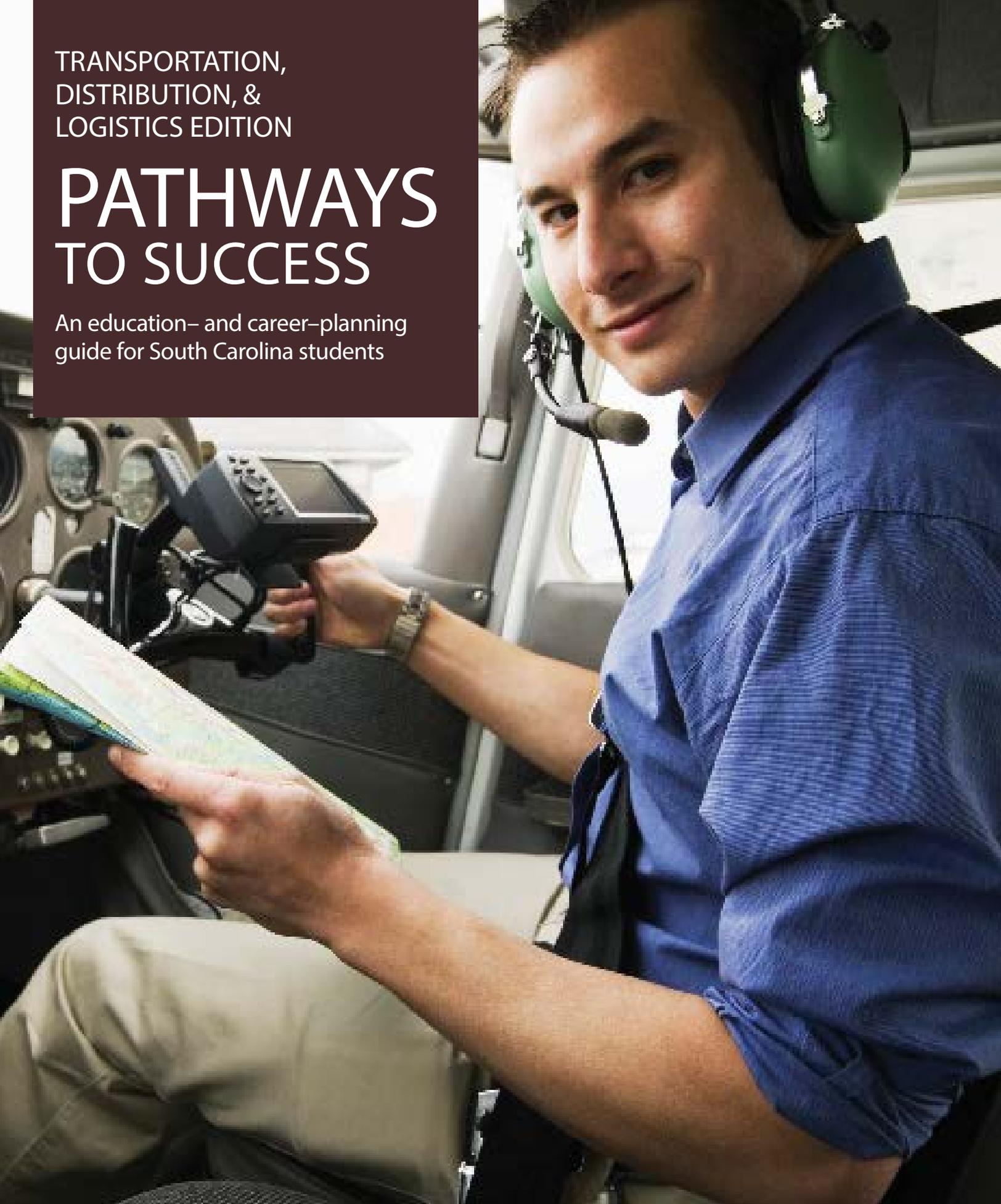
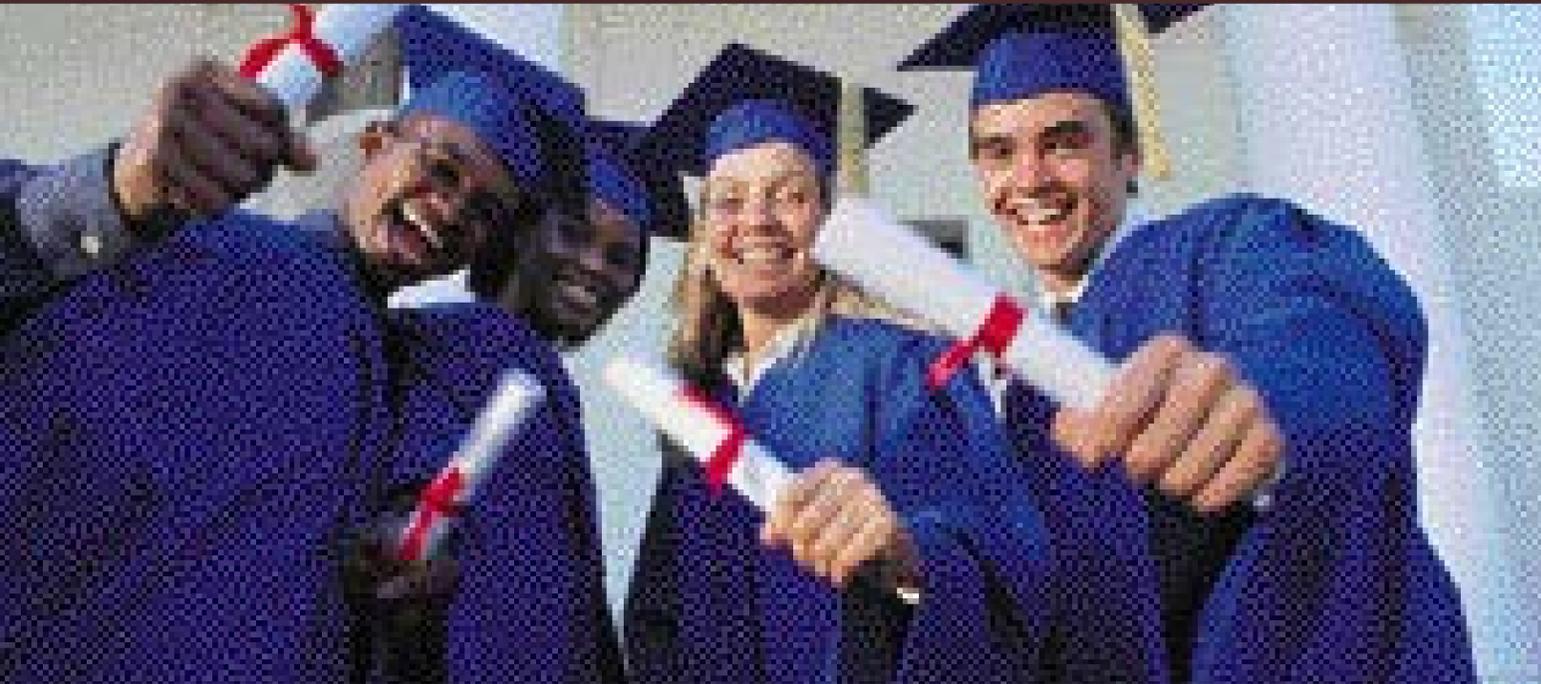


TRANSPORTATION,  
DISTRIBUTION, &  
LOGISTICS EDITION

# PATHWAYS TO SUCCESS

An education- and career-planning  
guide for South Carolina students





## Dear South Carolina Student,

“What do you want to be when you grow up?” You’ve heard it again and again, and if you’re like most people in school, you probably feel pretty lost. However, knowing what appeals to you or, better yet, what you want to do, can help you focus on those subjects and activities that will prepare you for the future.

But with so much to think about in life right now, and so many career directions to choose from, choosing a career pathway can be overwhelming. Even worse, what if you were to decide and then change your mind?

How would you like to know more about your options? This guide offers you realistic insight into various career clusters and how they might fit into the way you think and feel.

Pathways to Success can help you get started. It is a series of education- and career-planning guides designed to help you make informed, smart career decisions. You can use this information to eliminate options that aren’t attractive, so you can begin focusing on a career direction that is more appealing.

If you change your mind along the way, Pathways to Success can help you redirect your career plans, courses, and extracurricular activities.

In South Carolina, there are 16 career clusters that you can explore. This issue of Pathways to Success introduces you to one of these clusters. The clusters correspond to different fields within the job market (business, healthcare, the arts, agriculture, manufacturing, etc.).

Each issue of Pathways to Success explains what it is like to work in one of the career clusters, what kinds of jobs are available, and what parts of the career cluster are growing fastest. It also spells out the specific ways to prepare yourself for an occupation: majors to choose in high school, what classes to take, opportunities to learn outside of class, and the kind of education and training you can pursue after high school.

Believe it or not, being in school gives you a great chance to explore all of your options. So go for it. Figure out just how you feel about certain subjects. Seek out those things that you feel good about. Then start preparing yourself so you will be able to do the things you like to do “when you grow up.”

# A Career Destination in Transportation

Taking the road to a career in Transportation, Distribution, and Logistics is well worth the ride. Doing business in America means moving people, raw materials, and products by road, rail, air, and water. To keep things moving requires millions of workers in supporting industries such as infrastructure planning and management, logistics, and maintenance of vehicles and facilities. The variety of opportunities is dizzying, but to get ahead it helps to have a solid technical background. Individuals from automobile service technicians to airline pilots find their jobs improved and enriched by technical advances. In Transportation, Distribution, and Logistics, the more you know, the further you go. To learn more about this exciting career sector, read on.



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### ATTENTION:

**Parents, Teachers, and Counselors: This Guide Is for You, Too.**

This career cluster guide speaks to students about their education and career paths, but you play a critical role as they plan their futures. Read this guide to get more information about the Transportation, Distribution, and Logistics cluster. Then, sit down and talk with your child or a student you are advising. Help craft an Individual Graduation Plan, or IGP, that puts that teen on a personal pathway to success (see “What is an IGP?” on page 6).

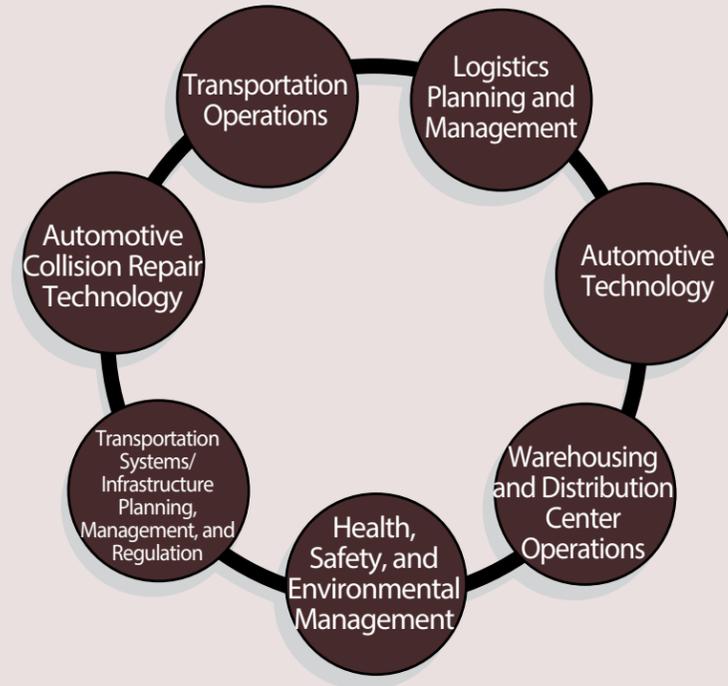


## What Are Career Clusters and Majors?

Career clusters help you acquire the knowledge and skills you need to reach your personal career goals. They organize what you learn in school around specific professional fields such as Education and Training or Information Technology. Information Technology, for example, focuses on professions that require highly technical training, while Human Services emphasizes occupations that involve people skills. South Carolina recognizes these 16 career clusters offered at various schools across the state.

- Agriculture, Food, and Natural Resources
- Architecture and Construction
- Arts, A/V Technology, and Communications
- Business, Management, and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections, and Security
- Manufacturing
- Marketing, Sales, and Service
- Science, Technology, Engineering, and Mathematics
- Transportation, Distribution, and Logistics

### Majors Clustered Under Transportation, Distribution, and Logistics



Each cluster consists of career majors, which are based on groups of professions that require similar talents, knowledge, and skills. For example, seven majors fall within the Transportation, Distribution, and Logistics cluster (see illustration above). Each major provides the required courses, instruction, and experience necessary to move toward employment in specific occupations such as small engine technician or air traffic controller, either right after high school or after additional education in college, the military, or elsewhere.

## A Model Career Cluster System

Career Awareness (Grades K-5)	Grades K-2	<ul style="list-style-type: none"> <li>• Students learn about different kinds of work.</li> <li>• Students are instructed in diversity and gender equity in the workplace.</li> <li>• Students learn about goal setting and decision making.</li> <li>• Students learn what it means to be a good worker.</li> </ul>
	Grades 3-5	<ul style="list-style-type: none"> <li>• Students use career assessment instruments to identify occupations.</li> <li>• Students learn about occupations in the various career clusters.</li> <li>• Students get involved in career guidance classroom activities.</li> </ul>
Career Exploration (Grades 6-8)	6th Grade	<ul style="list-style-type: none"> <li>• Students begin career exploration activities, including identification of learning opportunities in the community.</li> <li>• Students take career assessment instruments.</li> <li>• Students identify jobs within the clusters requiring different levels of education.</li> </ul>
	7th Grade	<ul style="list-style-type: none"> <li>• Students identify the steps of the career decision-making process.</li> <li>• Students identify and explore sources of career information.</li> <li>• Students take career assessment instruments.</li> <li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li> </ul>
	8th Grade	<ul style="list-style-type: none"> <li>• Students pick a cluster of study that they are interested in exploring.</li> <li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li> <li>• Students meet with parents, counselors, teachers, guardians, and legal designees to develop both an academic and career portfolio consistent with their academic and career focus.</li> <li>• Students take career assessment instruments.</li> </ul>
Career Preparation (Grades 9-Postsecondary)	9th Grade	<ul style="list-style-type: none"> <li>• Students may declare majors and focus their elective choices in particular areas.*</li> <li>• Students review and update their IGPs.</li> <li>• Students take career assessment instruments.</li> <li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li> </ul>
	10th Grade	<ul style="list-style-type: none"> <li>• Students should declare a career major.*</li> <li>• Students review and update their IGPs.</li> <li>• Students take career assessment instruments.</li> <li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li> </ul>
	11th Grade	<ul style="list-style-type: none"> <li>• Students review and update their graduation plans, with particular attention to postsecondary goals.</li> <li>• Students take career assessment instruments.</li> <li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li> <li>• Students may change or modify their career majors.</li> </ul>
	12th Grade	<ul style="list-style-type: none"> <li>• Students complete requirements for their majors.</li> <li>• Students receive recognition for completion of career cluster majors at graduation.</li> <li>• Students take career assessment instruments.</li> <li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li> <li>• Students may change or modify their career majors.</li> </ul>
	Postsecondary	<ul style="list-style-type: none"> <li>• Students follow aligned career cluster pathways to a two- or four-year college, the military, other postsecondary education or training, or employment.</li> <li>• Students obtain rewarding entry-level employment within their chosen clusters.</li> <li>• Students continue to refine career choices throughout their lifetimes of learning.</li> </ul>

\* Students are encouraged to review their IGPs and modify or change this focus throughout their secondary school careers with the guidance of educators and parents.

# Seven Steps to Success



To pick a career in Transportation, Distribution, and Logistics and put together a strategy for success, you have to get organized. Follow these steps to make it happen.

Your future career can be fun, or it can make you totally miserable, depending on whether or not you choose one that fits your unique personality, interests, goals, and abilities. Planning to be a nurse, for example, makes no sense if you can't stand the sight of blood. Forget being an engineer if you aren't going to take on advanced math. And if you live to be outdoors, opt out of a profession that keeps you cooped up in an office all day. The truth is, earning a living for about 40 years is a lot more rewarding—financially and otherwise—if you find the profession that fits you perfectly.

The search for your perfect profession starts with creating an Individual Graduation Plan, often called an IGP, to guide you through high school (see "What is an IGP?" on page 6). Every South Carolina student is required to create an IGP, but don't think of it as a hassle. Instead, look at it as a chance to explore your interests and options and to start working toward your personal dream—whether it's to be a movie star or a minister, a CEO or a chef, an entrepreneur, or an engineer.

## Here's a step-by-step guide to creating your own Individual Graduation Plan.

### Step 1: Complete Assessments

Start putting together your IGP by determining your strengths and weaknesses, what you love (or hate) to do with your time, and your hopes and dreams in life. To find the answers to these and other questions, take advantage of career assessment tools such as Holland's Self-Directed Search, ASVAB (Armed Services Vocational Aptitude Battery), and the Kuder Interest Inventory available through your school and online (see "What is an IGP?" on page 6).



### Step 2: Research Your Career Opportunities



After learning more about yourself, put together a list of careers you might want to research. Get the facts about what each possible profession pays, how many jobs in those professions are available in South Carolina (both now and in the future), and what kind of education you'll need to break into each of them. (For profiles of 25 career options in Transportation, Distribution,

and Logistics, see page 8). Use the career information resources available through your school's library and the Internet, including SCOIS, O\*NET, and COIN (see "Resource Roundup" on page 25). Go beyond the statistics, though, to get the inside story on what those who work in occupations on your list really do every day. Start by contacting professional associations and visiting Web sites, then arrange personal interviews and job shadowing.

### Step 3: Explore Your Education Options



Use your list of possible professions to investigate your education options in high school and beyond (see "Learn to Earn" on page 22). Identify both two-year and four-year colleges with programs that best fit your career goals. In the same way, find out about obtaining associate's degrees at two-year technical colleges with programs in Transportation, Distribution, and Logistics. Also, research opportunities for Transportation, Distribution, and Logistics training in the military. Then look at the clusters, majors, and courses offered in high school as well as special programs such as co-op education and dual-credit courses. Learn about academic requirements and tests you may have to take to graduate and get into college, including PACT, PSAT, PLAN, SAT, ACT, and WorkKeys. Also, explore extracurricular activities (see "Get an On-the-Job Education" on page 20) related to your list of possible professions, including sports, community service groups, band, clubs, and student organizations such as SkillsUSA and National Technical Honor Society.

### Step 4: Talk About Your Options With Parents and Counselors

Assessments and research are essential, but input from your parents (or guardians), counselors, and teachers can also help as you narrow your career and education choices. Talk with them about what you are learning as you are assessed—they can help you further identify your strengths, opportunities, and interests. Tell them about your hopes and dreams. Discuss with them career options five, 10, or 20 years from now. Ask them to help with your research by providing resources or using their contacts to set up career exploration experiences such as job shadowing and internships. Time with your guidance staff person may be limited, so make the most of it. Come in with clear and well-researched ideas about your future, and ask what he or she can do to help you get where you want to go in life.

### Step 5: Make Your Choices and Document Your Decisions



Now that you are armed with valuable research and good advice from people you trust, it's time to make some decisions. Ask your counselor what format your IGP should follow—it likely will include most of the information shown in "What is an IGP?" on page 6. Select your career objective, cluster, and major, and write them down on your IGP. Fill in a tentative schedule for your high school years. Add to your plan lists of the out-of-class and work experiences you want to pursue and your goal after high school—college, the military, employment, or another option. It's also smart to create a career portfolio, which is a file of material related to the education and career choices in your IGP. This portfolio might include items such as a resume, samples of your schoolwork, and research and assessment information. Once you have documented your decisions, save your IGP and career portfolio as your school directs.

### Step 6: Review and Revise Your IGP Each Year

A good IGP is frequently updated. It expands and changes as you go through high school. At least once at the end of each year, go back to your IGP and revise it as needed. Ask yourself if your decisions are still sound or if you've changed your mind about your career objective or plans after high school. Be realistic, but don't feel locked in to the choices you made earlier. Switching your cluster or major as you learn more about your interests and options in life is okay. Some direction—even if it changes—is better than no direction at all. Use this annual review of your plan to make choices that are intentional, not accidental, as you grow and change.

### Step 7: Graduate and Move On to Additional Education or Employment

The goal of an IGP is to give you a clear path to high school graduation, but that's not the end of your road to success. The plan you created will carry you on to college, the military, an apprenticeship, other education or training, or directly into the job market. You likely will continue to evaluate, research, discuss, and refine your career choices after high school and throughout your life.

# What is an IGP?

An Individual Graduation Plan (IGP) is like a road map to your future. If you stay on course, you'll reach your destination—graduation—with all the courses, skills, and experience you need to take your education or career to the next level. Here's what a basic IGP includes:

Information such as your name and school.

Your chosen career cluster is a field of study such as Education and Training or Business, Management, and Administration on which you plan to focus in high school and beyond. South Carolina recognizes 16 career clusters (see page 2), although local schools and districts may offer different clusters. This guide is an introduction to the Transportation, Distribution, and Logistics cluster.

Your plan for what to do after high school—get an associate's or bachelor's degree, enter the armed forces, seek industry certification, find employment, or pursue other options. Be specific—it's just a goal you can change later if needed.

A grade-nine-through-twelve outline of classes you should take, including core academic classes required for graduation and electives. Fill in the specific classes your school offers.

Your school may make this type of basic IGP part of your career portfolio—a file or folder that also may contain such information as results of your career-interest assessments, examples of your schoolwork, your scores from standardized tests, and records of your work experiences.

Out-of-class learning opportunities you want to pursue, such as student organizations or work experiences.

**Individual Graduation Plan**

Name: T'Grapevine Boyd  
 School: Central High School  
 Cluster: Transportation, Distribution, and Logistics  
 Major: Automotive Technology  
 Postsecondary Goal: An associate's degree from a technical college automotive program and A.S.E. certification

9th Grade	10th Grade	11th Grade	12th Grade
Math for the Technologies 1	Math for the Technologies 2	Math for the Technologies 3	Math for the Technologies 4
Physical Science	Applied Biology	Chemistry for the Technologies	Physics for the Technologies
English 1	English 2	Communication for the Workplace 3	Communication for the Workplace 4
World Geography	U.S. History and Constitution	Economics/Government	Electricity I
Physical Education	Computer Science	Automotive Technology	Automotive Technology
Mental Instruction	Introduction to Automotive Technology	Health 1	Health 2

Cocurricular Activities: Technology Student Association, SkillsUSA  
 Work-Based Learning Opportunities: Job shadowing, ASES (Automotive Trade Educational System) Internship

## Get Your Career Moving in Transportation, Distribution, and Logistics



From automotive service to traffic planning: Transportation, Distribution, and Logistics careers can put you in the driver's seat.



Without transportation, the world would grind to a halt. Planes, trains, and automobiles move people, goods, and materials across the country. Travelers circle the globe aboard ships and planes, and freighters carry our overseas imports and exports. An economy on the move depends on transportation. Moreover, this industry cluster contributes directly to the gross domestic product, and jobs in Transportation are projected to increase substantially. A career in Transportation is no dead end. Get in on the action, and get ahead—fast.

The Transportation, Distribution, and Logistics cluster is not your Daddy's clunker. For instance, a well-paid occupation today is an automotive service technician. Forget the old image of a mechanic in grease-stained coveralls. Today's service professionals are as high-tech as the cars they maintain, so much so that trained techs are hard to find. "There's a huge shortage nationwide and throughout South Carolina of qualified technicians," says William Bradshaw, South Carolina National Automobile Dealers Association (NADA) director and vice chairman of the NADA board. "We can sell all these cars, but if we don't have the qualified technicians to fix them right the first time, that affects customer loyalty." Pat Watson, executive vice president of the South Carolina Automobile Dealers Association (SCADA), adds that salaries are on the way up. "Opportunities are financially exciting today, but not nearly as awesome as they will be in the future." Service technicians can earn from \$30,000 to \$75,000 or more each year and have the chance to advance into even higher paying positions as service managers.

Opportunities abound outside the automotive business as well. For example, you could have a high-flying career as an airplane pilot or help people and products reach their destinations as a reservation or travel agent, cargo agent, or truck driver. The trucking industry employs roughly one out of every 11 workers in South Carolina and offers solid opportunities for advancement.

Logistics involves setting up and managing entire systems for moving people and materials. Many diverse career possibilities are available in this very dynamic field, ranging from owning and operating your own company to working for a Fortune 500 company. Transportation networks require the strategic planning of cities, towns, and roads, and trained professionals are required to get the job done. Communities across the state employ skilled traffic engineers and urban planners to design their public transportation systems. And all of the vehicles used to keep America moving emit pollutants into the environment. As the U.S. improves air and water quality, it will need more professionals with the knowledge to help create a more healthful environment. Career options branch off from the main transportation highway in a variety of rewarding directions. Put yourself in the driver's seat and find a route to success that best suits your talents and interests.

## Quick Quiz

Answer "yes" or "no" to these questions to see if Transportation, Distribution, and Logistics is the right career cluster for you.

- I am able to give directions on how to get to my home to a friend.
- I can figure out which route to take on the public transportation system to get from one point to another.
- I am willing to lift heavy objects in my job.
- I'd like to organize the shipment of goods from one place to another.
- I'd like to drive a truck or fly a plane.
- I can hook up audio-visual equipment, such as speakers to a stereo or a VCR to a television.

Totals: "Yes" \_\_\_\_\_ "No" \_\_\_\_\_

If you answered "yes" to three or more of the questions, then you may have what it takes to make it in Transportation, Distribution, and Logistics.

Source: SCOIS (Coin Career) Assessment Tests



# 25 Career Choices in Transportation, Distribution, and Logistics

Occupation	SC Salary	Job Growth <sup>1</sup>	Education Required <sup>2</sup>	Career Readiness Certificate Level <sup>3</sup>	Description
Air Traffic Controller	\$74,300	15.7%	OJT, MA, DD	gold	Regulates air traffic from airport control towers, air route control centers, and flight service stations located throughout the country.
Pilot	\$60,960	NA	AD, BD	gold	Flies aircraft, such as airplanes and helicopters, for commercial airlines.
Transportation Manager	\$58,570	9.3%	OJT, AD, BD	gold	Arranges for the transporting of raw materials to company production areas and finished products to customers, warehouses, or storage areas.
Locomotive Engineer	\$54,370	NA	OJT, HS	bronze	Operates electric, diesel-electric, or gas-turbine-electric locomotives to transport freight and passengers.
Automotive Service Advisor	\$50,090	15.0%	OJT, HS, AD	silver	Inspects and tests automobiles to determine the need for and cost of repairs. Prepares work orders, listing parts and labor required to complete repairs.
Rail Transportation Worker	\$46,400	18.1%	OJT, HS, AP	silver	Facilitates the movement of freight and people on our nation's railways.
Urban and Regional Planner	\$44,080	11.8%	BD, MA	gold	Studies and provides solutions for problems connected with such issues as land use, transportation, water and sewage systems, and community facilities.
Inspector and Compliance Officer	\$41,690	10.7%	BD	gold	Verifies and enforces compliance with public laws, regulations, and standards for health, safety, and other matters.
Aircraft Mechanic	\$39,900	15.6%	OJT, AP, AD	silver	Inspects, repairs, and services all types of aircraft engines and mechanical hydraulic systems and components of airplanes.
Environmental Science Technician	\$37,810	12.1%	BD	gold	Solves environmental problems in such areas as air and water pollution, radiation, hazardous waste, toxic materials, and land management.
Heavy Equipment Service Technician	\$36,150	10.2%	OJT, HS, AD, AP	silver	Maintains and properly cares for heavy equipment machinery, such as motor graders, backhoes, and loading shovels.
Diesel Service Technician	\$32,270	14.6%	OJT, AP, HS, AD	gold	Repairs and maintains diesel engines that power heavy trucks, automobiles, and various other diesel-powered equipment.
Sailor and Deckhand	\$31,930	17.0%	OJT, HS	bronze	Performs much of the manual labor on a ship.
Small Engine Mechanic	\$28,880	8.4%	OJT, HS, AD	gold	Diagnoses, adjusts, and repairs mechanical and electrical problems in a small gasoline engine.
Travel Agent	\$28,380	26.9%	AD, BD	gold	Arranges for travel, lodging, and related reservations, keeping in mind clients' tastes, budgets, and other requirements.
Dispatcher	\$28,370	13.0%	OJT, HS	silver	Coordinates activities of traveling personnel and vehicles either with a company or a community agency.
Truck Driver	\$26,860	12.7%	OJT, HS	bronze	Drives trucks of all types and sizes to transport materials and finished products from one place to another.
Shipping and Receiving Clerk	\$26,480	6.9%	HS	silver	Prepares products for shipment and receives, unpacks, and examines shipped goods to verify the completeness of shipments received.
Hazardous Waste Manager	\$24,870	10.7%	BD	silver	Conducts studies on hazardous waste problems.
Freight, Stock, and Material Mover	\$21,950	11.9%	OJT	silver	Performs various tasks involved in loading, unloading, and moving baggage, freight, and all types of materials.
Bus Driver	\$18,740	17.6%	OJT, HS	silver	Transports passengers in a bus over specified routes to local or distant points according to a time schedule.
Taxi Driver and Chauffeur	\$17,510	19.7%	OJT	silver	Provides transportation to passengers for a fee.
Automotive Body Repairer	\$29,710	14.0%	OJT, AP, HS, AD	silver	Repairs damaged bodies and body parts of automotive vehicles and estimates repair costs.
Automotive Technician	\$33,700	10.5%	OJT, AP, HS, AD	silver	Inspects, maintains, and repairs mechanical, electrical, and hydraulic parts of gasoline and diesel powered vehicles.
Flight Attendant	\$49,700	NA	HS, AD	gold	Works aboard airplanes to provide a variety of personal services for airline passengers to ensure their safety and comfort.

## About This Chart

This chart is a sampling of 25 of the more than 100 occupations that fall within the Transportation, Distribution, and Logistics sector of the South Carolina job market. For more information about any Transportation, Distribution, and Logistics occupation, check out the South Carolina Occupational Information System (SCOIS). This electronic database is packed with valuable information on careers, colleges, scholarships, and more. SCOIS is available in local schools and at more than 600 other locations throughout South Carolina. Here are explanations for the abbreviations and symbols used in this chart.

### Education Requirement Abbreviations

- C — 12- or 18-month certificate
- AD — Two-year associate's degree
- AP — Advanced Placement
- BD — Four-year bachelor's degree
- HS — High school diploma or GED
- MA — Master's degree
- NA — Information not available or item does not apply
- OJT — On-the-job training
- DD — Doctorate degree

Source for chart: SCOIS

<sup>1</sup> The expected percentage increase or decline in the number of positions in the profession in South Carolina through 2008.  
<sup>2</sup> The minimum educational attainment required to enter the profession; occupations may have different entry-level jobs for those with different degrees.

<sup>3</sup> The South Carolina Career Readiness Certificate demonstrates to employers that you have the skills necessary to be successful in your chosen occupation. For more information on the CRC in South Carolina go to [www.WorkReadySC.org](http://www.WorkReadySC.org).

# A Hands-On Head Start

The AYES program gives high school students a jump on careers in automotive service with first-rate on-the-job training.

## Not Just for Guys Anymore

Teresa Shaw loves old cars and race cars. So, at age 23, she applied for an entry-level position as a service advisor at Border Ford Lincoln-Mercury in Mullins, South Carolina. Eight years later, Shaw is the service manager at the dealership and regularly visits schools in Dillon and Union Counties encouraging young women to explore careers in automotive service.



Teresa Shaw says successful automotive service advisors love people and cars.

“This is a great field for girls who love cars and love people. Because when a woman takes her car into the shop, she is always afraid that someone is going to take advantage of her. That’s why dealerships want to have women working in the service department,” explains Shaw. “Female customers feel more comfortable when they deal with a woman service advisor or manager. They feel like we will make sure that their car is fixed properly and that we will be honest with them.”

Shaw admits that some men are still “shocked” when they see her working in the dealership’s service department, but she says that she has always felt “welcome and respected” by her coworkers, employers, and customers.

Says Shaw, “A lot of times when I go to meetings or go to school for more training, I am the only woman. That makes me feel good because I can sit in that classroom and know that those men are no smarter than I am. I can hang right with them when it comes to cars and customer service.”



The best way to learn about a career is to try it on for size. Automotive Youth Educational Systems (AYES) provides students interested in careers in automotive service the chance to explore career opportunities at local car dealerships through job shadowing, career days and fairs, and internships.

AYES is a partnership among participating automotive manufacturers, dealers, and high schools. More than 380 high schools and career centers and 3,800 auto dealers nationwide participate in the program.

AYES partners—including several major automobile manufacturers such as BMW—play an important role in local programs’ success. Pendleton High School in Pendleton, Dillon County Technology Center in Dillon, and R.D. Anderson Applied Technology Center in Moore, for example, are among eight schools in the eastern United States that have received current model BMWs for their schools’ automotive training programs.

## A Huge Advantage

William Bradshaw, president of Bradshaw Automotive Group, which owns dealerships in Greenville, Greer, and Spartanburg, South Carolina, and Asheville, North Carolina, says that the AYES program gives high school students a huge career advantage. “So many of our four-year college students can’t find a job,” he explains, “whereas people who go through AYES and a two-year technical program are usually guaranteed a job because they’ve worked at a dealership that needs them.”

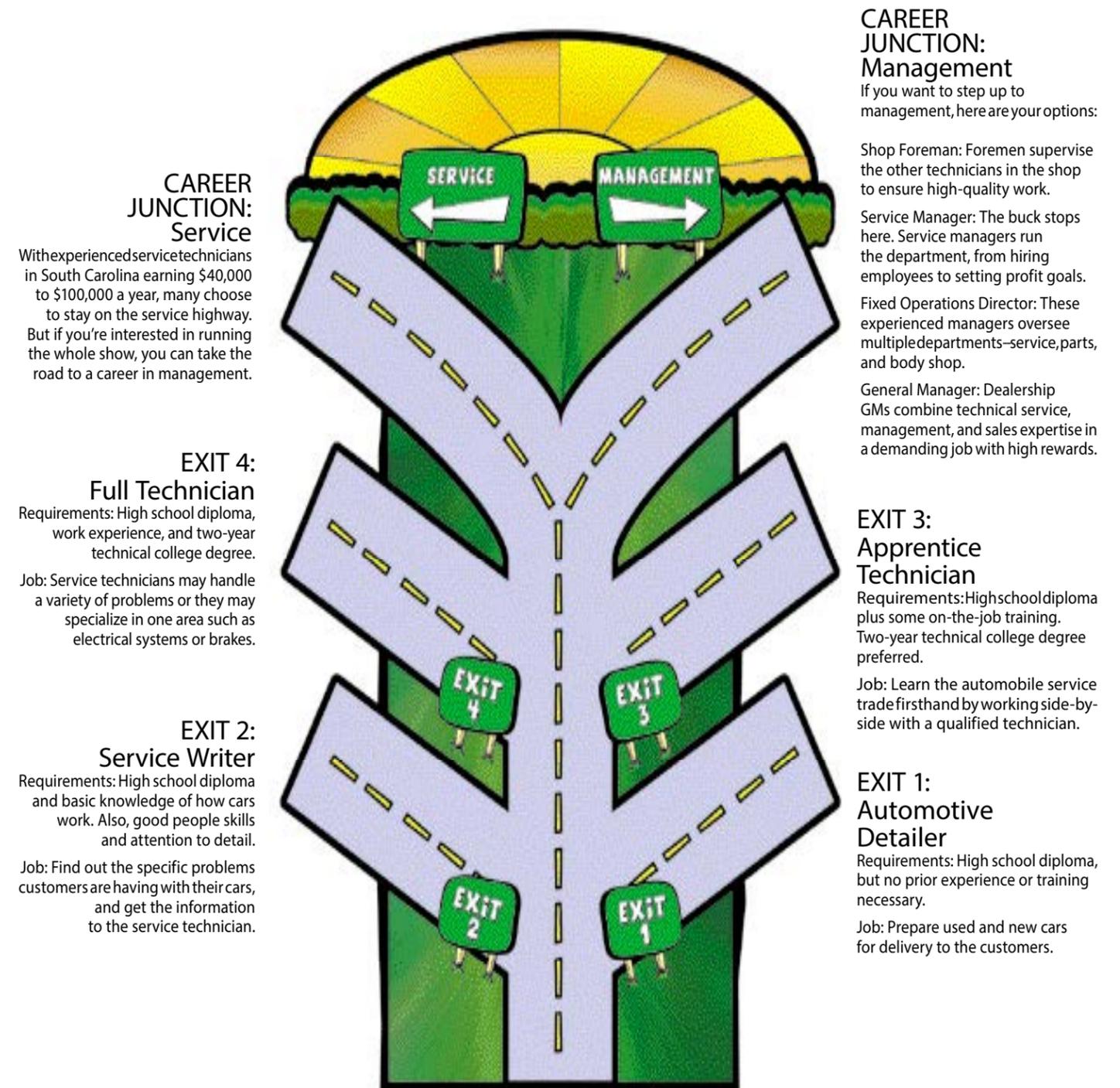
Qualified high school juniors are eligible to enter AYES. In addition to classroom and laboratory courses in basic automotive technology or collision repair and refinishing, they’ll be matched with mentors at participating dealerships. During the summer between their junior and senior years, they’ll typically begin full-time internships under the guidance of their mentors—experienced technicians or other specialists.

“The mentor program gives students some great skills and a good idea if this is the career for them,” says Bradshaw. “Plus, a lot of these credits can be transferred to the two-year college, so students graduate from high school with college credits and incredible skills.” For more information, visit the AYES Web site at [www.ayes.org](http://www.ayes.org).

# Highway to High Pay

## Career opportunities in auto service

Where your career begins at an auto dealership and where it leads is up to you. The more skills you bring to the dealership, the easier it is to build your own highway to career success. Here’s where good training and hard work can take you in automobile service.



# Pick a Pathway to Success

To make it big in Transportation, Distribution, and Logistics, choose the career major that's right for you.



You've looked at the options, you've ruled out the clusters of careers that are clearly wrong for you, and you've decided you have a future in Transportation, Distribution, and Logistics. You're off to a great start, but now you wonder where you go from here. How do you make the future happen?

First, take a look at the Career Major Maps beginning on the next page. Career majors, or pathways, as they're sometimes called, represent all the different ways people prepare for careers. (see "What Are Career Clusters and Majors?" on page 2). The maps that follow lay out the different routes you can take to careers in Transportation, Distribution, and Logistics.

It's all there in the major maps. They list sample high school class schedules for each of the career majors (keep in mind that your school may offer different programs and classes). There's information about extracurricular activities, your options for career preparation after high school, and the jobs to which each career pathway leads. In the Transportation, Distribution, and Logistics career cluster, you can choose from seven different majors:

- Transportation Operations (page 13)
- Logistics Planning and Management (page 14)
- Warehousing and Distribution Center Operations (page 15)
- Automotive Technology (page 16)
- Transportation Systems/Infrastructure Planning, Management, and Regulation (page 17)
- Health, Safety, and Environmental Management (page 18)
- Automotive Collision Repair Technology (page 19)

Use the Career Major Maps to prepare your Individual Graduation Plan (IGP) (see "What is an IGP?" on page 6). Each of the majors matches a different set of jobs in the transportation industry in South Carolina. The Automotive Technology pathway, for example, can take you on to a training program in automobile service offered at a two-year college and then into a job repairing and servicing today's complex automotive systems. Generally, you need to take four elective courses in your major area to graduate with a high school major.

## Keep Your Options Open

As you make your way through high school, you should keep in mind that you can always change your plans. Most high schools ask students to review their IGP's once a year to make sure the plans continue to match what students really want. If you decide at any point that you are not happy with your career plans, you should change them to match your true needs and desires.

\*The U.S. Department of Education lists seven basic majors in Transportation, Distribution, and Logistics under different names. The seven majors listed above are those available in South Carolina. Local schools and districts may offer fewer career clusters and majors, clusters and majors that are organized differently, or clusters and majors with alternative names.

## Career Major Map: Transportation Operations

Employees in Transportation Operations drive or pilot the vehicles that transport people and freight or support transportation operations by ensuring that transport is safe, secure, and on time.

Required Core for Graduation	Sample Core Choices			
	For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
English* Four Units Required	English 1	English 2	English 3	English 4
Math* Four Units Required	Algebra 1 or Math for the Technologies 1	Geometry or Math for the Technologies 2	Algebra 2 or Math for the Technologies 3	Pre-Calculus or Math for the Technologies 4
Science* Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
Social Studies Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
Additional State Requirements	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units)		Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)	

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Automotive Technology	Small Engine Technology Industrial Technology Education Project Lead The Way Courses Modern or Classical Language	Career Mentoring Shadowing Internship SkillsUSA Technology Student Association (TSA) Senior Project

Professional Opportunities Upon Graduation		
High School Diploma Entrepreneur Automotive Technician Parts Salesperson	Additional Training to 2-year Degree Entrepreneur Automotive Technician Service Manager	4-year Degree & Higher Educator Entrepreneur Automotive Engineer

\*Course selection will depend on satisfying prerequisites.

## Core Credentials

You must master a core base of academic knowledge to establish credentials for success in Transportation. This essential academic core includes the following:

- **Science:** Transportation, Distribution, and Logistics networks and equipment are complex technical systems. To design and maintain them requires a solid grounding in basic science.
- **Math:** Information Technology (IT) makes everything from cars to distribution networks to traffic lights run smoothly. To master IT, you must master math.
- **English:** Transportation, Distribution, and Logistics is about coordinating complicated efforts, usually involving far-flung teams of workers, to get materials, people, and products where they have to go. To be part of the effort you must have excellent communication skills.
- **Social Studies/History:** Transportation, Distribution, and Logistics means getting the better of geography. You can't go places without knowing where they are. You can't deal with people at great distances without understanding the nuances of culture and history in their home countries.
- **Modern or Classical Language:** Modern or Classical language study prepares you to communicate effectively with people in distant countries, a skill that can be vital for success in the Transportation, Distribution, and Logistics industry.
- **Arts:** If your Transportation, Distribution, and Logistics career path passes through a college campus, get creative. Four-year colleges and universities require an arts credit for admission.

### Career Major Map: Logistics Planning and Management

Professionals in Logistics Planning and Management plan, manage, and control the physical distribution of materials, products, and people, often coordinating more than one mode of transportation to ensure that cargo arrives on time in the most efficient way possible.

Required Core for Graduation	Sample Core Choices For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
English* Four Units Required	English 1	English 2	English 3	English 4
Math* Four Units Required	Algebra 1 or Math for the Technologies 1	Geometry or Math for the Technologies 2	Algebra 2 or Math for the Technologies 3	Pre-Calculus or Math for the Technologies 4
Science* Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
Social Studies Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
Additional State Requirements	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units)		Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)	

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Integrated Business Applications International Business and Marketing Automotive Technology Automotive Collision Repair Technology	Business Management Industrial Technology Education Introduction to Engineering Design Principles of Engineering Modern or Classical Language	Career Mentoring Shadowing Internship SkillsUSA Technology Student Association (TSA) Senior Project

Professional Opportunities Upon Graduation		
High School Diploma Entrepreneur Highway Maintenance Person	Additional Training to 2-year Degree Entrepreneur Logistics Planner	4-year Degree & Higher Educator Entrepreneur Public Administrator Transportation Engineer Urban Planner

\*Course selection will depend on satisfying prerequisites.

### Career Major Map: Warehousing and Distribution Center Operations

Warehousing workers operate transportation and distribution facilities such as ports, terminals, warehouses, and distribution centers.

Required Core for Graduation	Sample Core Choices For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
English* Four Units Required	English 1	English 2	English 3	English 4
Math* Four Units Required	Algebra 1 or Math for the Technologies 1	Geometry or Math for the Technologies 2	Algebra 2 or Math for the Technologies 3	Pre-Calculus or Math for the Technologies 4
Science* Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
Social Studies Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
Additional State Requirements	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units)		Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)	

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Integrated Business Applications International Business and Marketing Automotive Technology	Business Management Industrial Technology Education Introduction to Engineering Design Principles of Engineering Modern or Classical Language	Career Mentoring Shadowing Internship SkillsUSA Technology Student Association (TSA) Senior Project

Professional Opportunities Upon Graduation		
High School Diploma Entrepreneur Warehouse Worker	Additional Training to 2-year Degree Entrepreneur Transportation Engineer Warehouse Manager	4-year Degree & Higher Educator Entrepreneur Transportation Engineer

\*Course selection will depend on satisfying prerequisites.

### Career Major Map: Automotive Technology

Employees in Automotive Technology maintain, repair, and service automobiles and mobile transportation equipment, as well as refueling mobile equipment.

Required Core for Graduation	Sample Core Choices For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
English* Four Units Required	English 1	English 2	English 3	English 4
Math* Four Units Required	Algebra 1 or MathfortheTechnologies1	Geometry or MathfortheTechnologies2	Algebra 2 or MathfortheTechnologies3	Pre-Calculus or MathfortheTechnologies4
Science* Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
Social Studies Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units) Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Automotive Technology Automotive Collision	Small Engine Technology Industrial Technology Education Introduction to Engineering Design Principles of Engineering Digital Electronics Modern or Classical Language	Career Mentoring Shadowing Internship SkillsUSA Technology Student Association (TSA) Senior Project

Professional Opportunities Upon Graduation		
High School Diploma Entrepreneur Automotive Technician Parts Salesperson	Additional Training to 2-year Degree Entrepreneur Automotive Technician Service Manager	4-year Degree & Higher Educator Entrepreneur Automotive Engineer

\*Course selection will depend on satisfying prerequisites.

### Career Major Map: Transportation Systems/Infrastructure Planning, Management, and Regulation

Public transportation systems specialists deal with all aspects of the design and operation of public transportation by road, air, sea, and rail.

Required Core for Graduation	Sample Core Choices For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
English* Four Units Required	English 1	English 2	English 3	English 4
Math* Four Units Required	Algebra 1 or MathfortheTechnologies1	Geometry or MathfortheTechnologies2	Algebra 2 or MathfortheTechnologies3	Pre-Calculus or MathfortheTechnologies4
Science* Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
Social Studies Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units) Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Integrated Business Applications International Business and Marketing Automotive Collision Automotive Technology Repair Technology	Industrial Technology Education Introduction to Engineering Design Principles of Engineering Modern or Classical Language	Career Mentoring Shadowing Internship SkillsUSA Technology Student Association (TSA) Senior Project

Professional Opportunities Upon Graduation		
High School Diploma Entrepreneur Landscaper	Additional Training to 2-year Degree Entrepreneur Engineering Technology Civil Engineering Technology	4-year Degree & Higher Educator Entrepreneur Public Administrator Urban Planner Civil Engineer

\*Course selection will depend on satisfying prerequisites.

### Career Major Map: Health, Safety, and Environmental Management

Professionals in Health, Safety, and Environmental Management plan and carry out initiatives to make our environment safer and cleaner.

Required Core for Graduation	Sample Core Choices For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
English* Four Units Required	English 1	English 2	English 3	English 4
Math* Four Units Required	Algebra 1 or MathfortheTechnologies1	Geometry or MathfortheTechnologies2	Algebra 2 or MathfortheTechnologies3	Pre-Calculus or MathfortheTechnologies4
Science* Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
Social Studies Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units) Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Repair Technology	Business Management Industrial Technology Education Biotechnical Engineering Modern or Classical Language	Career Mentoring Shadowing Internship SkillsUSA Technology Student Association (TSA) Senior Project

Professional Opportunities Upon Graduation		
High School Diploma Entrepreneur Landscaper	Additional Training to 2-year Degree Entrepreneur Engineering Technician	4-year Degree & Higher Educator Entrepreneur Environmental Engineer

\*Course selection will depend on satisfying prerequisites.

### Career Major Map: Automotive Collision Repair Technology

Workers in Automotive Collision Repair Technology repair automobiles and other motor vehicles that have been damaged in collisions.

Required Core for Graduation	Sample Core Choices For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
English* Four Units Required	English 1	English 2	English 3	English 4
Math* Four Units Required	Algebra 1 or MathfortheTechnologies1	Geometry or MathfortheTechnologies2	Algebra 2 or MathfortheTechnologies3	Pre-Calculus or MathfortheTechnologies4
Science* Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
Social Studies Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units) Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Automotive Collision Repair Technology	Small Engine Technology Industrial Technology Education Introduction to Engineering Design Principles of Engineering Modern or Classical Language	Career Mentoring Shadowing Internship SkillsUSA Technology Student Association (TSA) Senior Project

Professional Opportunities Upon Graduation		
High School Diploma Entrepreneur Auto Body Technician Auto Body Painter	Additional Training to 2-year Degree Entrepreneur Auto Body Technician Service Manager Service Estimator	4-year Degree & Higher Educator Entrepreneur Insurance Claims Adjuster Automotive Engineer

\*Course selection will depend on satisfying prerequisites.

# Get an On-the-Job Education

Start building your future today with a course of study in the school of real-world experience.



## Explore Transportation On-the-Job

There's plenty of ground to cover in a career cluster that includes everything from environmental engineering to automobile body work. By experiencing Transportation, Distribution, and Logistics jobs firsthand you can do the following

- decide which jobs appeal to you and which don't,
- apply classroom knowledge in a real-world setting,
- begin to master skills you need to do the job,
- make better-informed career decisions,
- create an IGP that is effective and efficient,
- earn credits toward graduation and even a paycheck while you learn on the job,
- build your career portfolio and resume, and
- make contacts that could lead to later employment.

Once you've learned all there is to know about your chosen career in the Transportation business, you've uncovered about half of what you need for success. You've mastered the "what" of your Transportation, Distribution, and Logistics career, but you need to figure out the "how-to" as well, and quite often the only place to do that is on the job.

You can store plenty of classroom knowledge in your head without really knowing how best to apply it. The more of the how-to, on-the-job education you master before you begin your first formal job, the smoother your transition to the working world will be. Ask your guidance counselor or principal for information on the associations and companies in your area that offer work-based training for students in the Transportation, Distribution, and Logistics cluster. Here are a few options to explore.

### n Job Shadow

If you're not sure what career path you want to follow, job shadowing is a great first step. National Groundhog Job Shadow Day is held one day each February. More than a million students participate by following employees in their chosen fields for the day. Observing an urban planner, environmental scientist, brake specialist, or some other Transportation, Distribution, and Logistics professional will help you decide whether or not this career is right for you. You can also job shadow on your own after school or during the summer. Ask your guidance counselor and parents to help you find shadowing opportunities.

### n Get a Job

Federal, state, and local labor and motor vehicle laws restrict the kinds of jobs for which students may qualify. But there are plenty of entry-level opportunities available in Transportation. Taking a summer job as a packer or package handler can provide you with a firsthand look at the warehouse and distribution industry, while signing on as a customer service representative for a transportation-related company will help you decide whether or not dealing with the public suits you. A job as a cashier in an auto parts store will put you in contact with other people who service cars. Or, if you're thinking about a career as a driver, try delivering pizzas or packages for the summer.

Many employers offer free certification training and tuition incentives. Teresa Shaw worked her way up from an entry-level service advisor to service manager at Border Ford Lincoln-Mercury in Mullins, South Carolina (see "Not Just for Guys Anymore" on page 10), by taking advantage of training offered through the dealership. "There are so many benefits available to employees once they start working at a dealership," says Shaw. "You can really take your career as far as you want to go."

### n Take First Prize

Extracurricular organizations such as SkillsUSA and Technology Student Association (TSA) sponsor competitions to test your technical skills (see "Join a Student Group" on page 21). For example, at the annual



South Carolina Automotive Body Skill Competition, students compete for medallions, scholarships, and the chance to represent the state at the National SkillsUSA Competition. The two-day event is held at the BMW Performance Center in Greer. Students compete in seven categories, and the highest combined score wins the contestant a trip to the national competition.

### n Volunteer

Lending a hand to help nonprofit and charitable organizations won't earn you a paycheck, but it's a great way to collect some valuable skills, experience, and business connections. Many local organizations depend on young volunteers for help.

If you're interested in distribution, why not donate your time to a local food bank? You could help with packaging, storage, and deliveries and, perhaps, even devise a more efficient distribution system. Or, if you are good with tools and love to fix things, your local Boys & Girls Club or children's center may need someone to repair donated bikes and toys. In addition to helping others in your community, volunteering helps you learn the generic work skills—punctuality, responsibility, and teamwork—that are crucial to success in any field.

### n Find a Mentor

The AYES program (see "A Hands-On Head Start" on page 10) offers high school students the opportunity to participate in hands-on automotive service internships at car dealerships under the guidance of experienced mentors. But you don't need a formal internship such as AYES to learn from a professional in your chosen field. Anyone already working in a career that interests you can help you make informed education and career decisions.

Try to meet with your mentor monthly at his or her job site or over the phone. Find out what skills are needed to succeed at his or her job. By partnering with a mentor, you'll gain a firsthand look at the career you're interested in, and you'll be first in line when internship, scholarship, and job opportunities come along at your mentor's place of business.

## Join a Student Group

Gain valuable leadership skills and have fun with people with similar interests by joining a student organization related to your career goals. Here are three organizations that serve students interested in Transportation-related careers.

- **Air Force Junior ROTC** – If you're considering a career in the aerospace industry, the Air Force Junior Reserve Officer Training Corps (ROTC) could be the right group for you. Approximately 102,000 students in grades 9–12 participate in Air Force Junior ROTC through American high schools across the U.S. and around the world. In addition to providing instruction in air and space fundamentals, the Air Force Junior ROTC trains high school members, called "cadets," in citizenship, personal responsibility, and self-discipline. Cadets participate in community service projects, field trips, and training sessions. Also classroom time is spent learning about applied flight sciences, military aerospace policies, and space exploration. Qualified cadets are eligible for financial assistance, college credit, and other educational incentives upon graduation from high school. [www.afjrotc.af.mil](http://www.afjrotc.af.mil)

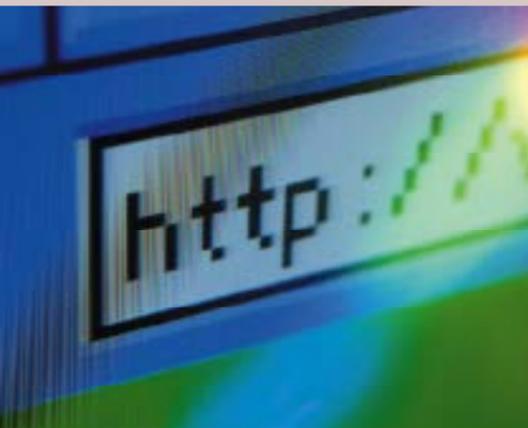
- **SkillsUSA** – SkillsUSA prepares high-performance students for high-tech careers. This national organization serves more than 264,500 high school and college students and professional members involved in training programs in technical, skilled, and service occupations. In 54 state and territorial associations including several chapters. SkillsUSA stages local, state, and national career skills competitions in categories that include automotive service technology, aviation maintenance technology, and collision repair. Local chapters also participate in community service projects, fund-raising, internships, job shadowing, and other career-oriented activities. [www.skillsusa.org](http://www.skillsusa.org)

- **Technical Student Association (TSA)** – TSA's goal is to inspire its student members to prepare for careers in a technology-driven economy and culture. More than 150,000 K–12 students in 47 states participate in TSA. Through fund-raising, social activities, community service, and leadership training, student TSA members develop problem-solving, decision-making, and critical thinking skills in fields such as communications, power, energy, transportation, engineering, manufacturing, construction, and biotechnology. TSA sponsors local, state, and national competitions for students in more than 60 events, including dragster design, structural engineering, and transportation modeling. [www.tsaweb.org](http://www.tsaweb.org)

# Learn to Earn

Earning the right degree after high school will drive your career in Transportation, Distribution, and Logistics.

## College Connections



Every South Carolina two- and four-year college has a Website that includes information about admission requirements, majors, fees, financial aid, internships, and scholarship opportunities.

You can find the Web site for any South Carolina public, private, or technical college through one of these sites:

- South Carolina Public Colleges/Universities [www.state.sc.us/edu/univcoll.html](http://www.state.sc.us/edu/univcoll.html)
- South Carolina Technical Colleges [www.scteched.tec.sc.us](http://www.scteched.tec.sc.us)
- South Carolina Independent Colleges/Universities [www.scicu.org](http://www.scicu.org)

At car dealerships, high school grads in entry-level jobs may get to prep new and used cars for delivery. Graduates with additional training and education get to work on those cars and earn the salaries required to buy vehicles of their own that they are proud to drive. The choice is yours: Do you want to wash the car or drive it home at the end of the workday?

With all the options for after-high-school learning available in South Carolina, you can take your career in Transportation, Distribution, and Logistics exactly where you want it to go.

### n Two-Year Colleges

South Carolina's network of public two-year colleges provides a wide variety of certification and associate's degree programs ranging from automotive repair to engineering technology. Students can either complete two-year degrees and head into the workplace or transfer to four-year institutions to pursue bachelor's degrees. Participants in Trident Technical College's (TTC) Engineering Transfer program, for example, can enter the civil engineering program either at the Citadel or the University of South Carolina after completing two years at TTC.

The National Automotive Technicians Education Foundation (NATEF) has awarded the industry standard ASE (National Institute for Automotive Service Excellence) certification to the automotive programs at seven South Carolina colleges: Florence-Darlington Technical College, Greenville Technical College, Midlands Technical College, Orangeburg-Calhoun Technical College, Piedmont Technical College, Spartanburg Technical College, and Trident Technical College. Graduating from an ASE-certified program gives students a huge competitive advantage in the job market. Additionally, certification and degree programs are linked to specific employers, for example, Florence-Darlington Technical College offers a two-year Caterpillar Dealer Service Technician program that equips students with the expertise needed to service and repair Caterpillar diesel equipment.

### n Four-Year Options

South Carolina's efficient port system, including the shipping complex at the Port of Charleston, creates a unique opportunity for students interested in maritime transportation, distribution, and logistics. The College of Charleston created South Carolina's first intermodal transportation program in 1985, which prepares students for management of transportation systems that combine different means of moving goods, such as containers, that are transported by rail, by road, and by freighter.

The College of Charleston's Global Logistics and Transportation Program includes a Rotterdam Travel Study component, allowing students to study in the Netherlands at Rotterdam's Erasmus University and get a look at the operations of the largest container port in Europe. The program also includes internship opportunities in South Carolina. Clemson University's Department of Management offers an undergraduate program that prepares students for careers in logistics, managing entire transportation networks. "You can work for a carrier, a shipper, or any number of third parties," says Clemson's Dr. Richard L. Clark. "In fact, logistics is the second largest employer of people in the United States."

### n Joining the Military

Enlisting in the military offers high school graduates a wide range of career training and educational opportunities, including scholarship money for those willing to commit to multiple years of service. For those considering Transportation, Distribution, and Logistics industry careers, the Air Force offers training in a variety of mechanical and aviation career fields including aircraft maintenance, civil engineering, air traffic control, and space and missile operations. College credit is available for most of the Air Force's Tech Training programs. Through the Tech Training experience, the Air Force provides service people with all the right tools, including education and training, to start their careers off right. Participants also can earn college credit while attending Tech Training.

The Army brings a world of educational options to its service people stationed around the globe through the Internet-based eArmyU program. Enlisted soldiers and active National Guard or Army Reserve personnel can work toward certificates or college degrees in 146 academic programs offered online by 29 colleges and universities. The Army pays up to 100 percent for tuition, books, and course fees, and even provides students with personal laptop computers, e-mail accounts, and free online access. Find out more about the many training and education opportunities in the military services at [www.goarmy.com](http://www.goarmy.com) (Army), [www.navy.com](http://www.navy.com) (Navy), [www.uscg.mil](http://www.uscg.mil) (Coast Guard), [www.airforce.com](http://www.airforce.com) (Air Force), and [www.marines.com](http://www.marines.com) (Marines).

## Financial Aid Facts

If you want to further your education beyond high school, don't let tuition costs derail your dream. The state of South Carolina, the federal government, colleges, businesses, and professional organizations all offer financial aid to students who want to build careers in Transportation, Distribution, and Logistics.

Thousands of scholarships are awarded to students who meet specific eligibility requirements. For example, South Carolina students who are dependents and direct descendants of sea service personnel can apply for one of the 22 four-year, \$10,000 scholarships awarded annually by the Navy League Foundation ([www.navyleague.org](http://www.navyleague.org)).

To find out the kinds of aid for which you may qualify, ask your high school counselor or the financial aid officers at the schools you would like to attend. You can also launch your own online search at [www.finaid.org](http://www.finaid.org).

Automotive Youth Educational Systems (AYES, see page 10) and its manufacturing partners award \$5,000 John F. Smith, Jr.

(JFS) scholarships each year to several graduating high school students who have completed AYES internships and plan careers in automotive service. Deserving students must emulate the vision of Mr. Smith, including "the right aptitude and work ethic."

State residents are eligible for several kinds of scholarships administered by the South Carolina Commission on Higher Education. Funds available include LIFE Scholarships, Lottery Tuition Assistance, the South Carolina HOPE Scholarship, and Palmetto Fellows Scholarships.

On the federal level, there are more than \$80 billion dollars in aid funds available annually for students enrolled in training, certification, degree, and non-degree programs. You don't have to attend college to be eligible for aid. Apply for both state and federal financial help by completing the "Free Application for Federal Student Aid" (FAFSA). You can get a paper application from a school counselor or apply online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov).



## 10 Highest-Paying Transportation, Distribution, and Logistics Professions

Occupation	Salary
1. Air Traffic Controller	\$74,300
2. City Manager	\$74,020
3. Public Administrator	\$74,020
4. Industrial Hygienist	\$66,020
5. Industrial Engineer	\$64,600
6. Civil Engineer	\$61,830
7. Pilot	\$60,960
8. Transportation Manager	\$58,570
9. Automotive Service Advisor	\$50,090
10. Rail Transportation Worker	\$46,400

Based on annual mean salary in South Carolina. Source: SCOIS

## 10 Fastest-Growing Transportation, Distribution, and Logistics Professions

Occupation	Job Growth
1. Travel Agent	26.9%
2. Ambulance Attendant/Driver	24.3%
3. Taxi Driver and Chauffeur	19.7%
4. Reservation and Ticket Agent	18.4%
5. Rail Transportation Worker	18.1%
6. Bus Driver	17.6%
7. Sailor and Deckhand	17.0%
8. Air Traffic Controller	15.7%
9. Aircraft Mechanic	15.6%
10. Automotive Service Advisor	15.0%

Based on expected growth in percentage of jobs available between 2001 and 2008 in South Carolina. Source: SCOIS

# Core Requirements for Graduation

## High School Graduation

Subjects	Units Required
English/Language Arts	4
Mathematics	4
Science	3
U.S. History and Constitution	1
Economics	0.5
U.S. Government	0.5
Other Social Studies	1
Physical Education or Junior ROTC	1
Computer Science	1
Modern or Classical Language or Career and Technology Education	1
Electives	7
<b>Total *</b>	<b>24</b>

\* Must pass the exit examination.

## State Certificate

Subjects	Units Required
English/Language Arts	4
Mathematics	4
Science	3
U.S. History and Constitution	1
Economics	0.5
U.S. Government	0.5
Other Social Studies	1
Physical Education or Junior ROTC	1
Computer Science	1
Modern or Classical Language or Career and Technology Education	1
Electives	7
<b>Total *</b>	<b>24</b>

\* Must have failed to meet the standard on all subtests of the exit examination.

## College Entrance

Subjects	Units Required
English/Language Arts	4
Grammar and Composition	2
English Literature	1
American Literature	1
Mathematics	4
Algebra 1 and 2	2
Geometry	1
Pre-Calculus	1
Modern or Classical Language	2
Laboratory Science      Biology, Chemistry, or Physics	3
Social Sciences      U.S. History, Economics, and Government	3
Electives	1
Physical Education/ROTC	1
Arts	1
<b>Total</b>	<b>19</b>



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# Resource Roundup

Click your way to more career, educational, and scholarship resources by using the Internet. Here are some useful Web sites to get you started:

## Transportation, Distribution, and Logistics Web Sites

- Automotive Youth Educational Systems, [www.ayes.org](http://www.ayes.org)
- Council of Supply Chain Management Professionals, [www.cscmp.org](http://www.cscmp.org)
- Institute of Transportation Engineers (ITE), [www.ite.org](http://www.ite.org)
- National Automobile Dealers Association, [www.nada.org](http://www.nada.org)
- National Institute for Automotive Service Excellence (ASE), [www.asecert.org](http://www.asecert.org)
- South Carolina Automobile Dealers Association, [www.scada.org](http://www.scada.org)
- U.S. Department of Transportation, [www.dot.gov](http://www.dot.gov)

Search the Internet for other professional organizations related to Transportation, Distribution, and Logistics careers.

## Education and Career Planning Web Sites

### Inside South Carolina

- Career Guidance Model, [www.careerguidancemodel.org](http://www.careerguidancemodel.org)
- South Carolina Chamber of Commerce, [www.scchamber.net](http://www.scchamber.net)
- South Carolina Commission on Higher Education, [www.che400.state.sc.us](http://www.che400.state.sc.us)
- South Carolina Employment Security Commission, [www.sces.org](http://www.sces.org)
- South Carolina Higher Education Tuition Grants Commission, [www.sctuitiongrants.com](http://www.sctuitiongrants.com)
- South Carolina Independent Colleges and Universities, [www.scicu.org](http://www.scicu.org)
- South Carolina Occupational Information System, [www.scois.net](http://www.scois.net)
- South Carolina Public Colleges and Universities, [www.state.sc.us/edu/univcoll.html](http://www.state.sc.us/edu/univcoll.html)
- South Carolina Technical College System, [www.sctechsystem.com](http://www.sctechsystem.com)
- WorkKeys, [www.workreadysc.org](http://www.workreadysc.org)

### Outside South Carolina

- America's Career Resource Network Association, [www.acrna.net](http://www.acrna.net)
- Career Communications, Inc., [www.carcom.com](http://www.carcom.com)
- Armed Services Vocational Aptitude Battery (ASVAB), [www.todaymilitary.com/app/tm/nextsteps/asvab](http://www.todaymilitary.com/app/tm/nextsteps/asvab)
- Career Interests Game, [career.missouri.edu/students/explore/thecareerinterestsgame.php](http://career.missouri.edu/students/explore/thecareerinterestsgame.php)
- Career Key, [www.careerkey.org](http://www.careerkey.org)
- Coin Career College System, [community.coin3.com](http://community.coin3.com)
- College Board, [www.collegeboard.com](http://www.collegeboard.com)
- Holland's Self-Directed Search, [www.self-directed-search.com](http://www.self-directed-search.com)
- Kuder, [www.sc.kuder.com](http://www.sc.kuder.com)
- Mapping Your Future, [www.mapping-your-future.org](http://www.mapping-your-future.org)
- National Career Development Association, [www.ncda.org](http://www.ncda.org)
- O\*NET Online, [online.onetcenter.org](http://online.onetcenter.org)
- Occupational Outlook Handbook, [www.bls.gov/oco](http://www.bls.gov/oco)
- The Princeton Review, [www.review.com](http://www.review.com)
- Salary Information, [www.salary.com](http://www.salary.com)

\* Web site addresses were correct at time of publication but may have changed. If an address is no longer valid, please use an Internet search engine to locate the resource.

Note: Local South Carolina schools and districts may choose to use fewer career clusters, clusters that are organized differently, or clusters with alternative names.

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Learn more about career and education opportunities in Transportation, Distribution, and Logistics.



## Career Guidance Information Sources

Check out these comprehensive sources of career and education information, which are available through your school or public libraries:

SCOIS (South Carolina Occupational Information System)—[www.scois.net](http://www.scois.net). An electronic database of information about careers, salaries, job requirements, educational options, scholarships, and more.

O\*NET (Occupational Information Network)—[online.onetcenter.org](http://online.onetcenter.org). A national occupational information database that helps students make informed decisions about education, training, career choices, and work.

COIN (Coin Career Guidance System)—[community.coin3.com](http://community.coin3.com). A comprehensive software program with career and college planning information, especially for South Carolina students.

WorkKeys—[www.workreadysc.org](http://www.workreadysc.org). A comprehensive resource for information about the South Carolina Career Readiness Certificate – how and where to qualify, as well as its value to students and the community.

Kuder—[sc.kuder.com](http://sc.kuder.com). A comprehensive online college and career planning system with links to government and educational information and organizations.



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