BE A PART OF HEALTH SCIENCE

Caring for Our Future: Careers in Health Science

The Health Science Career Cluster, the largest and fastest-growing industry in South Carolina and the US, orients students to careers that promote health, wellness and diagnosis as well as treat injuries and diseases.

More than 200,000 people in SC are employed in health science occupations, which means the following for students interested in this career pathway:

- Health science jobs offer high salaries and job security due to the growing demand for health care professionals
- While the number of doctors is growing, additional booming jobs are those that play supporting roles such as physician assistants, dental hygienists, home health aides and nurses
- Many health science jobs call for less than four years of education after high school

The Health Science Career Cluster

The Health Science Career Cluster is divided into the following five majors:

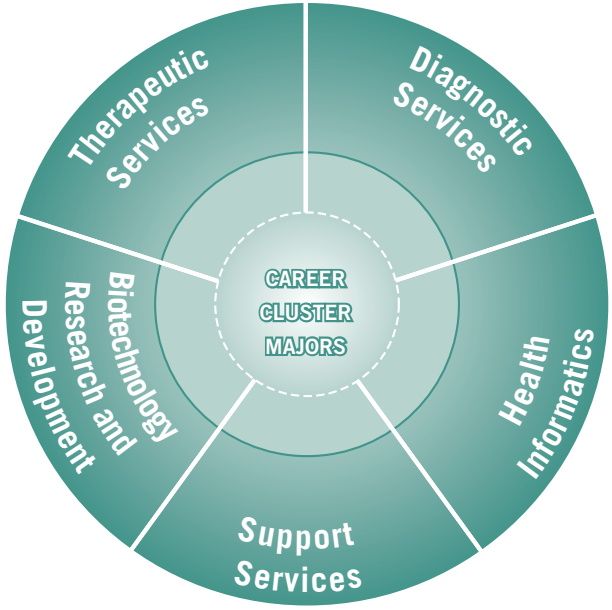
» Therapeutic Services

» Diagnostic Services

» Health Informatics

» Support Services

» Biotechnology Research and Development



Learning Health Science in South Carolina

There are various education resources in South Carolina for those looking to pursue studies and start a career in health science, including the following:

» Numerous high schools offer health sciences courses and the co-curricular organization HOSA (Future Healthcare Professionals)

» Sixteen technical colleges operate throughout the state in support of health science offering related associate degrees

» Universities such as the following offer bachelor and doctoral degrees in various related areas of study:

Medical University of South Carolina (MUSC)

University of South Carolina

- » School of Medicine
- » School of Pharmacy
- » College of Nursing

Clemson University

- » School of Nursing
- » Pre-Pharmacy Program

Columbia International University

- » Bachelors of Science in Nursing (BSN)

Therapeutic Services: Health professionals in the Therapeutic Services major work directly with patients providing care, treatment, counseling and health education information.

If You Choose Therapeutic Services as Your Career Major, You May be a Part of:

- Administering medications to patients and monitoring patients for reactions or side effects
- Analyzing a patient's medical history, medication allergies, physical condition and examination results to verify an operation's necessity and to determine the best procedure
- Evaluating an athlete's readiness to play and providing participation clearances when necessary and warranted
- Providing information and advice regarding drug interactions, side effects, dosage and proper medication storage

Sample Careers

Associate's/Certificate/ High School Diploma

Annual Salary Range
$35,000-$50,000

- Certified Nursing Assistant (CNA)
- Sports Medicine Coordinator
- Pharmacy Technician
- Patient Care Technician

Bachelor's Degree

Annual Salary Range
$50,000-$100,000

- Physical Therapist
- Director of Nursing (DON)
- Rehabilitation Services Director
- Registered Nurse (BSN)
- Athletic Trainer

Bachelor's Degree + Graduate Degrees and/or Certifications

Annual Salary Range
$100,000+

- Physician
- Dentist
- Plastic Surgeon
- Outpatient Pharmacy Manager

Career	Entry-Level Education	Annual Median Salary & Hourly Pay (2020)	Job Outlook (2019-29)	Responsibilities	Skills
Athletic Trainers	Master's Degree	**$49,860/year** **$23.97/hour**	**23%** (Much faster than average)	• Evaluate and advise individuals to assist recovery from or avoid athletic-related injuries or illnesses or maintain peak physical fitness • Care for athletic injuries using physical therapy equipment, techniques or medication • Instruct coaches, athletes, parents, medical personnel or community members in the care and prevention of athletic injuries • Travel with athletic teams to be available at sporting events	• Active listening • Coordination • Critical thinking • Decision making • Speaking • Writing
Registered Nurses	Bachelor's Degree	**$75,330/year** **$36.22/hour**	**9%** (As fast as average)	• 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 • Advise patients on health maintenance and disease prevention or provide case management • Monitor, record and report symptoms or changes in patients' conditions	• Active listening • Critical thinking • Decision making • Reading comprehension • Speaking • Writing
Pharmacists	Professional Degree	**$128,710/year** **$61.88/hour**	**2%** (Decline)	• Compound and dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use • Advise physicians and other health practitioners on the selection, dosage, interactions and side effects of medications • Plan, implement or maintain procedures for mixing, packaging or labeling pharmaceuticals according to policy and legal requirements to ensure quality, security and proper disposal • Advise customers on the selection of medication brands, medical equipment or healthcare supplies	• Active listening • Critical thinking • Decision making • Reading comprehension • Speaking • Writing
Surgeons	Doctoral Degree	**$208,000+/year** **$100.00/hour**	**3%** (Average)	• Operate on patients to treat diseases, correct deformities, repair injuries, prevent and treat diseases, or improve or restore patients' functions • Examine patients to obtain information on their medical condition and surgical risk • Direct and coordinate activities of nurses, assistants, specialists, residents and other medical staff • Prescribe preoperative and postoperative treatments and procedures such as sedatives, diets, antibiotics and preparation and treatment of the patients' operative areas	• Active listening • Critical thinking • Decision making • Judgment • Problem solving • Reading comprehension • Speaking

Diagnostic Services: Careers in the Diagnostic Services major use tests and evaluations that aid in the detection, diagnosis and treatment of diseases, injuries or other physical conditions.

If You Choose Diagnostic Services as Your Career Major, You May be a Part of:

- Detecting and mapping radiopharmaceuticals in patients' bodies using a camera to produce photographic or computer images
- Conducting chemical analyses of body fluids, such as blood or urine, using a microscope or automatic analyzer to detect abnormalities or diseases and entering findings into a computer
- Reviewing cases by analyzing autopsies, laboratory findings or case investigation reports
- Preparing results of experimental findings for presentation at professional conferences or in scientific journals

Sample Careers

Associate's/Certificate/ High School Diploma

Annual Salary Range
$30,000-$50,000

- Medical Laboratory Technician
- Phlebotomist
- Ultrasound Technologist
- Toxicology Laboratory Technician

Bachelor's Degree

Annual Salary Range
$50,000-$100,000

- Nuclear Cardiology Technologist
- Professor
- Nuclear Medicine Supervisor
- Medical Genetics Director

Bachelor's Degree + Graduate Degrees and/or Certifications

Annual Salary Range
$100,000+

- Forensic Pathologist
- Laboratory Director
- Oral Pathologist

Career	Entry-Level Education	Annual Median Salary & Hourly Pay (2020)	Job Outlook (2019-29)	Responsibilities	Skills
Medical and Clinical Laboratory Technicians	Associate's Degree	**$54,180/year** **$26.05/hour**	**11%** (Faster than average)	• Conduct chemical analyses of body fluids, to detect abnormalities or diseases • Conduct blood tests for transfusion purposes and perform blood counts • Obtain specimens, cultivating, isolating, and identifying microorganism for analysis • Analyze and record test data to issue reports that use charts, graphs, or narratives	• Active listening • Critical thinking • Reading comprehension • Speaking • Writing
Radiologic Technologists	Associate's Degree	**$63,710/year** **$30.63/hour**	**9%** (As fast as average)	• Review and evaluate developed x-rays, video tape, or computer-generated info to determine if images are satisfactory for diagnostic purposes • Monitor patients' conditions and reactions, reporting abnormal signs to physician • Position imaging equipment and adjust controls to set exposure time and distance, according to specific of examination • Prepare and administer oral or injected contrast media to patients	• Active listening • Reading comprehension • Social perceptiveness • Speaking • Writing
Nuclear Medicine Technologists	Associate's Degree	**$79,590/year** **$38.27/hour**	**5%** (Average)	• Prepare, administer and measure radioactive isotopes in therapeutic, diagnostic and tracer studies using a variety of radioisotope equipment • Prepare stock solutions of radioactive materials and calculate doses to be administered by radiologists • Execute blood volume, red cell survival and fat absorption studies following standard laboratory techniques • Explain test procedures and safety precautions to patients and provide them with assistance during test procedures	• Active listening • Critical thinking • Decision making • Judgment • Reading comprehension • Speaking • Writing
Pathologists	Post-Doctoral Training	**$208,890/year** **$100.00/hour**	**4%** (Average)	• Diagnose presence and stage of diseases using laboratory techniques and patient specimens • Study the nature, cause and development of diseases • Write pathology reports summarizing analyses, results and conclusions • Consult with physicians about ordering and interpreting tests or providing treatments	• Active listening • Critical thinking • Decision making • Reading comprehension • Speaking • Writing

Health Informatics: Employees in Health Informatics manage health care agencies as well as manage all of the patient data and information, financial information and computer applications related to health care processes and procedures.

If You Choose Health Informatics as Your Career Major, You May be a Part of:

- Reviewing and editing transcribed reports or dictated material for spelling, grammar, clarity, consistency and proper medical terminology
- Entering data such as demographic characteristics, history and extent of disease, diagnostic procedures or treatment into a computer
- Interviewing patients to obtain medical information and measuring their vital signs, weight and height
- Analyzing and interpreting patient, nursing or information systems data to improve nursing services

Sample Careers

Associate's/Certificate/ High School Diploma

Annual Salary Range
$30,000-$50,000

- Certified Medical Assistant (CMA)
- Medical Language Specialist
- Health Information Clerk
- Medical Office Assistant
- Registered Health Information Technician (RHIT)

Bachelor's Degree

Annual Salary Range
$50,000-$100,000

- Clinical Applications Specialist
- Nursing Information Systems Coordinator
- Clinical Information Services Director
- Business Consultant

Career	Entry-Level Education	Annual Median Salary & Hourly Pay (2020)	Job Outlook (2019-29)	Responsibilities	Skills
Medical Assistants	Post-Secondary Certificate	**$35,850/year** **$17.23/hour**	**18%** (Much faster than average)	• Perform administrative and certain clinical duties under the direction of a physician, including scheduling appointments, maintaining medical records, billing and coding information for insurance purposes • Record patients' medical history, vital statistics or test results in medical records • Authorize drug refills and provide prescription information to pharmacies • Explain treatment procedures, medications, diets or physicians' instructions to patients	• Active listening • Coordination • Critical thinking • Reading comprehension • Speaking • Writing
Medical Transcriptionists	Post-Secondary Certificate	**$35,270/year** **$16.96/hour**	**-7%** (Decline	• Transcribe medical records recorded by physicians and other health care practitioners using various electronic devices covering office visits, emergency room visits, diagnostic imaging studies, operations, chart reviews and final summaries • Translate medical jargon and abbreviations into their expanded forms to ensure the accuracy of patient and health care facility records • Produce medical reports, correspondence, records, patient-care information, statistics, medical research and administrative material • Identify mistakes in reports and check with doctors to obtain the correct information	• Active listening • Critical thinking • Decision making • Judgment • Reading comprehension • Speaking • Time management • Writing
Medical Records and Health Information Technicians	High School Diploma or Equivalent	**$45,240/year** **$21.75/hour**	**9%** (As fast as average)	• Compile, process and maintain medical records of hospital and clinical patients in a manner consistent with medical, administrative, ethical, legal and regulatory requirements of the health care system • Protect the security of medical records to ensure that confidentiality is maintained • Assign a patient to diagnosis-related groups (DRGs) using appropriate computer software • Process patient admission or discharge documents	• Active listening • Critical thinking • Reading comprehension • Speaking • Writing
Informatics Nurse Specialists	Bachelor's Degree	**$93,730/year** **$45.06/hour**	**7%** (Average)	• Design, develop, select, test, implement and evaluate new or modified informatics solutions, data structures and decision-support mechanisms to support patients, health care professionals and their information management systems • Educate staff and assist in problem solving to promote the implementation of the health care system • Develop or implement policies or practices to ensure the privacy, confidentiality or security of patient information • Analyze and interpret patient, nursing or information systems data to improve nursing services	• Active listening • Critical thinking • Judgment • Problem solving • Reading comprehension • Speaking • Writing

Support Services: People who work in the Support Services major provide a therapeutic, healthy and safe environment for the delivery of health care.

If You Choose Support Services as Your Career Major, You May be a Part of:

- Conducting nutritional assessments of patients, including obtaining and evaluating patients' dietary histories to plan nutritional programs
- Examining medical equipment and checking for proper use of equipment to protect patients and staff from electrical or mechanical hazards and to ensure compliance with safety regulations
- Advising patients and their families on nutritional principles, dietary plans and diet modifications as well as food selection and preparation

Sample Careers

Associate's/Certificate/High School Diploma

Annual Salary Range
$30,000-$50,000

- Certified Dietary Manager (CDM)
- Biomedical Electronics Technician
- Cook Chill Technician (CCT)
- Service Technician
- X-Ray Service Engineer
- Dietary Aide

Bachelor's Degree

Annual Salary Range
$50,000-$100,000

- Environmental Health and Safety Specialist
- Registered Dietician
- Registered Environmental Health Specialist (REHS)
- Correctional Food Service Supervisor
- Senior Environmental Scientist
- Pediatric Clinical Dietician

Career	Entry-Level Education	Annual Median Salary & Hourly Pay (2020)	Job Outlook (2019-29)	Responsibilities	Skills
Dietetic Technicians	High School Diploma or Equivalent	**$30,110/year** **$14.48/hour**	**7%** (Fast as average)	• Observe patient food intake and report progress and dietary problems to dietician • Plan menus or diets or guide individuals or families in food selection, preparation, or menu planning based on nutritional needs and established guidelines • Deliver speeches on diet, nutrition, or health to promote healthy eating habits and illness prevention and treatment • Prepare a major meal, following recipes and determining group food quantities	• Active listening • Critical thinking • Coordination • Problem solving • Reading comprehension • Speaking
Medical Equipment Repairers	Associate's Degree	**$51,610/year** **$24.81/hour**	**7%** (As fast as average)	• Test, adjust or repair biomedical or electromedical equipment • Perform preventative maintenance or service such as cleaning, lubricating or adjusting equipment • Plan and carry out work assignments using blueprints, schematic drawings, technical manuals, wiring diagrams or liquid or air flow sheets following prescribed regulations, directives or other instructions as required • Disassemble malfunctioning equipment and remove, repair or replace defective parts such as motors, clutches or transformers	• Critical thinking • Decision making • Judgment • Problem solving • Reading comprehension • Troubleshooting
Dieticians and Nutritionists	Post-Baccalaureate Certificate	**$63,090/year** **$30.33/hour**	**11%** (Faster than average)	• Plan and conduct food service or nutritional programs to assist in the promotion of health and control of disease • Consult with physicians and health care personnel to determine nutritional needs and diet restrictions of a patient • Monitor food service operations to ensure conformance to nutritional, safety, sanitation and quality standards • Organize, develop, analyze, test and prepare special meals such as low-fat, low-cholesterol and chemical-free meals	• Active listening • Critical thinking • Coordination • Decision making • Reading comprehension • Speaking • Writing
Environmental Scientists and Specialists (Health)	Bachelor's Degree	**$73,230/year** **$35.21/hour**	**8%** (As fast as average)	• Conduct research or perform an investigation for the purpose of identifying, abating or eliminating sources of pollutants or hazards that affect either the environment or the health of the population • Provide scientific or technical guidance, support, coordination or oversight to government agencies, environmental programs, health care experts or the public • Conduct environmental audits, inspections or investigations of violations • Collect, synthesize, analyze, manage and report environmental data such as pollution emission measurements and atmospheric monitoring measurements	• Active listening • Critical thinking • Coordination • Problem solving • Reading comprehension • Speaking • Writing

Biotechnology Research and Development: Scientists in the Biotechnology Research and Development major study diseases to discover new treatments, and they invent medical devices used to either directly assist patients or to improve the accuracy of diagnostic tests.

If You Choose Biotechnology Research and Development as Your Career Major, You May be a Part of:

- Drawing conclusions or making predictions based on data summaries or statistical analyses
- Developing or maintaining applications that process biologically-based data into searchable databases for purposes of analysis, calculation or presentation
- Conducting research on cell organization and function including mechanisms of gene expression, cellular bioinformatics, cell signaling or cell differentiation

Sample Careers

Associate's/Certificate/High School Diploma

Annual Salary Range
$30,000-$50,000

- Biology Technician
- Biotechnology Technician
- Laboratory Technician

Bachelor's Degree

Annual Salary Range
$50,000-$100,000

- Clinical Laboratory Scientist
- Professor of Biostatistics
- Bacteriologist
- Molecular Biology Professor
- Associate Professor

Career	Entry-Level Education	Annual Median Salary & Hourly Pay (2020)	Job Outlook (2019-29)	Responsibilities	Skills
Bioinformatics Technicians	Bachelor's Degree	**$98,230/year** **$47.23/hour**	**8%** (Average)	• Apply principles and methods of bioinformatics to assist scientists in areas such as pharmaceuticals, medical technology, biotechnology, computational biology, proteomics, computer information science, biology and medical informatics • Apply bioinformatics tools to visualize, analyze, manipulate or interpret molecular data • Build and maintain databases for processing and analyzing genomic or other biological information • Extend existing software programs, web-based interactive tools or database queries as sequence management and analysis needs evolve	• Active listening • Critical thinking • Decision making • Judgment • Reading comprehension
Microbiologists	Bachelor's Degree	**$84,400/year** **$41.00/hour**	**5%** (Average)	• Investigate the growth, structure, development and other characteristics of microscopic organisms such as bacteria, algae or fungi • Study the relationship between organisms and diseases or the effects of antibiotics on microorganisms • Prepare technical reports and recommendations based upon research outcomes • Supervise biological technologists and technicians and other scientists	• Active listening • Critical thinking • Decision making • Reading comprehension • Speaking • Writing
Molecular and Cellular Biologists	Post-Doctoral Training	**$85,290/year** **$41.00/hour**	**2%** (Slow)	• Maintain accurate laboratory records and data • Design molecular or cellular laboratory experiments, oversee their execution, and interpret results • Perform laboratory procedures following protocols including DNA sequencing, cloning and extraction, and RNA purification • Evaluate new technologies to enhance or complement current research	• Active listening • Critical thinking • Decision making • Reading comprehension • Speaking • Writing
Biostatisticians	Master's Degree	**$92,270/year** **$44.36/hour**	**8%** (Average)	• Develop and apply biostatistical theory and methods to the study of life sciences • Design research studies in collaboration with physicians, life scientists or other professionals • Write detailed analysis plans and descriptions of analyses and findings for research protocols or reports • Determine project plans, timelines or technical objectives for statistical aspects of biological research studies	• Active listening • Critical thinking • Decision making • Judgment • Problem solving • Reading comprehension • Speaking

PROFILE OF THE

South Carolina Graduate

WORLD-CLASS KNOWLEDGE

Rigorous standards in language arts and math for career and college readiness

Multiple languages, science, technology, engineering, mathematics (STEM), arts and social sciences

WORLD-CLASS SKILLS

Creativity and innovation

Critical thinking and problem solving

Collaboration and teamwork

Communication, information, media and technology

Knowing how to learn

LIFE AND CAREER CHARACTERISTICS

Integrity • Self-direction • Global perspective • Perseverance • Work ethic • Interpersonal skills

© SCASA Superintendents' Roundtable

Codified by the South Carolina General Assembly in 2016

Adopted by: SC Arts Alliance, SC Arts in Basic Curriculum Steering Committee, SCASCD, SC Chamber of Commerce, SC Coalition for Math & Science, SC Commission on Higher Education, SC Council on Competitiveness, SC Education Oversight Committee, SC School Boards Association, SC State Board of Education, SC State Department of Education, TransformSC Schools and Districts

transformSC
tomorrow won't wait for our students

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