ATTENTION PARENTS!

A MESSAGE FROM THE GOVERNOR

As I’ve said on many occasions, our people are Alabama’s greatest strength, especially our young people, who hold the state’s future in their hands. As the guardians of our state’s future, students deserve every possible tool to help them—and Alabama—succeed in all areas.

To achieve this, we have created the Alabama SUCCESS Guides, which are designed to assist students in identifying resources regarding careers, postsecondary education and financial literacy. Through our students, we are positioning our state for even greater accomplishments. They will be well-equipped for careers in Alabama’s workforce which will allow them to compete—and excel—in our global economy.

This Alabama SUCCESS Guide is an excellent tool in helping our students of today become our leaders of tomorrow.

Kay Ivey, Governor of Alabama

This guide is part of a series created to help students in Alabama learn more about high-demand careers, salaries, the steps they need to take to reach their goals, and the resources that can help them get there.

The workforce has changed since you entered it. Many of the jobs that exist today were not even created when you graduated from high school, and the pace of change is faster than ever! However, since work skills are transferable to many jobs, by helping your student connect with what they learn in the classroom to real jobs that interest them, they will graduate better equipped for life after high school.

Thank you for talking with your child about what careers interest them—and why. You can help them by sharing your own work experiences with your child. Ask people in your community who work in jobs that interest your child to share about their careers or let your child visit their workplace. And last, but not least, go with your child to meet with their school counselor or career coach to get them moving in the right direction. Help them prepare for their future...today.
STUDENTS ENTERING CAREERS IN HEALTH SCIENCE NEED A STRONG FOUNDATION IN MATH AND SCIENCE, BEGINNING IN MIDDLE SCHOOL. Higher-level classes in these areas are critical for an understanding of the key concepts in health science. Computer, communication, and business courses also are valuable. Students need to pursue as many hands-on science opportunities as possible, including laboratory activities in school, science fairs, and volunteer or paid internship work experience in a health science field. Although a high school education provides fundamental knowledge, most careers in health science require education and training beyond this level. Training programs in health science careers are available across Alabama, at both two- and four-year colleges and universities, leading to certificates and degrees.

DR. NEIL LAMB
DIRECTOR OF EDUCATIONAL OUTREACH
HUDSONALPHA INSTITUTE FOR BIOTECHNOLOGY, HUNTSVILLE

WHAT EMPLOYERS WANT

SAMPLE OCCUPATIONS

Physical Therapist
Registered Nurse
Nurse Practitioner

Physical Therapist Assistant
Home Health Aide
Occupational Therapist

Medical Assistant
Licensed Practical or Licensed Vocational Nurse
EMT or Paramedic

SREB AC Health Informatics Program

PLTW Biomedical Science Program

PATHWAYS

CLUSTER: HEALTH SCIENCE
Think Again

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

MYTH: All healthcare jobs are in hospitals.

FACTS: Health science workers promote health and wellness. They diagnose and treat injuries and disease. As a physician, dentist, or nurse, you could work directly with patients. You could also work in a laboratory to get information used in research or provide administrative support by keeping medical records. Health science jobs are found at a variety of different sites. For example, you could work in a hospital, office, clinic, or nursing home. Or you could work on a cruise ship, at a sports arena, or within a patient’s home.

Reality Check

What It Costs to Live on Your Own in Alabama

Estimated 2017-2018 monthly expenses for a 22 year-old living in Birmingham.

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groceries</td>
<td>$350-$400</td>
<td>rentbits.com/rb/t/rental-rates/birmingham-al</td>
</tr>
<tr>
<td>Mobile Phone</td>
<td>$55</td>
<td>carsdirect.com</td>
</tr>
<tr>
<td>Cable and Internet</td>
<td>$80</td>
<td>att.com, verizon.com</td>
</tr>
<tr>
<td>Gasoline</td>
<td>$100 (1,000 miles @ $3.00 per gallon, 30 mpg)</td>
<td>gasbuddy.com</td>
</tr>
<tr>
<td>Rent and Utilities</td>
<td>$700-$850</td>
<td>bestplaces.net</td>
</tr>
<tr>
<td>Car Payment</td>
<td>$350-$450 (Used 2016)</td>
<td>carsdirect.com</td>
</tr>
<tr>
<td>Car Insurance</td>
<td>$60-$125 (6-Month Policy)</td>
<td>progressive.com</td>
</tr>
</tbody>
</table>

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 pages 5 and 6 to get a more accurate take-home amount.

Sources:
- RENT: rentbits.com/rb/t/rental-rates/birmingham-al
- CAR: carsdirect.com
- MOBILE PHONE: att.com, verizon.com
- GROCERIES: bestplaces.net
- CABLE AND INTERNET: birmingham.mybrighthouse.com
- CAR INSURANCE: progressive.com
- GAS: gasbuddy.com
YOU DECIDE

Does the Health Science Career Cluster fit you, your talents, and your dreams?
Take this quick quiz to find out.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Do you enjoy helping others?</td>
<td>Is science one of your favorite subjects?</td>
<td>Do you like working on projects as part of a team?</td>
<td>Do you enjoy doing hands-on experiments in a lab?</td>
<td>Are you interested in how the human body works?</td>
</tr>
<tr>
<td>WHY IT MATTERS:</td>
<td>There are plenty of interesting jobs available for caring, patient, and helpful people in nursing, athletic training, rehabilitation, and other health-related fields.</td>
<td>To succeed in any health-related career, you need to understand and enjoy science.</td>
<td>Jobs such as finding solutions to complex health problems, caring for patients, and managing health-care facilities all require teamwork.</td>
<td>Training for all health-related careers includes lots of lab work, so you need to be able to follow directions carefully and take accurate measurements.</td>
<td>Everything in Health Science is related to the human body in some way.</td>
</tr>
</tbody>
</table>

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

CAREER IDEAS

What Job Works for YOU?

On the next two pages you will find job descriptions for this career cluster that are projected to be the “Hot Jobs” in the state of Alabama from now through the year 2024. The jobs are listed in order of projected demand.*

On pages 7 and 8 you will see short bios of people who live and work in this career cluster right here in Alabama. As you read their stories, pay attention to their pathway to the job they are in currently and the lessons they learned along the way. What can you learn from these real-life stories that might help you along your own career path? ►►►►►►►►►►►►►

*This information is provided by the Alabama Department of Labor, Labor Market Information Division in cooperation with the U.S. Bureau of Labor Statistics. The wage data is based on the May 2015 Occupation Employment Survey employment and wage estimate file. The wages have been aged using the most current Employment Cost Index (ECI) factors reflecting wages as of September 2016.
PHYSICAL THERAPIST

Job Description: Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and improve or correct disabling conditions resulting from disease or injury.

Education: Doctoral or professional degree & License

Salary Range: $63,754 – $102,170

NURSE PRACTITIONER

Job Description: Diagnose and treat acute, episodic, or chronic illness, independently or as part of a healthcare team. May focus on health promotion and disease prevention. May order, perform, or interpret diagnostic tests such as lab work and x rays. May prescribe medication. Must be registered nurses who have specialized graduate education.

Education: Master's degree & License

Salary Range: $66,703 – $110,783

REGISTERED NURSE

Job Description: Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required.

Education: Bachelor's degree & License

Salary Range: $44,223 – $65,290

PHYSICAL THERAPIST ASSISTANT

Job Description: Assist physical therapists in providing physical therapy treatments and procedures. May, in accordance with State laws, assist in the development of treatment plans, carry out routine functions, document the progress of treatment, and modify specific treatments in accordance with patient status and within the scope of treatment plans established by a physical therapist.

Education: Associate's degree & License

Salary Range: $41,735 – $61,028

HOME HEALTH AIDE

Job Description: Provide routine individualized healthcare such as changing bandages and dressing wounds, and applying topical medications to the elderly, convalescents, or persons with disabilities at the patient's home or in a care facility. Monitor or report changes in health status. May also provide personal care such as bathing, dressing, and grooming of patient.

Education: No formal educational credential

Salary Range: $17,629 – $21,933

OCCUPATIONAL THERAPIST

Job Description: Assess, plan, organize, and participate in rehabilitative programs that help build or restore vocational, homemaking, and daily living skills, as well as general independence, to persons with disabilities or developmental delays.

Education: Master's degree & License

Salary Range: $57,322 – $93,710
MEDICAL ASSISTANT

**Job Description:** Perform administrative and certain clinical duties under the direction of a physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician.

**Education:** Postsecondary non-degree award

**Salary Range:** $21,330 – $31,028

LICENSED PRACTICAL OR LICENSED VOCATIONAL NURSE

**Job Description:** Care for ill, injured, or convalescing patients or persons with disabilities in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. May work under the supervision of a registered nurse. Licensing required.

**Education:** Postsecondary non-degree award & License

**Salary Range:** $29,588 – $40,659

EMERGENCY MEDICAL TECHNICIAN OR PARAMEDIC

**Job Description:** Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.

**Education:** Postsecondary non-degree award and License

**Salary Range:** $20,207 – $34,309

SPEECH LANGUAGE PATHOLOGIST

**Job Description:** Assess and treat persons with speech, language, voice, and fluency disorders. May select alternative communication systems and teach their use. May perform research related to speech and language problems.

**Education:** Master's degree and License

**Salary Range:** $50,624 – $78,921

DENTAL HYGIENIST

**Job Description:** Clean teeth and examine oral areas, head, and neck for signs of oral disease. May educate patients on oral hygiene, take and develop x rays, or apply fluoride or sealants.

**Education:** Associate's degree and License

**Salary Range:** $36,716 – $49,846

MEDICAL OR HEALTH SERVICES MANAGER

**Job Description:** Plan, direct, or coordinate medical and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.

**Education:** Bachelor's degree and License

**Salary Range:** $64,903 – $121,132
I work in a skilled nursing facility. I evaluate patients who have had surgery or medical problems that have limited their ability to walk, transfer, or care for themselves. Once the problems are assessed I establish goals for their plan of care. I work closely and supervise the physical therapy assistants (LPTA). I supervise the progression of our patients and adjust their plan of care as needed. I educate staff on assisting in the care of the patient to improve safety and overall quality of care.

I became interested in physical therapy in high school upon being treated for an ankle sprain. However, I didn't really understand what physical therapy was all about until I started volunteering at a local hospital while in college. This experience gave me a good understanding of the different types of people that could benefit from physical therapy. I finished my undergraduate work with a Bachelor's Degree in Biology and applied to the PT program at UAB. I completed the program and received my Master's Degree in Physical Therapy. Over the past 20 years I have worked in a variety of settings including home health, hospital, outpatient, school systems, and skilled nursing facility. Physical therapy is a very rewarding profession. It brings me great joy to help people learn to be more independent and do things they can't do currently because of surgery or medical condition.

“It brings me great joy to help people learn to be more independent and do things they can’t do currently because of surgery or medical condition.”

“As a school nurse, I assess daily the health needs of each student. I perform screenings such as hearing, vision, and scoliosis. I administer medications, monitor diabetics and epileptics. I create Care Plans for each student’s health needs and make sure that all faculty and staff are aware and properly trained for the safety of the students.

When I was in 10th grade, I knew that I had a passion for the health science field, but I wanted to learn a little more about it before deciding for sure. So, I attended the Health Science Program at the Earnest Pruett Center.

I grew up with parents in the medical field, and always knew I wanted to go into medicine. I loved hearing stories of my parents helping people. I quickly learned I had a little bit of a weak stomach and decided maybe a rehabilitation route was best for me. I shadowed a physical therapist for a few months and loved to see the patients’ progress over time. During that same time period, I was helping out with bible school at my church and discovered my love of being around kids. I switched my major to elementary education for one semester, but decided I missed the medical aspect. I talked to my parents more about different options in the medical field, and they mentioned speech therapy. I researched what it was, and it seemed like a perfect mix of teaching and helping people in a “medical sort of way.” When I transferred to USA, I switched my major to Speech and Hearing Sciences and loved every minute of it. I decided to pursue my master's to be able to work in a variety of different medical settings as well as in the school. In the future, I hope to help numerous children and adults who have communication difficulties.

“I hope to help numerous children and adults who have communication difficulties.”
I am a Dental Hygienist at a pediatric dentist office. I work with small children cleaning their teeth and help to educate parents about dental health.

I was sure from high school I wanted to work in the medical field. I started college and then decided to obtain a job that would allow the opportunity to continue my career path in the dental field. After high school I attempted Wallace Community College. I knew after a few months that I didn’t want to continue to go to college. I was then presented with a career opportunity at a dentist office. I was trained there for two years learning to be a dental assistant. After I was a certified dental assistant, I was given the chance to attend the Alabama Dental Hygiene Program. I completed a year of school and then passed state board testing. I was then considered a Registered Dental Hygienist in the state of Alabama. I work with small children and help them overcome their fear of the dentist. I love watching children who are terrified to come in to the office walk out smiling. It makes you feel like you make a small difference in a child’s life. Their small smiles make all the difference! To be a dental hygienist, you need to have patience and a genuine ability to make other people feel comfortable. You also need to have the ability to quickly adjust to change and be able to work well with others.

I fill prescriptions, consult with physicians about patient care, analyze drug interactions, administer vaccinations, and counsel patients.

Before high school, I had no idea what career path I would choose. I just knew that I wanted to go to college. Math and science were always my favorite subjects so I started thinking maybe I would choose a career path in the medical field. My guidance counselor in high school was always so very helpful and had mentioned pharmacy. After one semester in college, I decided to choose pharmacy as my major. After sitting down with my college advisor and weighing my options, I applied to Auburn University School of Pharmacy. Thankfully I was accepted. After completing clinicals in hospital, retail, and consultant pharmacy, I chose retail. This gives me plenty of opportunities to get to know my patients on a one-on-one basis and to help them in any way possible. Attention to detail is crucial since you are dealing with medications, and you need to enjoy customer interaction. I thoroughly enjoy my job for many reasons. I have great coworkers and patients. Even though I have to work some weekends and holidays, I do enjoy having two weekdays off each week. As far as the future goes, I will probably stay in the retail setting and continue getting certifications in different areas as the need arises.

I am currently in private practice as an orthopedic surgeon with emphasis on sports medicine in Athens, AL with five partners. I treat surgical and nonsurgical orthopedic injuries including fracture care, sports injuries such as ACL tears, meniscus injuries, hip labral and shoulder injuries. I also treat various degenerative joint conditions of the shoulder, elbow, hip, and knee.

Once I completed my junior college I then transferred to UAB where I was set on doing some type of engineering. I kept an open mind, and after several hours of different job shadowing, I chose my career path of medicine. I think a strong work ethic with great family and friend support are key attributes for a successful career in medicine. Every day is a challenge dealing with multiple medical issues, the ever-changing healthcare world, and the financial responsibility of running your own private practice. I have had several teachers, instructors, and mentors throughout my long college and high school career to help guide me and push me to be the person I am today. Being an orthopedic surgeon has several advantages, but one that holds true with any medical profession is helping others and improving their quality of life.

I started out working at a local grocery store in high school, and after attending junior college I continued working as a butcher for that store.
Sit Down With Your Parents and Counselor and Create a Plan

Map out an Alabama Education Plan (sample below) based on your interests, strengths, and possible career goals. Your plan outlines the courses and electives you’ll take in high school, plus related co-curricular organization and career preparation experiences. Your school counselor or career coach 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. Below is a sample Alabama Education Plan for you to use as a guide.

Sample Education Plan for This Career Cluster

<table>
<thead>
<tr>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
<td><strong>Sophomore Year</strong></td>
<td><strong>Junior Year</strong></td>
<td><strong>Senior Year</strong></td>
</tr>
<tr>
<td>English 9</td>
<td>English 10</td>
<td>English 11</td>
<td>English 12</td>
</tr>
<tr>
<td>Algebra I</td>
<td>Geometry</td>
<td>Algebra II with Trig</td>
<td>Math Elective</td>
</tr>
<tr>
<td>Biology</td>
<td>Physical Science</td>
<td>Chemistry</td>
<td>Anatomy/Physiology</td>
</tr>
<tr>
<td>World History</td>
<td>United States History 10</td>
<td>United States History 11</td>
<td>US Government/Economics</td>
</tr>
<tr>
<td>*Career Preparedness</td>
<td>*Health/Elective</td>
<td>**Elective</td>
<td>**Elective</td>
</tr>
<tr>
<td>*LIFE PE</td>
<td>**Elective</td>
<td>**Elective</td>
<td>**Elective</td>
</tr>
<tr>
<td>**Elective</td>
<td>**Elective</td>
<td>**Elective</td>
<td>**Elective</td>
</tr>
</tbody>
</table>

*Other Required Courses
**Career & Technical Education and/or Foreign Language and/or Arts Education (3 Credits)

Health Science Cluster Courses

- Advanced Health Seminar
- Dental Assisting
- Diagnostic Services
- Emergency Services
- Family Wellness
- Forensics and Criminal Investigations
- Foundations of Health Science
- Health Informatics
- Health Promotion and Wellness
- Health Science Internship
- Human Body Structures and Functions
- Introduction to Biotechnology
- Introduction to Pharmacy
- Introduction to Veterinary Sciences
- Medical Coding
- Medical Terminology
- Nurse Aide Training
- Nutrition in Healthcare
- Orientation to Health Science
- Patient Care Technician
- Safety and Health Regulations
- Senior Career Pathway Project, Health Science
- Sports Medicine Advanced
- Sports Medicine Fundamentals
- Sports Medicine Intermediate
- Support Services
- Therapeutic Services
- Veterinary Science

Co-Curricular

- HOSA — Future Health Professionals
- Job Shadowing
- Career Day/Fair
- Internship
- Field Trips
- Work Experience
- Guest Speakers

Work-Based Learning
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. **MAKE A LIST**
   - Before you can apply to college, you have to do your best work in all your classes. Course selection and grades really do count when you are applying to colleges and training programs.

3. **GET INVOLVED**
   - Join career technical student organizations, clubs, and teams at your school, volunteering for service projects, and participating in church or community activities.

4. **PLAN FOR TEST**
   - 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 collegeboard.org or sample ACT tests at 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.

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**
   - Alumni'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 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.

4. **DO A LITTLE DIGGING**
   - More than one million local, national, and college-specific scholarships are available each year. Ask your school counselor or career coach for help finding printed scholarship resource guides. To find and apply for scholarships online, sign up for the free college scholarship search source achievealabama.org.

5. **APPLY FOR AID**
   - Fill out the Free Application for Federal Student Aid (FAFSA) beginning on October 1 of your senior year. FAFSA forms and instruction booklets are available at your school counselor’s office and online at studentaid.ed.gov. Some schools also require the CSS/Financial Aid Profile form (profileonline.collegeboard.org), and others have their own financial aid forms. Carefully read each college’s application to know what forms you need to submit and when.
CONTACT INFORMATION
Sean J. Stevens
Alabama State Department of Education
PO Box 302101
Montgomery, AL 36130-2101
334-242-9111 phone
334-353-8861 fax
sstevens@alsde.edu

NON-DISCRIMINATION STATEMENT
The Alabama State Board of Education and the Alabama State Department of Education do not discriminate on the basis of race, color, disability, sex, religion, national origin, or age in its programs, activities, or employment and provides equal access to the Boys Scouts and other designated youth groups. The following person is responsible for handling inquiries regarding the non-discrimination policies: Title IX Coordinator, Alabama State Department of Education, P.O. Box 302101, Montgomery, Alabama 36130-2101 or call (334) 242-8165.

ALABAMAWORKS.COM/SUCCESSGUIDES