

COLLEGE OF HEALTH SCIENCES AND TECHNOLOGY PROGRAM GOALS AND STUDENT LEARNING OUTCOMES

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Our Mission

RIT's College of Health Sciences and Technology is poised to transform the quality, safety, and affordability of health care. By combining technology and medicine, the college seeks to educate 21st century healthcare professionals, develop new patient-focused programs and systems, effectively assess community needs, and develop and apply innovative healthcare delivery practice. The College of Health Sciences and Technology will build on a foundation of liberal arts and basic sciences. Students will gain advanced knowledge in theoretical science and practical applications in experiential learning environments. These experiences will prepare students to serve humanity as practitioners, scientists, and leaders through their contribution to, and the provision of, high quality patient care, healthcare service, and/or applied translational biomedical research.

Biomedical Sciences (BS)

Program Goal #1: Develop an integrative understanding of the human body in preparation for careers in healthcare and biomedical sciences, including research

- Master foundational knowledge of the systems and physiology of the human body

Program Goal #2: Develop critical and analytical thinking skills

- Apply knowledge to complex issues in human health and/or development

Program Goal #3: Expand awareness of a broad array of career options and activities in human medicine, biomedical research, and allied health professions

- Acquire knowledge of different medical care and delivery systems (US and other nations), and of the role of health-related and clinical research in addressing health issues

Diagnostic Medical Sonography (BS)

Program Goal #1: Demonstrate an understanding of the humanistic and ethical considerations and working knowledge of hospital functions in general, and the ultrasound department in particular, to include: basic skills, emergency care, patient-technologist relationships, medical legal aspects and professionalism

- Acquire a thorough knowledge of office procedures and skills
- Acquire an understanding of humanistic and ethical considerations and the fundamentals of patient care, medical legal aspects and nursing skills pertaining to the ultrasound profession
- Identify, gather, prepare and present data and information (physical, administrative and financial) relevant to the management and administration of sonography departments

Program Goal #2: Describe and utilize routine procedures performed in Diagnostic Medical Sonography as well as demonstrate proficiency and fluency in the use of medical terminology, especially those pertaining to Diagnostic Medical Sonography

- Illustrate the cross-sectional anatomy of various abdominal, obstetrical, gynecological, peripheral vascular and small parts disorders
- Demonstrate an understanding of the normal and congenital anomalies which afflict various abdominal, obstetrical, gynecological, peripheral vascular and small parts disorders

Program Goal #3: Perform the daily ultrasound workload of OB/GYN, abdominal, and small parts, to include Doppler procedures

- Perform and complete abdominal, obstetrical, gynecological, small parts and peripheral vascular clinical ultrasound competencies and examinations
- Create high quality diagnostic scans while demonstrating the appropriate planes pertinent to various abdominal, obstetrical, gynecological, peripheral vascular and small parts structures and disorders

Program Goal #4: Distinguish between normal and abnormal sonographic appearance of different anatomical structures by identifying and understanding the important features of disease processes which includes pathophysiology, signs and symptoms, significant laboratory data, diagnostic techniques, prognosis and treatment

- Acquire a thorough knowledge of the physiological properties of various abdominal, obstetrical, gynecological, peripheral vascular and small parts disorders
- Select the pertinent laboratory tests and other diagnostic procedures used to evaluate the function of various abdominal, obstetrical, gynecological, peripheral vascular and small parts disorders

- Identify and understand the pathology of various abdominal, obstetrical, gynecological, peripheral vascular and small parts disorders
- Master the embryology, the internal and external anatomy and the terminology of various abdominal, obstetrical, gynecological, peripheral vascular and small parts disorders

Program Goal #5: Develop practical knowledge, skills and strategies for, and familiarity with the operation of sonographic instrumentation and laboratory equipment

- Develop and acquire an understanding of sonographic physics and instrumentation

Program Goal #6: Develop research familiarity, skills and knowledge pertaining to Diagnostic Medical Sonography

- Develop and illustrate appropriate research skills

Exercise Science (BS)

Program Goal #1: Integrate scientific information and research into practice

- Demonstrate how to locate, interpret, evaluate, and use professional literature to make ethical practice decisions
- Use current information technologies to locate and apply evidence- based guidelines and protocols

Program Goal #2: Develop communication skills and professional behaviors for entry into pre-professional practice

- Demonstrate effective and professional oral and written communication
- Demonstrate assertiveness, advocacy, and negotiation skills appropriate to the situation
- Demonstrate counseling techniques to facilitate behavior change
- Apply established guidelines to professional practice
- Describe the professional roles that collaborate with an Exercise Physiologist in the delivery of fitness services

Program Goal #3: Develop and deliver information and clinical and customer services

- Use the fitness assessment process to make decisions, identify problems and evaluate fitness interventions
- Apply knowledge of the role of the environment, exercise, and lifestyle choices to develop interventions to affect change and enhance wellness in diverse individuals and groups
- Utilize knowledge of education and behavior change theories to develop an educational session or program for a target population

Program Goal #4: Demonstrate foundational knowledge of core sciences

- Demonstrate knowledge of physical, chemical and biological sciences

Global Public Health (BS)

Program Goal #1: Demonstrate an understanding of history, values, and concepts that serve as a foundation for modern public health initiatives taking into account the various determinants of health and the challenges faced by different population groups around the globe

- Describe and discuss the history and philosophy of public health as well as its core values, concepts, and functions across the globe and in society
- Apply knowledge of population health to identify and recommend solutions to address health-related needs and concerns of populations
- Determine and analyze methods to address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities

Program Goal #2: Students will apply knowledge of the biological and life sciences to assess behaviors and other factors that can enhance or harm the health and well-being of humans

- Apply important concepts from the biological and life sciences to analyze factors that can help either promote health or lead to diseases
- Describe the underlying science of human health and disease including identifying opportunities for promoting and protecting health across the life course

Program Goal #3: Students will integrate and apply knowledge of data collection methods, statistical analysis techniques, and evidenced-based approaches to develop or analyze global public health initiatives

- Apply statistical concepts and utilize statistical tools commonly used in public health practice
- Use research tools and evidence-based analytical methods to monitor and assess the health of populations

Program Goal #4: Students will analyze and compare the characteristics, structures and functions the US healthcare system and those found in other countries around the world, including various legal, economic, regulatory, personnel, and policy influences

- Analyze the legal, ethical, economic, and regulatory dimensions of health care and public health policy, and the roles, influences and responsibilities of the different agencies and branches of government
- Describe the fundamental characteristics and organizational structures of the U.S. health system as well as the differences in systems in other countries

Program Goal #5: Students will apply innovative technology, communication strategies, and project management skills to address global public health problems

- Apply the fundamental concepts and features of project implementation, including planning, assessment, and evaluation
- Address the basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology.

Nutritional Sciences (BS)

Program Goal #1: Prepare students to apply nutrition principles, concepts, and practices to domains aligned with health and well-being

- Explain the impact of health care policy and administration, different health care delivery systems, reimbursement issues, policies and regulations on good and nutrition services

Program Goal #2: Demonstrate ability to integrate scientific information and research into practice

- Demonstrate how to locate, interpret, evaluate, and use professional literature to make ethical-based practice decisions
- Use current information technologies to locate and apply evidence-based guidelines and protocols

Program Goal #3: Develop communication skills and professional behaviors for entry into professional practice

- Demonstrate effective and professional oral and written communication
- Describe education methods to facilitate behavior change and enhance wellness for diverse individuals and groups.

Program Goal #4: Apply principles of management and system to deliver programs and services

- Apply management and business theories and principles to the development, marketing, and delivery of programs or services

Program Goal #5: Prepare students for successful application to graduate school or professional employment opportunities

- Acquire the foundation of knowledge essential for successful placement in graduate school or professional employment

Program Goal #6: Demonstrate knowledge and skills for customer service including: development and delivery of information, products and services to individuals, groups, and populations

- Use the nutrition care process to make decisions, identify nutrition related problems and determine and evaluate nutrition interventions
- Apply knowledge of the role of the environment, food, and lifestyle choices to develop interventions to affect change and enhance wellness in diverse individuals and groups
- Develop knowledge of education and behavior change theories and techniques and apply to the development of an educational session or program for a target population

Physician Assistant BS/MS

Program Goal #1: Graduates will demonstrate core medical knowledge of established and evolving biomedical and clinical sciences and apply this knowledge to patient care

Program Goal #2: Graduates will demonstrate interpersonal and communication skills that result in effective information exchange with patients, families, physicians, and other members of the healthcare team

Program Goal #3: Graduates will provide effective, safe, high-quality, and equitable patient care in diverse settings and across the life span

Program Goal #4: Graduates will practice with integrity, ethical and legal responsibility, and sensitivity to diverse patient populations

Program Goal #5: Graduates will critically analyze their practice experiences with Evidence-Based Medicine (EBM) and quality assurance processes to improve patient care

Program Goal #6: Graduates will demonstrate awareness of and responsiveness to healthcare systems, while keeping the patient at the center of cost-effective, safe care

Medical Illustration (MFA)

Program Goal #1: Demonstrate an advanced level of knowledge in the biomedical sciences

- Demonstrate advanced knowledge of human anatomy, molecular biology, physiology, and related biomedical sciences

Program Goal #2: Visualize scientific structures, processes, and concepts

- Visualize and accurately render anatomic, tissue, cellular, and molecular structures
- Illustrate physiological processes and abstract scientific concepts through visual storytelling

Program Goal #3: List instructional objectives to communicate biomedical content to a variety of target learners

- Identify the target learners (audience) for each set of instructional illustrations
- Describe the level of scientific literacy of each group of target learners
- Create a set of instructional objectives for each instructional illustration

Program Goal #4: Solve complex communication problems with appropriate application of verbal and visual content, realism, symbolism, graphic conventions, and motion or interactive media

- Select the most appropriate medium for delivery of content to target learners
- Select appropriate level of realism, symbolism, and graphic conventions for optimal delivery of instructional objectives to target learners

Program Goal #5: Utilize a variety of media and production techniques in appropriate applications and understand production processes sufficiently to communicate with pre-press companies, art directors, etc.

- Create artwork in a variety of media
- Select the appropriate dimensions, color space, resolution, file format, and other criteria for delivery to client
- Use industry standard terminology when discussing production and output processes

Program Goal #6: Communicate effectively with clients, subject matter experts, co-workers, supervisors, and vendors in oral and written form

- Use correct anatomic and medical terminology when discussing scientific content

Program Goal #7 Demonstrate knowledge of professional and ethical conduct

- Describe HIPAA regulations regarding the use of patient information
- Follow operating room protocols at affiliated hospitals

- Describe U.S. and international copyright laws and how they apply to the use of reference materials
- Describe copyright infringement and the criteria for determining Fair Use

Program Goal #8: Demonstrate awareness of established business and management practices

- Describe standard employment practices in the profession
- Describe business models and taxation of independent illustrators
- Describe pricing strategies and calculate prices for illustration projects
- Create a personal identity package and marketing materials
- Generate sample contracts, licensing agreements, and invoices

Program Goal #9 Demonstrate competency in the academic research process through a graduate research project or thesis

- Conduct background research on a proposed biomedical topic
- Develop a set of instructional objectives to deliver the topic to a specific group of target learners
- Create a body of artwork to meet the instructional objectives
- Present the work during the online Thesis Presentations at the end of the 2nd year of the program
- Complete a written thesis paper summarizing the project

Dietetics and Nutrition (MS)

Program Goal #1: Apply foundational sciences to food and nutrition knowledge to meet the needs of individuals, groups, and organizations

- Employ anatomy, physiology, and biochemistry concepts in solving nutritional sciences problems
- Exhibit knowledge of nutritional health promotion and disease prevention for individual, groups, and populations
- Use electronic databases to obtain nutrition information and evaluate credible sources in decision making

Program Goal #2: Incorporate client/patient-centered principles and competent nutrition and dietetics practice to ensure positive outcomes

- Utilize knowledge of foundational sciences and disease when determining the appropriateness of the therapy
- Critically analyze potential negative effects of nutrition therapy or supplement and determine the required knowledge, skill and judgement required to manage negative outcomes

Program Goal #3: Apply food systems principles and management skills to ensure safe and efficient delivery of food and water

- Consider and adjust for food allergies when preparing menus and foods
- Develop a plan to minimize vulnerabilities in the food supply chain

Program Goal #4: Implement community and population nutrition health theories when providing support to community or population nutrition programs

- Utilize program planning steps to develop, implement, monitor and evaluate community and population programs

Program Goal #5: Demonstrate leadership, business and management principles to guide practice and achieve operational goals

- Develop and lead implementation of risk management strategies and programs

Program Goal #6: Integrate evidence-informed practice, research principles and critical thinking into practice

- Critically examine and interpret current research and evidence-informed practice findings to determine the validity, reliability and credibility of information
- Demonstrate graduate-level written communication competencies

Program Goal #7: Demonstrate professional behaviors and effective communication in all nutrition and dietetics interactions

- Maintain confidentiality and security in the sharing, transmission, storage and management of protected health information

Program Goal #8: Generate graduates that successfully transition to entry level practice as a Registered Dietitian Nutritionist

- At least 80% of program graduates complete program/degree requirements within 3 years (150% of the program length).
- Of graduates who seek employment, 80 percent are employed in nutrition and dietetics or related fields within 12 months of graduation.
- 80% percent of program graduates take the CDR credentialing exam for dietitian nutritionists within 12 months of program completion.
- 90% of employers will rate graduate entry-level performance as being at or above that of other entry-level dietitians in their employ.
- The program's one-year pass rate (graduates who pass the registration exam within one year of first attempt) on the CDR credentialing exam for dietitian nutritionists is at least 80%.
- 80% of graduates who respond to a survey will be members of the Academy of Nutrition and Dietetics or another professional organization focused on food, nutrition, and health that has continuing education activities approved for continuing professional development by the Commission on Dietetic Registration.
- Produce graduates that develop and apply evidence-informed guidance to advance practice as a Registered Dietitian Nutritionist.

Program Goal #9: Produce graduates that develop and apply evidence-informed guidance to advance practice as a Registered Dietitian Nutritionist.

- 90% of graduates who respond to a survey will indicate either participation in a research-focused activity or application of evidence-based information in their work as a nutrition professional.
- 80% of graduates will disseminate results from their research activity in local, state, or national venues prior to or within 18 months of program completion.

Health and Well-being Management (MS)

Program Goal #1: Design, deliver, and evaluate individual and group health and well-being interventions/programs that are consistent with evidence based social and behavioral theories

- Apply needs assessment techniques and integrate behavior models, motivational theories, learning styles, literacy issues with innovative technology into health and nutrition program development
- Develop and implement a program evaluation plan including participant selection, measurement strategies including study-specific instruments, data collection options, and the application of statistical methods to establish evaluation outcomes and impact assessments

Program Goal #2: Promote program services to appropriate community recipients including the ability to categorize subsets of the worksite/organization population and identify appropriate intervention strategies for each subset

- Identify and explain dissemination and implementation science, evidence-based practice, and translational research in the context of health and well-being program planning

Program Goal #3: Plan and conduct inquiries into problems and outcomes related to managing activities, programs and campaigns related to health and well-being

- Examine and critique pre-implementation components to construct sound health and well-being research protocols
- Delineate funding mechanisms for health and well-being research and identify potential ethical issues to formulate response options
- Apply research design concepts and strategies through independent data analysis and/or interpret data to address the problem under investigation using written communication

Program Goal #4: Collaborate with multiple disciplines to promote and administer health related research, activities, and policy at the organizational, community, state, and federal level

- Prepare health and well-being programs to disseminate to a target audience

Program Goal #5: Design and execute an inquiry project that is relevant to the health promotion industry

- Conduct an inquiry project utilizing health-based literature and applying, analyzing and interpreting quantitative and/or qualitative research methods to report findings using effective written communication

Occupational Therapy ODT

Program Goal #1: Develop a Strong Foundation in Biological and Clinical Sciences

- Demonstrate an understanding of human anatomy, physiology, and neuroscience as they relate to occupational therapy practice.

Program Goal #2: Enhance Clinical Reasoning and Patient Management Skills

- Conduct comprehensive assessments, develop evidence-based treatment plans, and implement therapeutic interventions across diverse populations and settings.

Program Goal #3: Cultivate Ethical and Professional Practice Skills

- Apply ethical principles and professional standards in clinical decision-making, communication, and interactions with clients, families, and healthcare teams.

Program Goal #4: Foster Leadership and Management Competencies

- Demonstrate leadership skills, including effective communication, team collaboration, resource management, and advocacy for clients and the profession.

Program Goal #5: Integrate Technology into Occupational Therapy Practice

- Demonstrate competence in ability to utilize technology, including assistive devices, telehealth platforms, electronic health records, virtual reality, and wearable devices, to enhance assessment, intervention, documentation, and outcomes measurement in occupational therapy.

Program Goal #6: Facilitate Scholarly Inquiry and Research Skills

- Describe and present scholarly research through writing and oral presentations.