

## **DESCRIPTIONS OF MAJOR HEALTH/MEDICAL CAREERS OPEN TO PRE-PROFESSIONAL STUDENTS**

\*Degrees offered at ASU

### **ALLOPATHIC MEDICINE**

Traditional medical degree.

### **OSTEOPATHIC MEDICINE**

Osteopathic medicine is a distinctive form of medical practice in the United States. Osteopathic medicine provides all of the benefits of modern medicine including prescription drugs, surgery, and the use of technology to diagnose disease and evaluate injury. It also offers the added benefit of hands-on diagnosis and treatment through a system of therapy known as osteopathic manipulative medicine.

### **PODIATRY**

Podiatrists provide the vast majority of foot health care services in the United States. This mission includes attracting qualified young men and women to the field, and to increasing the awareness of the importance of foot health among the general public and other health professionals.

### **DENTISTRY**

Dentistry is defined as the evaluation, diagnosis, prevention and/or treatment (nonsurgical, surgical or related procedures) of diseases, disorders and/or conditions of the oral cavity, maxillofacial area and/or the adjacent and associated structures and their impact on the human body.

### **OPTOMETRY**

The Mission of the profession of optometry is to fulfill the vision and eye care needs of the public through clinical care, research, and education. Doctors of optometry are independent primary health care providers who specialize in the examination, diagnosis, treatment, and management of diseases and disorders of the visual system, the eye and associated structures, as well as the diagnosis and management of related systemic conditions.

### **\*PHYSICAL THERAPY (graduate degree)**

Physical therapists (PTs) evaluate and treat individuals of all ages, who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives. PTs use treatment techniques to promote the ability to move, reduce pain, restore function, and prevent disability. In addition, PTs work with individuals to prevent the loss of mobility before it occurs by developing fitness- and wellness-oriented programs for healthier and more active lifestyles.

### **\*Physical Therapist Assistant (Associate degree)**

The Physical Therapist Assistant (PTA) is a technically educated health care provider who assists the physical therapist in the provision of physical therapy and performs physical therapy interventions selected by the supervising physical therapist. The PTA works under the direction and supervision of the physical therapist, helping manage conditions such as back and neck injuries, sprains/strains, fracture, arthritis, burns, amputations, stroke, multiple sclerosis, birth defect, injuries related to work and sports, and others.

### **PHYSICIAN ASSISTANT**

The physician assistant works in a dependent relationship with a supervising physician to provide diagnostic and therapeutic patient care in order to free the supervising physician to spend more time with complex patient problems only the physician can treat. The PA is qualified to perform a minimum of 70% of the clinical procedures carried out by a general practice physician. The PA obtains patient histories, performs comprehensive physical examinations, orders and interprets diagnostic laboratory tests, prepares a diagnosis, implements basic treatment procedures for common illnesses, and treats emergency cases.

### **\*COMMUNICATION DISORDERS (BS & graduate degree)**

Speech/Language Pathologists and Audiologists provide direct services to persons across the lifespan with communication disorders (speech, language, hearing, swallowing, etc.) through prevention, diagnosis, and intervention activities. Speech/Language Pathologists and audiologists are employed in a variety of service delivery settings including public and private schools/preschools, acute care hospitals, long-term care hospitals, skilled nursing facilities, assisted living facilities, university programs, private practice facilities, as well as state and federal programs.

### **PHARMACY/PHARMACEUTICAL SALES**

Pharmacists dispense prescription medications to patients and offer advice on their safe use. Pharmaceutical representatives provide drug information and product samples to physicians.

### **CHIROPRACTIC MEDICINE**

Chiropractic concerns itself with the relationship between structure (primarily the spine) and function (primarily coordinated by the nervous system) of the human body, and how that relationship affects the restoration and preservation of health. It is a nontraditional form of medical care.

### **\*NURSE PRACTITIONER (graduate degree)**

Nurse Practitioners (NPs) provide much of the same care provided by physicians. Nurse Practitioners are able to specialize in an area of study they desire (i.e. Pediatrics, Family Practice, Adult, Geriatric, etc.,) and provide care within the scope of their expertise. Nurse practitioners may treat both acute and chronic conditions, as well as prescribe medications and therapies for the patient at hand. Nurse practitioners may also bill for Medicare and Medicaid and private insurance for services performed.

### **\*NURSE ANESTHETIST (graduate degree)**

CRNAs can administer anesthesia in all types of surgical cases, and are able to apply all the accepted anesthetic techniques - general, regional, local, or sedation. CRNAs practice in a wide variety of settings including public and private sectors, traditional hospital settings, pain clinics, physician's offices, or in solo practice. CRNAs will provide care along side an anesthesiologist, in what is termed the Anesthesia Care Team.

**\*REGISTERED NURSE** (Associate or BS degree)

RNs provide direct care and make decisions regarding plans of care for individuals and groups of healthy, ill and injured people. There are over 200 specialties in nursing, such as critical care, ambulatory care, behavioral health, community health, emergency room, flight, geriatric, home health, legal, maternal-child, medical-surgical, operating room, pediatric and travel nursing. ASU also offers a second degree accelerated Bachelor of Science in Nursing degree requiring thirteen months of study after a first bachelor's degree.

**\*RADIOLOGIC SCIENCES** (Associate Degree)

Radiologic technologists, also referred to as radiographers, produce x-ray films (radiographs) of parts of the human body for use in diagnosing patients' medical problems. They also are involved in administering nonradioactive materials into patients' blood streams for diagnostic purposes.

**\*NUCLEAR MEDICINE TECHNOLOGY** (BS degree)

Nuclear medicine technologists operate cameras that detect and map the radioactive drug in a patient's body to create diagnostic images. After explaining test procedures to patients, technologists prepare a dosage of the radiopharmaceutical and administer it by mouth, injection, inhalation, or other means. They position patients and start a gamma scintillation camera, or "scanner", which creates images of the distribution of a radiopharmaceutical as it localizes in, and emits signals from, the patient's body. The images are produced on a computer screen or on film for a physician to interpret.

**\*DIAGNOSTIC MEDICAL SONOGRAPHY** (BS degree)

A Diagnostic Medical Sonographer provides patient services using medical sonography equipment under the supervision of a physician. Medical Sonography utilizes high frequency sound waves and requires the sonographer to be skilled in the application. The sonographer acquires pertinent anatomic, physiologic and/or pathological sonographic images necessary to aid in diagnosing problems with internal organs, tissue or blood flow inside the body.

**\*RADIATION THERAPY** (BS degree)

Radiation Therapists are skilled in the art and science of medical radiation treatment delivery. The majority of patients receiving radiation therapy have cancer. Along with surgery and chemotherapy, radiation therapy offers these patients the best chance to succeed in the fight against their disease. Major focus areas are the care and assessment of patients, simulation, treatment planning, and delivery of treatments using linear accelerator and radioisotopes.

**\*MAGNETIC RESONANCE IMAGING** (BS degree)

Magnetic resonance imaging (MRI) scanners rely on the principles of atomic nuclear-spin resonance. Using strong magnetic fields and radio waves, MRI collects and correlates deflections caused by atoms into images. MRIs offer relatively sharp pictures and allow physicians to see internal bodily structures with great detail.

**\*CLINICAL LABORATORY SCIENTIST** (Associate & BS degree)

The Clinical Laboratory Scientist works in supervisory and teaching positions, as well as performing a full range of simple and complex tests in search of data on patients' health. Laboratory test results influence up to 70 percent of the critical medical decisions that influence the medical treatment that a patient receives. This specialist works in the laboratory areas of blood banking, chemistry, hematology, immunology, and microbiology.

**OCCUPATIONAL THERAPY** (Associate & graduate degree)

Occupational therapists and occupational therapy assistants help people across the lifespan participate in the things they want and need to do through the therapeutic use of everyday activities (occupations). Common occupational therapy interventions include helping children with disabilities to participate fully in school and social situations, helping people recover from injury to regain skills, and providing supports for older adults experiencing physical and cognitive changes.

**HEALTH INFORMATION MANAGEMENT** (Associate & BS degree)

Health Information Management is the practice of acquiring, analyzing, and protecting digital and traditional medical information vital to providing quality patient care. Health information management professionals work in a variety of different settings and job titles. They often serve in bridge roles, connecting clinical, operational, and administrative functions.

**RESPIRATORY THERAPY** (BS degree)

The Respiratory Therapist helps patients with deficiencies and abnormalities of the cardiopulmonary system ranging from newborn and pediatric patients to adults and the elderly.

**\*DIETETICS** (BS Degree)

Registered Dietitians are food and nutrition experts who have met the minimum academic and professional requirements to qualify for the credential "RD". They may work in a variety of employment settings which include: academia, community and public health, food and nutrition-related business and industry, food service management, healthcare facilities, journalism, private practice, research, sports nutrition, and wellness programs.

**\*DISASTER PREPAREDNESS & EMERGENCY MANAGEMENT** (AAS, BS, MINOR, MS & GRADUATE CERTIFICATE)

Graduates of the Disaster Preparedness & Emergency Management programs, in conjunction with the National Response Framework, will be valuable contributors to their community, state and national disaster preparedness and emergency management activities. Employment opportunities include healthcare settings, government agencies, non-government organizations, education, law enforcement, emergency medical services, fire service and other entities. All geographic areas utilize disaster experts including local, state, regional, national and international locations.

**\*SOCIAL WORK** (BS & graduate degree)

Social workers work in hospitals, hospices, nursing homes, and mental health care facilities, helping patients and families understand and cope with their condition and make difficult health care choices. Individuals with a BSW often provide case management services to help coordinate care for people with disabilities and health care needs. With the MSW degree, social workers are licensed to provide mental health therapy in agencies or in private practice, and often advance to be agency supervisors and administrators.