



VERA Z. DWYER COLLEGE OF HEALTH SCIENCES

INDIANA UNIVERSITY SOUTH BEND

Health Sciences Careers

Education Level Key: C = Certificate, D = Diploma, Degrees: A = Associate, B = Bachelor's, M = Master's, P = PhD.

The Vera Z. Dwyer College of Health Sciences provides students with educational opportunities which support students in being competitive and successful in a variety of settings. This list represents multiple careers in the field of health care and not all careers are possible with a degree from a program in the Vera Z. Dwyer College of Health Sciences.

ADMINISTRATION

Health Care Administration (C, A, B, M, P) – plan, organize, and coordinate health care delivery. They manage facilities, services, programs, budgets, and relations with other organizations. Hospitals usually have three levels of healthcare administrative responsibility. Executive level are concerned with planning, policymaking, community outreach, negotiations, and response to federal regulations and standards. Associate or assistant administrators are responsible for budgeting, personnel, in-service education, information management, and coordination of hospital departments. Other administrators specialize in financial management, marketing, systems analysis, planning, and labor relations. The administrators of health maintenance organizations (HMOs) have added responsibility of developing medical benefit programs for enrolled members.

Interested in these careers? Explore the [Health Promotion Concentration](#) or the [Health Services Management](#) program

CLERICAL/HEALTH

Health Unit Coordinator (C) – manage non-nursing patient care activities at nursing stations in hospitals and nursing homes. They may process forms for admitting, discharging, and transferring patients. Their duties may include transcribing physicians' orders by computer or manually; reading charts and charting; ordering diets, drugs, equipment, supplies, laboratory tests, and x-ray exams.

Health unit coordinators have a basic knowledge of medical terminology and pharmacology, nursing and diagnostic procedures, and basic sciences and therapies.

Medical Record Administrator (D, A) – is responsible for patients' records in a hospital or other health care institutions. They are involved in assessing the quality of patient care. It is their responsibility to facilitate the flow of health information to all departments, to assure the quality of clinical data collected on patients, and to maintain a record/information system capable of making medical information available to authorized individuals in a timely manner.

Medical Record Technician (C, D, A) – the daily operations of the health information management/medical record department may be handled by a medical record technician. The technician reviews medical records for completeness and accuracy, sees that information in the patient's record is arranged properly, and translates the names of diseases and treatment procedures into standard coding systems. The medical record technician microfilms and files records, compiles statistics and data for the medical staff, transcribe medical reports, retrieves records upon request, and releases information to attorneys, third-party payers, and other authorized parties. They are also involved in assessing quality care and maintaining health information systems.

Medical Secretary/Clerical Worker (C, D, A) – must possess good secretarial skills and an understanding of the specialized vocabulary used in the medical field. Typically tasks include receiving patients, typing medical histories, answering telephones, scheduling appointments, preparing and filing medical records, recording transactions, preparing medical insurance and government forms, ordering medical supplies, and handling correspondence.

Interested in these careers? Explore the [Billing & Coding Minor](#)

CLINICAL LABORATORY SCIENCES

Cytotechnologist (D, B) – Cytology is the study of the structure and functions of cells. Utilizing special techniques, cytotechnologists prepare cellular samples for study by microscopy and assist in the diagnosis of disease. Cytotechnologists perform the majority of their work using a microscope, in screening preparations of body cells for abnormalities in structure, indicating benign, infectious, inflammatory, or malignant conditions. Upon completion of a degree, cytotechnologists are eligible to become board certified through the American Society for Clinical Pathology (ASCP).

Histotechnologist (D, B) – A histotechnologist is responsible for the preparation of body tissue for examination. The processing of body tissues is performed by fixation, dehydration, sectioning, decalcification, micro-incineration, embedding in paraffin wax, mounting on slides, and staining. Histotechnologists work closely with pathologists and assist in identifying tissue structures, cell components, and staining characteristics. Histotechnologists and pathologists are able to use this information and relate it to physiological functions. Upon completion of a degree, histotechnologists are eligible to become board certified through the American Society for Clinical Pathology (ASCP).

Medical Laboratory Technician (D, A) – A medical laboratory technician (MLT) performs many of the standardized and uncomplicated procedures in a laboratory, both manual and automated. An MLT will collect and prepare specimens and perform routine testing that is necessary for the diagnosis and monitoring of disease. The technician also monitors quality control and quality assessment programs that have predetermined parameters. Upon completion of a degree, medical laboratory technicians are eligible to become board certified through the American Society for Clinical Pathology (ASCP).

Medical Laboratory Scientist (D, B, M, P) – A medical laboratory scientist (MLS), also known as a medical technologist (MT), performs qualitative and quantitative diagnostic assays through all areas of the laboratory for the identification and monitoring of disease. Medical laboratory scientists have the technical proficiency to operate, standardize, maintain, and troubleshoot complex instrumentation. They often become responsible for establishing and maintaining a quality assessment program, organizing and supervising daily laboratory operations, and educating laboratory students during their clinical practicum. Upon completion of a degree, medical laboratory scientists are eligible to become board certified through the American Society for Clinical Pathology (ASCP). Medical laboratory scientists have the opportunity for career and education advancement through master's and doctoral programs, as well as board certification as a specialist in areas such as chemistry, microbiology, hematology, blood bank, and management.

Phlebotomist (C) – By having direct contact with patients, a phlebotomist is the public representative of the laboratory team. Phlebotomists own a critical role in diagnostic testing by adhering to appropriate specimen collection practices, whether by venipuncture, capillary puncture, or heel stick methods. Upon completion of a phlebotomy program, phlebotomists are eligible to become board certified through the American Society for Clinical Pathology (ASCP).

Specialist in Blood Bank Technology (B+) – demonstrates superior technical proficiency and problem-solving abilities in such blood bank areas as 1) testing for blood antigens, compatibility, and antibody identification; 2) investigating abnormalities, such as hemolytic disease of the newborn, hemolytic anemia, and adverse responses to transfusion; 3) supporting physician in transfusion therapy of patients with coagulopathies or candidates for transplant; 4) blood collection and processing, including selecting donors, drawing and typing blood, and performing pre-transfusion tests to ensure the safety of the patient.

Interested in these careers? Explore the [Bachelor of Science in Clinical Lab Science](#)

COMMUNICATIONS/INFORMATIONS

Biomedical Illustrator (B, M) – creates visual material to facilitate the recording and disseminating of medical and biological knowledge. Illustrators employ various techniques, including drawing, painting, sculpting, layout, design, typography, and computer graphics. An illustrator creates surgical and anatomical drawings, visuals for educational films, and artwork for brochures and posters. The illustrator may be expected to create models of body parts. Biomedical illustrators sometimes work with biomedical photographers.

Biomedical Photographer (C, B) – Biomedical photographers capture images to facilitate the recording and disseminating of medical and biological knowledge. The photographer makes visual records of biological and medical events, and may photograph physical changes in the patient, microscopic slides of tissue, or surgical procedures. The photographer must have a basic understanding of biological sciences. Biomedical photographers sometimes work with biomedical illustrators.

Biostatistician (Biometrician) (B, M, P) – In the field of biostatistics, statistical and computer methods are developed and applied to problems in biology, epidemiology, medicine, and health policy. Biostatisticians play a crucial role in scientific research, working closely with physicians and other health scientists on the design, conduct, and analysis of research investigations. Through such collaboration, biostatisticians are key participants in improving public health.

Health Care Interpreter (C) – facilitates communication between patients and the health care practitioners. Health Care Interpreters assist with language translation and the deaf and hard-of-hearing.

Health Science Writer (B, M, P) – One of the science writer's main tasks is to translate scientific reports, written or oral, into Standard English so that the general public can understand them. Developments in medicine, chemistry, and biology all need to be translated into comprehensible form. Such translations can take the form of newspaper and magazine articles, press releases, newsletters, radio and television scripts, trade books, textbooks, information pamphlets, and encyclopedia entries.

Health Science Librarian (M) – provides physicians, nurses, allied health personnel, and other health care providers with materials and resources on medical techniques, procedures, and current research. Like all librarians, they select and purchase materials; organize materials into a manageable collection, develop and maintain catalogs; help users find information; and administer the library, including planning, budgeting, and managing personnel.

Interested in these careers? Explore the [Masters of Health Communication Program](#)

COUNSELING THERAPIES

Aging and Human Developmental Paraprofessional (C) – concentrates on the elderly; deals with the major physiological, psychological, and sociological processes that occur with aging. The job includes communicating with older people, assessing their needs and advocating for them, as well as implementing programs. Someone with advanced training could supervise others working with the elderly and could evaluate programs. Graduates are often activities or housing directors and work under occupational or recreational therapists.

Alcohol and Drug Counselor (C, A, B) – tasks may vary greatly depending on the organization in which they work. Job responsibilities will also be influential by the choice of involvement in one of the following areas of care giving: prevention, assessment, intervention, primary care, and aftercare. For example, in primary care, a counselor generally conducts individual and group counseling sessions. The person may also teach classes (according to his or her areas of specialty) on such topics as communication, intimacy, family systems and alcoholism, codependency, incest, physical and emotional abuse, grief, and the Twelve Step Program of Alcoholics Anonymous.

Chaplain (varies) – a chaplain is a clergyperson, endorsed layperson, or deacon with clinical pastoral education. The chaplain uses clinical and pastoral skills to assist the treatment team in giving care to the sick. Special focus is given to developing and utilizing religious resources of the ill in the healing process.

Clinical Social Worker (B, M) – help patients and their families handle problems that accompany illness or inhibit recovery and rehabilitation. A social worker might secure and coordinate the services of other community agencies to help the patient or family during hospitalization and rehabilitation. Social workers use their counseling skills to deal with both the patients' and the family's concerns. They help families understand the implications of the illness, the best ways they can help, and how to deal with their own feelings. They also collect patient information to help other health professionals understand social, emotional, and environmental factors.

Human Services (A) – A variety of descriptions are given to direct-care workers in human services. Training programs focus on: a solid grounding in human growth and development; effective communication and interpersonal skills; an ongoing commitment to self-awareness and change; effective intervention skills (i.e. leisure education, treatment approaches, groups processes); and over 400 hours of field experience, including a long internship.

Psychologist/Counselor (M, P) – Psychologists are trained in the science of psychology and in its application, as well as in the study of human behavior. Work settings are highly diversified, including teaching, research, and applied psychology. Psychologists assess and diagnose using clinical interviews, psychological tests, and other techniques. These techniques are used in determining an individual's strengths and problem areas in cognitive and personality functioning, interests, and behavior. Professional psychological services include meeting with couples, families, individuals, and groups.

Interesting in these careers? Explore the [Masters of Social Work Program](#) or the [Masters of Counseling Program](#).

DENTISTRY

Dental Assistant (C, D, A) – performs many duties at chair-side, assisting the dentist with patients. The assistant may sterilize and prepare instruments, prepare tray setups for dental procedures, and greet and prepare patients. May also perform routine clerical tasks such as order supplies, make appointments, and manage the dental office. Registered dental assistants can take x-rays, polish teeth, apply fluoride, take impressions, remove surgical dressings and sutures, and perform laboratory procedures. They are also involved in proper dental care and nutrition.

Dental Hygienist (A, B) – is a licensed preventive oral health professional who provides educational, clinical, and therapeutic services. These include an evaluation of the patient’s health, tissues of the head and neck and intraoral soft and hard tissues; removal of calculus, stain, and plaque; application of cavities-preventive agents, such as fluoride and pit and fissures sealants; development of individualized oral hygiene programs; dietary analysis and counseling; exposure, processing, and interpretation of dental x-rays; placement of temporary fillings and periodontal dressings, removal of sutures, and polishing and recontouring amalgam restorations, education of patients and the public about the importance of good oral hygiene.

Dental Laboratory Technician (D) – makes and repairs fixed and removable prostheses (dentures, partial dentures, orthodontic appliances, crowns and bridges in porcelain and full cast metals). The work requires the use of delicate tools, good vision and manual dexterity, and the ability to follow directions precisely.

Dentist (Doctor of Dental Science – 4 + yrs) – the primary care provider for the hard and soft tissue of the mouth and associated structures. The dentist provides preventive care (oral hygiene), diagnosis, treatment, and surgery, and supervises the work of auxiliary personnel. Dentists are skilled in the technical aspects of dentistry as well as in pain control and the management of anxiety.

Interested in these careers? Explore the [Bachelor of Science in Dental Hygiene program](#)

DIETETICS

Dietetic Technician (A, B) – works in partnership with the Registered Dietitian and other professionals to provide quality food and nutrition services. Technicians working in clinical areas help patients select nutritious diets and counsel clients on ways to select food to promote health and treat disease. Dietary management technicians work in food production, planning and costing menus, ordering food, and training and supervising personnel.

Dietitian (B) – as a food services administrator, a registered dietitian hires, trains, and supervises food service employees; writes purchase specifications for food and equipment; develops and monitors food, equipment, and personnel budgets; plans menus; and is responsible for the quality control of food production. The clinical dietitian assesses and monitors patients’ nutritional status and makes recommendations for nutrition intake; instructs about food selection and preparation and teaches principles of good nutrition. Dietitians also become involved in research, the education of health science students, and nutrition of the general public.

Interested in these careers? Explore the [Nutrition and Dietetics programs at IUPUI](#)

EDUCATION / WELLNESS PROMOTION

Health Educator (B, M) – work with health personnel and community representatives to identify health needs and resources, make and act upon intelligent decisions leading to positive health behavior, and design ways to improve the utilization of health resources. The health educator’s primary goal is optimal health maintenance for everyone.

Health & Wellness (C, B, M, P) – allied health professionals, nurses, counselors, teachers, or health educator expand their current practices through taking health and wellness training. Health and wellness practitioners work in cooperation with modern medicine, helping their clients live in a way that enhances health and total well-being and avoids illness. Health and wellness counseling encourages self-responsibility, good nutrition, physical fitness, ecological awareness, effective stress management, relaxation, and the development of healthy relationships, sexuality, and spirituality. The practitioner assesses a client’s current lifestyle and helps plan and implement health-promoting lifestyle changes.

Interested in these careers? Explore the [Bachelor of Science in Health Science with a concentration in Health Promotion](#)

EMERGENCY MEDICAL TECHNICIAN (EMT)

Emergency Medical Technician ~ EMT (C, D, A) – provides basic life support to ill and/or injured patients at the scene of an accident and while transporting patients to the hospital. The technician determines the extent of illness or injury, provides initial emergency care, and reports the patient's condition to the emergency department or medical control center. The EMT is trained in basic emergency skills, such as opening airways, giving artificial respiration and cardiac resuscitation; administering oxygen; controlling bleeding; treating shock; stabilizing fractured limbs; bandaging; assisting in childbirth; caring for poison, burn, or drug overdose patients; and managing mentally disturbed people.

ENGINEERING AND SCIENCE-

Biomedical Engineer (B, M) – These individuals use engineering principles to solve medical problems. They conduct research to test and modify known theories and develop new theories of life systems, and design life support apparatus utilizing principles of engineering and bio-behavioral sciences (artificial hearts, pacemakers, lasers for surgery, etc.) Some adapt computers for medical sciences and health care use. They may also test to ensure safety and give advice on the purchase of new equipment.

Biomedical Equipment Technician (C, D A) – handles the installation, operation, repair, maintenance, and calibration of electronic equipment. The technician demonstrates the use of the equipment to other staff and health science students.

Medical Physicist (C, D A) – is concerned with the application of physical energy, concepts, and methods to the diagnosis and treatment of human disease. Examples: application of ionizing radiation to medical therapies, bioelectrical investigations of the brain and heart, etc. Radiation therapy is the major field of employment for medical physicists.

MEDICINE

Chiropractic Technician (D) – relieve chiropractors of many administrative and clinical duties, freeing them to concentrate of patient diagnosis and treatment. They may schedule appointments, perform preliminary examinations procedures, take case histories, operate conjunctive therapy equipment, take and develop x-rays, handle bookkeeping and billing, process insurance forms, and communicate the philosophy of chiropractic care.

Chiropractor (Doctor of Chiropractic) – are primary portal of entry health care providers who practice their healing art through non-drug, non-surgical means. They believe that the relationship between the structure and function of the human body is significant; spinal manipulation by way of chiropractic adjustments corrects disturbances of the nervous system caused by derangement of the musculoskeletal structure.

Medical Assistant (C, D, A) – relieve physicians of many administrative and clinical duties, allowing them to concentrate on patient diagnosis and treatment. They may schedule appointments, take case histories, operate conjunctive therapy equipment, take and develop x-rays, handle bookkeeping and billing, process insurance forms, and refill prescriptions.

Organ Transplant Coordinator (B) – oversees the organ transplant process. This includes locating donor organs; arranging transportation for organs; coordinating transplants; consulting with physicians, surgeons, and hospital staff; and conferring with and counseling recipients and their families.

Osteopathic Physician (Doctors of Osteopathic Medicine-DO) – Doctors of Osteopathic Medicine (DOs), like Doctors of Allopathic Medicine (MDs), are concerned with the prevention, diagnosis, and treatment of human illness, disease, and injury. They may prescribe medicine, perform surgery, and use all accepted scientific modalities to maintain and restore health. There is an emphasis on the relationship between body structure and function, which requires a thorough understanding of anatomy and the development of special skills in recognizing and correcting structural problems through manipulative treatment.

Physician (Doctors of Allopathic Medicine-MD) – are responsible for the diagnosis of disease or injury and the prescription of treatment. Physicians may conduct the treatment themselves or they may lead a healthcare team in which nurses, physician assistants, rehabilitation therapists and pharmacists, for example, to provide a comprehensive treatment plan for the patient. There is advanced training including the following areas: Allergy and Immunology, Anesthesiology, Colon and Rectal Surgery, Dermatology, Emergency Medicine, Endocrinology and Metabolism, Family Practice, Hematology, Infectious Disease, Internal Medicine, Medical Oncology, Neurological Surgery, Nuclear Medicine, Obstetrics and Gynecology, Ophthalmology, Orthopedic Surgery, Otolaryngology, Pathology, Pediatrics, Physical Medicine, Plastic Surgery, Preventive Medicine, Psychiatry, Pulmonary Medicine, Radiology, Surgery, Thoracic Surgery, and Urology.

Physician Assistant (M) – provides diagnostic and therapeutic health care. Working under a physician’s supervision, the physician assistant is qualified to carry out 80 -90 % of the medical tasks traditionally performed by the physician. Physician assistants take medical histories, perform physical examinations, and order laboratory tests. After diagnosing a problem, the physician assistant develops and implements a treatment plan, including in more than 40 states, providing prescriptions.

Podiatric Physician (MD) – is concerned with the examination, diagnosis, treatment, prevention, and care of conditions and diseases of the human foot and related structures.

Surgical Technologist/Technician (D, A) – assist with patient care and related services in hospital operating rooms, performing tasks that help ensure a safe environment, contribute to the operating team’s efficiency, and support the surgeons and others involved in operating procedures. The technologist sets up the operating room, prepares surgical instruments and assists in their use, and prepares patients for surgery.

MORTUARY SCIENCE

Funeral Director (Mortician) (B) – The funeral director is usually contacted at the time of death. The funeral director arranges to have the body transferred to the funeral home and prepares the body for the final disposition, according to state laws. The director completes the required paperwork (e.g. burial permits and death certificate) and arranges the service, carrying out the family’s wishes and supervising details of the service. After the service, the director may assist family members as they file claims for social security, veteran’s and union benefits, and insurance. The funeral director often becomes involved in post-death counseling and support group activities.

NURSING

Clinical Nurse Specialist (M) – A clinical nurse specialist (CNS) is a registered nurse who has completed a master’s degree in a specialized area of nursing practice and competence. A CNS is involved with research, administration, teaching and consulting with a specialty practice. These specialty practices include burn care, cardiopulmonary, diabetes care, metabolic care, neurological, oncology, developmental disabilities, family, children with disabilities, midwifery, neonatal, pediatric oncology, pediatric pulmonary, prenatal, and school health nursing.

Home Health Aide (NA) – care for the elderly, convalescent, or people with disabilities in the patient’s home. Duties include changing bed linens, preparing meals, cleaning, doing laundry, and running errands. The aide helps patient with dressing, bathing, and moving around the house. The aide may also administer medication under the direction of a physician or nurse, and may provide massage or other treatments.

Nurse Anesthetist (B, M) - A certified nurse anesthetist (CRNA) is a highly educated and specially trained nurse who administers all anesthetic techniques, including pain management. A CRNA is a skilled and experienced provider of life-supporting cares, most notably airway management.

Nurse Assistant ~ Aide, Orderly (CNA-C) – helps those who provide patient care. May transfer and transport patients, equipment, supplies, and specimens, and observe patients and take action if necessary. Duties might include giving baths a back rubs; making hospital beds, carrying meal trays; helping patients in and out of bed; and taking appropriate action in emergencies.

Nurse Midwife (M) – responsibilities include prenatal care, labor and delivery management, postpartum care, well-woman gynecology, and normal newborn care.

Nurse Practitioner (M) – working in collaboration with a physician, a nurse practitioner provides general health care and treatment of patients, including performing physical examinations, assessing patients’ clinical problems, recommending and prescribing medication or other forms of treatment. Examine patients; order, interpret, and evaluate diagnostic tests; record physical findings; formulate treatment plans and prognosis; make referrals to physicians if indicated; and determine when a patient has recovered. Minnesota law authorizes certified nurse practitioners to prescribe medicines.

Practical Nurse (LPN - D) – The licensed practical nurse (LPN) delivers high quality direct nursing care to people in all stage of the wellness/illness continuum. The duties include administering medications and performing skilled technical procedures. The level of responsibility is different in each setting, but may include patient evaluation and assessment and determining and implementing a patient’s care plan.

Registered Nurse (RN – A, B) – Registered nurses (RNs) are primary members of the health care team. They assess the health needs of individuals, families, and communities. RNs give direct care to patients, and they also direct and supervise the care given by other nursing personnel. RNs provide many skilled bedside services, such as close monitoring of patient’s condition, wound and skin care, and pain control. They also perform a variety of specialized, prescribed treatments, such as administering injections, intravenous feedings, and medications. RNs counsel and educate patients about their illnesses, preventive health measures, and self-care responsibilities.

Interested in these careers? Explore the following:

[Bachelor of Science in Nursing](#)
[Masters of Science in Nursing](#)
[Online RN to BSN at IU South Bend](#)

PHARMACY

Pharmacist (Doctorate of Pharmacy) – accurately fills and dispenses prescription and nonprescription drugs to patients; compounds medications; provides drug information to patients, health practitioners, and the general public; reviews patients’ drug therapy; consults with patients and health practitioners; and conducts drug-related research.

Pharmacologist (M, P) – are professional specialists in modern drug research aimed at understanding how drugs act. Through basic research, teaching health professionals, drug development and safety, environmental monitoring, and clinical testing, pharmacologists contribute to biological knowledge with applications in medicine and health. Pharmacologists possess a wide range of skills and interdisciplinary expertise for successfully investigating drug-related issues in today’s world.

Pharmacy Technician (D, A) – perform a variety of duties to the preparation of IV medications and distribution of unit dose drugs. They prepare and distribute medications under the direct supervision of a pharmacist. They replenish drugs and pharmaceutical supplies in the pharmacy and patient care areas, price and order drugs, and maintain records.

PUBLIC HEALTH

Environmental and Occupational Health (M, P) – Environmental and occupational health is concerned primarily with the interface between people and their various environments. Understanding how exposures to external hazards create a “toxic dose,” how that dose may elicit biological responses, and how those responses may progress to disease are the areas uniquely addressed by environmental and occupational health professionals. The various disciplines involved in this area can be grouped into those concerned primarily with understanding and measuring exposures (industrial hygiene, environmental chemistry, microbiology, radiation measurements, and epidemiology); and those that address directly the dose- response relationships (toxicology). Government or regulatory agencies, medical institutions, or industry in administrative or technical positions employs graduates.

Epidemiologist (M, P) – study the causes and prevention of disease through studies of incidence, distribution, and association to disease. Population-epidemiological methodology is one of three major methodologies of medical science (along with clinical-pathological and laboratory-experimental). Individuals with graduate degrees may teach, conduct research, develop disease prevention programs or work as administrators. State or national health agencies, medical or public health institutions, or business employs them.

Health Promotion Specialist (B+) – Health Promotion Specialists prepare comprehensive, technical education programs and materials for a wide variety of audiences on a wide variety of topics. They plan, design, implement, and evaluate comprehensive public health education, community health education and health promotion programs. Health Promotion Specialists often obtain the Certified Health Education Specialist (CHES) certification.

Maternal and Child Health (M) – physicians, nurses, social workers, occupational and physical therapists, and other health practitioners may specialize in maternal and child health. This area is concerned with the health care of new mothers; chronically ill, disabled, abused, and neglected children; and troubled adolescents. They may also teach, conduct research, or work as administrators.

Toxicologist (B, M) – Toxicologist use principles of biology and chemistry to discover adverse effects of chemicals on living systems and determine the likelihood of such effects occurring. The toxicologist investigates relationships between chemicals and disease.

Interested in these careers? Explore the [Bachelor of Science in Health Sciences with a concentration in Health Promotion](#)

RADIOLOGICAL TECHNOLOGY

Magnetic Resonance Imaging Technologist (C, A, B) – quality images are produced using radio waves and a magnet to excite nuclei. All anatomical structures can be imaged in great detail without the use of ionizing radiation. The body can be imaged from multiple angles with superior contrast resolution. An MRI technologist has a vast knowledge in anatomical structures, vascular anatomy, and patient safety.

Nuclear Medicine Technologist (A, B) – nuclear medicine is the medical specialty that uses the nuclear properties of radioactive and stable nuclides to make diagnostic evaluations of the anatomic or physiologic conditions of the body and to provide therapy with radioactive sources

Radiation Therapist (C, A, B) – assist in the treatment of disease by administering carefully prescribed doses of x-ray or other forms of ionizing radiation, under the supervision of a physician. The radiation therapist administers the treatment, observes the patient during treatment, and maintains records of the treatment. Other duties include tumor localization, treatment planning, patient follow-up, and patient education.

Radiographer (C, A, B) – the role of the radiographer is to obtain quality radiographs (photographic images made by passing x-rays through the area of the body) for the physician while providing a high standard of patient care. Radiographers must have a thorough understanding of anatomy, positioning, radiographic exposure, patient care, and radiation protection.

Sonographer (Ultrasound Technologist) (C, A, B) – ultrasonography is a diagnostic procedure that uses high frequency soundwaves to image organs, masses, and fluid accumulation within the body. This type of exam may also be referred to as an ultrasound scan or a sonogram. Unlike x-ray, ultrasound is non-ionizing and to-date has demonstrated no known biological effects at the intensity levels currently used. The field of Diagnostic Medical Sonography is dedicated to the preservation of life and health through diagnosis and prevention of disease.

Interested in these careers? Explore the following:

[Associate in Radiography](#)
[Bachelors of Science in Medical Imaging Technology](#)

REHABILITATIVE THERAPIES

Art Therapist (M) – treat individuals, couples, families, and groups using therapeutic art tasks. Art therapy uses art and the creative process to facilitate communication, expression of emotions, physical and cognitive skills, self-awareness, and personal growth. The art therapist works with children and adults, including people who are emotionally disturbed, physically disabled, elderly, developmentally delayed, drug dependent, or prisoners.

Audiologist (M) – specializes in the prevention, identification, and assessment of hearing impairment; the habilitation and rehabilitation of persons with hearing impairments, including prescribing and working with hearing aids; and research on normal and impaired hearing.

Cardiopulmonary Rehabilitation Specialist (B, M) – help patients who have been diagnosed with asthma, emphysema, chronic obstructive pulmonary disease, angina, coronary artery disease, heart attack and other conditions. They perform initial diagnosis and encourage lifestyle changes and rehabilitation to reduce health risks and improve quality of life.

Dance/Movement Therapist (M) – Dance/movement therapy is the psychotherapeutic use of movement to further the emotional, physical, and cognitive integration of the individual. Therapists work with people of all ages both in groups and individually. Expressive and communicative behavior is considered in treatment, with the goal of integrating these behaviors with psychological aspects of the client.

Drama Therapist (M) – Drama therapy is used to maintain health as well as to treat dysfunction, including emotional disorders, learning difficulties, geriatric problems, and social maladjustments. Drama therapists evaluate, treat, and conduct research with individuals, groups, and families, using improvisation, role-playing, puppetry, mime, and other theatrical arts.

Exercise Science (Kinesiotherapist) (B) – Kinesiotherapy is the treatment of the effects of disease, injury, and congenital disorders through therapeutic exercise and education designed to develop physical fitness, increase functional mobility and independence, and improve psychosocial behavior. The Kinesiotherapist evaluates, develops, implements, and modifies adapted exercise programs to improve the quality of life and health for adults and children.

Holistic Therapist (M) – This training is taken by allied health practitioners, nurses, psychologists, social workers, chemical dependency counselors, and others to expand their current practices. The goal of holistic therapies is to improve the health of the

whole person and work for prevention as well as relief of illness. Holistic therapies include the following techniques: acupressure (stimulation of energy points on the body), massage, movement therapy, transpersonal therapies, visualization, and nutrition.

Massage Therapist (L) – generally work one-on-one with clients in a quiet setting. Massage therapists may see as many as ten clients or more in a health club, spa, or private practice each day.

Music Therapist (B+) – Music therapy focuses on the structuring of music environments to bring about desirable changes in behavior. The National Association for Music Therapy defines it as the use of music to accomplish therapeutic aims; the restoration, maintenance, and improvement of mental and physical health. The music therapist is a member of the treatment team, and is active in assessment, program development, and evaluation as related to the individual needs of the client.

Occupational Therapist (B, M) – assesses needs, establishes goals, and develops treatment programs for individuals whose ability to cope with the tasks of living is threatened or impaired by congenital or developmental disability, the aging process, physical injury or illness, or psychological and social disability. An occupational therapist uses task-oriented activities to prevent, minimize, or correct disabling emotional, behavioral, or physical problems.

Occupational Therapy Assistant/Aide (OTA-A) – works under the supervision of the occupational therapist to treat patients and carry out a broad range of occupational therapy services. In addition to working directly with patients, the assistant may also construct adaptive equipment and splints, maintain tools and equipment, keep patients' records, and prepare clinical notes.

Physical Therapist (M) – works with patients to restore function and prevent disability after disease or injury. They evaluate patients and plan a treatment program involving exercise, heat, cold, water, and ultrasound. The therapist may give strengthening exercises to someone who has fractured a leg; lessons in walking and stair climbing to a patient with paralysis after a stroke; or coordination exercises to a child with cerebral palsy. When progress is slow, the therapist must keep up the patient's morale and cooperation. Thus, physical therapists need a good understanding of people and what motivates them.

Physical Therapy Assistant (PTA-A) – is a skilled technical worker who is a graduate of a PTA educational program accredited by the American Physical Therapy Association (APTA), or comparable accrediting agency. The PTA performs selected physical therapy treatments and related duties, as delegated by the physical therapist to assist in client related activities.

Physical Therapy Aide (NA) – performs tasks assigned by the therapist, maintains and transports equipment and supplies, and prepares and cleans treatment areas. The aide may also perform general office duties.

Prosthetics/Orthotics (B) – Prosthetics is the making and fitting of artificial limbs, while orthotics is the making and fitting of orthopedic braces to support weakened body parts or to correct physical defects, such as spinal cord malformations. The prosthetist and orthotist works closely with the physician, surgeon, and therapist to provide total rehabilitation services for patients with disabling conditions. They are responsible for taking measures or molds, designing the appliance selecting materials, fabricating and fitting.

Prosthetic/Orthotic Assistant and Technician (C, D) – works under the direct supervision of the prosthetist/orthotist and shares responsibilities. The assistant may also be assigned repair and maintenance work. The prosthetist/orthotist technician is involved mainly in the fabrication of components and devices, and does not have direct contact with patients.

Qualified Rehabilitative Consultant (B) – develops and monitors vocational rehabilitation programs for employees eligible for worker's compensation. They are employed by an independent firm or are self-employed. Some work for insurers or adjusting companies.

Respiratory Therapist/Technician (C, A) – respiratory care involves the diagnosis, treatment, management, and preventive care of patients with cardiopulmonary problems. These patients suffer from a variety of acute and chronic conditions that are either life threatening or disabling. Respiratory care personnel assist in the treatment of cardiac and pulmonary ailments, such as cardiac failure, asthma, pulmonary edema, cerebral thrombosis, drowning, hemorrhage, and shock.

Speech/Language Pathologist (B, M+) – study human communication, its normal development and its disorders. They evaluate the speech and language of children and adults; determine whether communication problems exist and the best ways to treat these problems. They treat individuals with articulation disorders, voice disorders, impaired hearing, stuttering, swallowing, feeding and cognition delayed language, aphasia, cleft palate, and other problems. They are also interested in the prevention of communication disorders through public education, early identification of problems, and research on the causes and treatment.

Therapeutic Recreation Specialist (B+) – using recreation services to help people with potentially limiting conditions make the most of their lives. They assess and set goals, design written plans, and evaluate the progress of persons with varying mental, physical, emotional, and behavioral disabilities. They work with both individuals and groups to enhance leisure abilities. In the community, efforts are directed toward integrating disabled individuals with their non-disabled peers.

Vocational Recreation Specialist (B+) – This individual uses industrial arts activities to assist physically or emotionally disabled individuals in their rehabilitation, especially in the workplace. Through these abilities, the client may develop or improve work skills, and explore vocational rehabilitation plan for the client, and evaluates the clients abilities and progress.

Interested in these careers? Explore the following:

[Bachelor of Science in Health Science with a concentration in Rehabilitation Science](#)
[Bachelor of Science in Health Science with a concentration in Speech Language Pathology](#)
[Bachelor of Science in Health Science with a concentration in Sports & Exercise Science](#)

SPORTS MEDICINE

Athletic Trainer (M) – is an allied health professional whose six domains are: prevention of athletic injuries; recognition and evaluation of athletic injuries; management treatment and disposition of athletic injuries; rehabilitation of athletic injuries; organization and administration of an athletic program; and education and counseling of athletes. After successfully completing the certification examination administered by the National Athletic Trainers Board of Certification, the Certified Athletic Trainer works under the direction of a physician when practicing the art and science of athletic training.

Exercise Physiologist (B+) – describe and explain the functional changes that occur during exercises. For example, they can predict the heart with various kinds of exercise, and the chemical and physical changes responsible for that rate. They may conduct research on oxygen uptake, muscle fatigue, muscle hypertrophy, body composition, and other phenomena. Exercise physiologists may also work with patients in the areas of cardiac or pulmonary rehabilitation.

Personal Trainer (C, B, M) – personal trainers possess the knowledge, skills, and abilities necessary to design safe and effective fitness programs. Personal trainers work in a variety of settings and are responsible for designing and implementing fitness training programs for individuals in one-on-one or group settings. There are a variety of certifications and educational opportunities available for personal trainers.

Sports Medicine (B) – “sports medicine” is an umbrella term, which refers to several professions involved in the clinical and scientific aspects of sports and exercise. Dr. David Lamb of the American College of Sports Medicine defines it as the scientific and clinical testing, manipulation, and care of those who exercise, especially athletes.

Sports Medicine Technician (NA) – under the supervision of a physician, the sports medicine technician assists in the recognition, evaluation, and emergency treatment of sports related injuries; helps athletes prevent injuries; and helps train and condition. The technician has an understanding of body mechanics, nutrition, emergency medical techniques, physiology, sports, psychology, and sports equipment.

Strength and Conditioning Specialist (B) – professionals who apply scientific knowledge to train athletes for the primary goal of improving athletic performance. They conduct sport-specific testing sessions, design and implement safe and effective strength training and conditioning programs and provide guidance regarding nutrition and injury prevention.

Interested in these careers? Explore the following:

[Bachelor of Science in Health Science with a concentration in Rehabilitation Science](#)
[Bachelor of Science in Health Science with a concentration in Sports & Exercise Science](#)

TECHNICAL INSTRUMENTATION

Cardiovascular Technology (A) – assists in areas of diagnosis and treatment of individuals with cardiac disease. The profession encompasses two areas of diagnostic evaluation: invasive cardiology (cardiac catheterization) and noninvasive cardiology (echocardiography). An entry level practitioner will possess the knowledge base and technical skills to: collaborate in providing cardiovascular modality services, with appropriate supervision; conduct diagnostic tests common to their specialty, analyze and interpret data necessary to report exam results to the attending physician.

Dialysis Technician (NA) – supervised by a nurse or physician, they provide service to individuals with kidney failure. They run a dialysis machine, which utilizes an artificial kidney to cleanse the patient’s blood of waste products. The technician inserts a needle (attached to tubes) into the patient’s artery and another into the vein, starts the machine, and monitors the treatment. After the treatment, the technician checks the patient’s vital signs and sterilizes the equipment.

Electrocardiograph (EKG) Technician (NA) – operate an instrument that measures the electrical impulses of the heart and translates these tracings on graph paper. The EKG technician attaches electrodes to the chest, arms, and legs of the patient after applying gel, which facilitates the movement of electrical impulses.

Electroencephalograph (EEG) Technician (C, A) – play an essential role in the diagnosis of brain disease (such as epilepsy or stroke), injury, and tumors. The technician also assists in determining that brain functions have stopped in a person who has died. The EEG technician attaches electrodes to specific areas of the patient’s head to measure differences in amplitude and frequency of electrical potentials between various parts of the brain.

Perfusionist (Cardiopulmonary Technician) (A, B) – operates extra corporeal blood circulation equipment during medical situations where the patient’s circulatory function needs to be supported or temporarily replaced. Perfusion involves specialized instrumentation and advanced life support methods. The perfusionist consults with physicians to select appropriate equipment, techniques, and blood products, anesthetics, or drugs to be given to the patient through the extra corporeal circuit. Perfusionists may be responsible for purchasing supplies and equipment and may have department management duties.

VETERINARY MEDICINE

Veterinarian (M, P, Doctor of Veterinarian Medicine-DVM) – the familiar role is preventive medical care, therapy, and surgery for pets and farm animals. Running a successful veterinary hospital or clinic demands management skills in addition to medical skills. Veterinarians working with food-producing animals serve as consultants to their farmer clients. They also work at points of entry to prevent the introduction of foreign animal specimens to determine the presence of disease. They work in research laboratories to assure the humane treatment of animals, and in zoos and circuses to assure animal health and welfare.

Veterinarian Technician (Animal Health Technician) (C, D, A) – assist veterinarians with examinations, diagnostic and laboratory tests, anesthesiology and surgery, scheduling and receiving clients, managing animal facilities, and office procedures.

VISION CARE

Ophthalmic Medical Personnel (NA) – Assist ophthalmologists (MDs) in history taking, lensometry, tonometry (measurement of fluid pressure within the eyeballs), application of eye dressing and eye drops, maintenance of instruments, measurement photography of the eye, electronic testing, and surgical assisting.

Optician/Ophthalmic Dispenser (C, A) – fills prescriptions for corrective eyewear by helping individuals select frames and lenses. They measure distance between pupils for proper fit, order lenses from ophthalmic laboratories, check new lenses for correct prescription, and adjust new lenses.

Optometrist (M, P, Doctor of Optometry-OD) – the American Optometric Association defines the Doctor of Optometry (OD) as a primary eye care professional. Optometry is an independent primary health care profession. It encompasses the prevention and remediation of disorders of the vision system through the examination, diagnosis, treatment, and management of visual efficiency and eye health.

Orthoptist (2 yr C) – orthoptics is the clinical science of ocular motility and binocular vision, and related disorders of the eye. An orthoptist is an eye muscle specialist who works under the supervision of an ophthalmologist (MD). Diagnosis and non-surgical treatment of eye muscle anomalies are the primary responsibilities of an orthoptist, although most master a wide range of ophthalmic technical skills in addition to general orthoptics.