- ◆ Use www.fafsa4caster.ed.gov to determine your financial aid eligibility.

GRADE 12 SENIOR YEAR

- ◆ In the fall, apply to postsecondary programs and retake any standardized college admissions tests if you would like to improve your score.
- ◆ Beginning in November, complete college financial aid forms. Deadlines and required data differ from school to school, so read the instructions carefully.
- ◆ In the spring, choose your postsecondary program on the basis of where you have been accepted, costs, etc.
- ◆ Continue doing your best work. Most schools require a final transcript before making your acceptance official.



COLLEGE PREP: Getting Accepted

The college admissions process can be stressful and a bit scary, especially if you are the first in your family to apply. Give yourself the best shot at getting into a college program that matches your goals by following these five steps:

1. Make the Grade

Your grade point average really does count, so do your best work on every assignment, pay attention in class, and participate in group discussions.

2. Get Involved

Build teamwork and leadership skills by joining clubs and teams at your school, volunteering for service projects, and participating in church or community activities.

3. Make a List

Before you can apply to college, you have to figure out what you would like to study and what matters most to you (like location, size, or religious affiliation). Use the college guides in your local library, school library, or counselor's office to start making a list of colleges that interest you. Use online tools like www.collegeboard.com and www.accs.cc to learn more about each school and take virtual campus tours.

4. Plan for Tests

Most colleges want scores from the ACT, SAT, or SAT II tests. See what tests the schools on your list require, sign up to take them in time to include the scores on your application, and then practice the free SAT sample questions at www.collegeboard.com or sample ACT tests at www.actstudent.org.

5. Be Neat and Complete

Before you send in a college application, double-check your spelling, make sure nothing is missing, and save a copy just in case you have to submit it again.

PAYING YOUR WAY: Financial Aid

Every Alabama student can afford to go to college. It just takes a little planning. Put your college dreams within financial reach by taking these five steps:

1. Consider a Community College

Alabama's public and private two-year colleges offer an affordable way to earn an associate's degree or complete enough credits to transfer into a four-year school as a junior. Learn more at www.accs.cc.

2. Weigh Your Options

Attending one of Alabama's four-year public or private schools cuts travel costs and other living expenses, as compared to attending schools out of state. In addition, public schools offer reduced in-state tuition, and, if there's a college nearby, you can save even more by living at home.

3. Rise to the Top

Apply to a couple of schools at which your grades and accomplishments put you near the top of the typical applicant pool. Since your application will stand out, you'll be more likely to qualify for scholarships and other merit aid.

4. Do a Little Digging

More than one million local, national, and college-specific scholarships are available each year. Ask your school librarian and counselor for help finding printed scholarship resource guides. To find and apply for scholarships online, sign up for the free college scholarship search source FastWeb at www.fastweb.com.

5. Apply for Aid

Fill out the Free Application for Federal Student Aid (FAFSA) as soon as possible after January 1 of the year you'll be starting college. FAFSA forms and instruction booklets are available in your guidance counselor's office and online at www.fafsa.gov. Some schools also require the CSS/Financial Aid Profile form (profileonline.collegeboard.com), and others have their own financial aid forms. Carefully read each college's application to figure out what forms you need to submit and when.

Tool Box



Resource Shelf

Use these websites and other resources available from your school counselor to learn more about careers, career clusters, and educational and job opportunities in high school and beyond.

ACCESS • www.accessdl.state.al.us

ACCESS (Alabama Connecting Classrooms, Educators, and Students Statewide) Distance Learning provides opportunities and options for Alabama public high school students to engage in advanced placement (AP), elective, and other courses to which they may not otherwise have access.

Alabama Career Information Network

www.alcareerinfo.org

This new Web portal increases Alabama students' and families' access to valuable career exploration activities and college financial aid information.

Alabama Commission on Higher Education

www.ache.alabama.gov

Click on "Colleges & Universities" within this website for a list of four-year institutions in Alabama.

The Alabama Community College System • www.accs.cc

Learn all about the public and private two-year colleges in Alabama. Connect directly to each school's website to see the courses, majors, degrees, and scholarships it offers to Alabama students.

Alabama Tech Prep • www.altechprep.org

This booklet is sponsored by Alabama Tech Prep. The goal of Tech Prep is to create a smooth transition from high school to college and to a career.

Alabama Virtual Library • www.avl.lib.al.us

This Alabama Legislature-funded site provides all students, teachers, and citizens of the State of Alabama with online access to essential library and information resources.

America's Career InfoNet • www.acinet.org/acinet

Use this site to search for occupational information, industry information, and state-specific labor market information.

Career Voyages • www.careervoyages.gov

This career planning resource helps students, parents, career changers, and career advisors.

O*NET (Occupational Information Network)

www.online.onetcenter.org

O*NET provides full information on occupations, including state-by-state salary data, employment prospects, and skill matching for students.

U.S. Department of Labor Occupational Outlook Handbook

www.bls.gov/oco

A valuable resource for both counselors and students, this federal website offers updated information on careers, job responsibilities and working conditions, salaries, and what jobs will be available in the future.

Articulation agreements: formal agreements between or among educational organizations (high schools, community colleges, and universities) that allow students to receive college credit for courses taken in high school.

Associate's degree: a two-year degree awarded by a community college.

Bachelor's degree: a four-year degree awarded by a college or university.

Career and technical student organizations (CTSOs): co-curricular organizations for students that offer activities and competitions related to particular careers.

Career Clusters: identifies pathways from high schools to two- and four-year colleges, technical schools, graduate schools, apprenticeship programs, and workplace so that learners can recognize the relationship between what they learn in school and what they can do in the future.

Career Pathways: pathways are sub-groupings of occupations/career specialties. Occupations/Career specialties are grouped into Pathways based on the fact that they require a set of common knowledge and skills for career success.

Doctoral degree: a degree awarded by universities for study beyond a master's degree. May also be called a Ph.D. or a first professional degree.

Dual enrollment: a program between Alabama public colleges and universities and local boards of education that allows high school students to enroll in certain approved college-level courses to receive both high school and college credit.

ECEP (Early College Enrollment Program): a program that allows juniors and seniors to have full-time enrollment at an Alabama public college or university while still graduating with their class and staying involved with high school activities.

Extended learning experiences: participation in career and technical student organizations, co-curricular activities, job shadowing, internships, or community service.

Internship: an extended learning experience that gives students an opportunity to work temporarily at an entry-level job in a career that interests them.

Job shadowing: an extended learning experience in which students observe professionals in particular careers as they go through a day on the job.

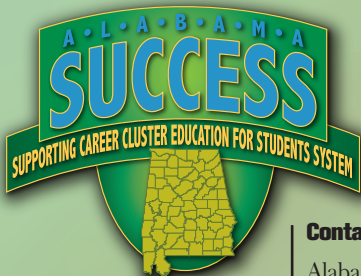
Master's degree: a degree awarded by universities for study beyond a bachelor's degree.

Postsecondary education: education beyond high school. Middle and high school are referred to as *secondary education*, so *postsecondary* means after high school.

STARS (State Transfer & Articulation Reporting System): STARS System allows public two-year students in Alabama to obtain a Transfer Guide/Agreement for the major of their choice. This guide/agreement, if used correctly, guides the student through their first two years of coursework and prevents loss of credit hours upon transfer to the appropriate public four-year university in Alabama.



Alabama Career Clusters and Pathways



Contact Information

Alabama SUCCESS/Alabama Tech Prep
 Margaret Smith
 P.O. Box 302101
 Montgomery, AL 36130-2101
 Phone: 334-353-4346
 Fax: 334-242-0234
 E-mail: msmith@alsde.edu

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No person shall be denied employment, be excluded from participation in, be denied the benefits of, or be subjected to discrimination in any program or activity on the basis of disability, sex, race, national origin, color, or age. Ref: Sec. 1983, Civil Rights Act, 42 U.S.C.; Title VI and VII, Civil Rights Act of 1964; Rehabilitation Act of 1973; Sec. 504; Age Discrimination in Employment Act; Equal Pay Act of 1963; Title IX of the Education Amendment of 1972; Title IX Coordinator, P.O. Box 302101, Montgomery, Alabama 36130-2101 or call (334)242-8444.

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