

# What can I do with a major in the health sciences?

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

## 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 health care 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,

**Phlebotomist (C)** – draws blood from patients for the purpose of analysis. Most blood is obtained by venipuncture, although arterial puncture or capillary blood from fingers or heels may be used.

**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.

## 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 the deaf and hard-of-hearing patient and the health care practitioner.

**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

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.

## **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.

## **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.

## **EDUCATION**

**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.

## **EMERGENCY MEDICAL TECHNICIAN (EMT)**

**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**

## PHARMACY

**Pharmacist (Doctorate of Pharmacy)** – accurately fills and dispenses prescription and nonprescription drugs to patients; compounds medications; provides drug information to patients, health pr

## 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. of Minne065 Tw -23r prid 1021(d)7( 02e(M)-4()-8(MCID 3 BDC /TT0 4(i)68.6 Tc 0

**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. Patients suffer from a variety of acute and chronic respiratory conditions. Respiratory therapists/technicians are responsible for the assessment, diagnosis, and treatment of patients with respiratory problems. They also provide patient education and counseling. Respiratory therapists/technicians work in hospitals, clinics, and long-term care facilities. They may also work in home care settings. Respiratory therapists/technicians are trained to perform a variety of respiratory procedures, including: administering oxygen therapy, nebulizer treatments, and chest physiotherapy. They also monitor patients’ vital signs and oxygen saturation levels. Respiratory therapists/technicians may also be responsible for the maintenance and repair of respiratory equipment. Respiratory therapists/technicians must have a strong understanding of anatomy and physiology, particularly of the respiratory system. They must also have excellent communication skills and be able to work effectively in a team environment. Respiratory therapists/technicians are an essential part of the healthcare team and play a vital role in the care of patients with respiratory problems.

## 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)** – they assist ophthalmologists (MDs). Tasks include history taking, lensometry, tonometry (measurement of fluid pressure within the eyeballs), application of eye dressing and eye drops, maintenance of instruments,