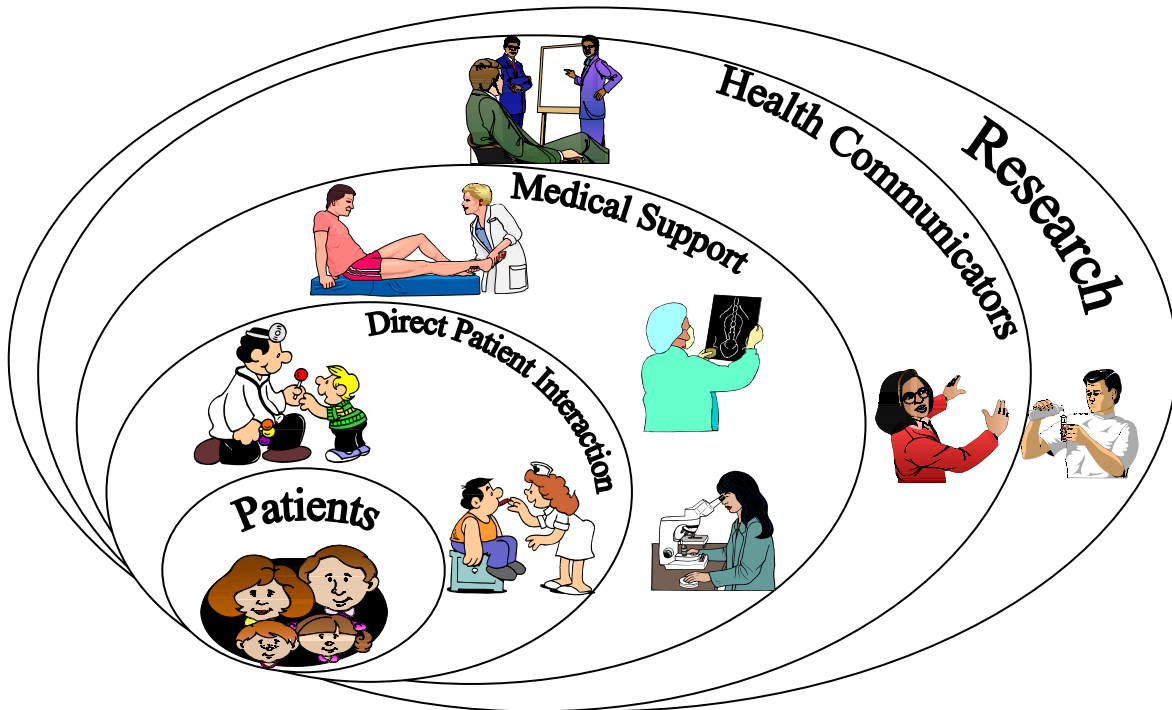


Examples of CAREERS in HEALTH SCIENCES and HEALTH CARE

NOTE:

Professional training for most of the health careers listed in this brochure requires graduate-level study that is NOT offered at the University of Arizona.



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Examples of CAREERS IN HEALTH SCIENCES AND HEALTH CARE

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Health Care Professions

Anesthesiologist Assistant	Occupational Therapist
Athletic Trainer	Ophthalmic Medical Technologist
Audiologist	Optometrist
Blood Bank Technologist	Orthoptist
Cardiovascular Technologist	Orthotist and Prosthetist
Cardiac or Pulmonary Rehabilitation Specialist	Pathologist's Assistant
Chiropractor	Perfusionist (cardiovascular)
Clinical Laboratory Scientist / Medical Technologist	Pharmacist
Cytotechnologist	Pharmaceutical Salesperson
Dentist	Physical Therapist
Dental Hygienist	Physician Assistant
Diagnostic Medical Sonographer	Podiatrist
Dietitian / Nutritionist	Radiologic Technologist
Doctor of Medicine (M.D.)	Radiation Therapist
Doctor of Osteopathy (D.O.)	Radiographer
Electroneurodiagnostic Technologist	Rehabilitation Counselor
Emergency Medical Technician / Paramedic	Respiratory Therapist
Exercise Physiologist - Clinical	Speech-Language Pathologist
Forensic Scientist	Surgical Technologist
Genetic Counselor	Therapeutic Recreation Specialist
Kinesiotherapist	Therapist –
Mental Health Counselor	Art Therapist
Nuclear Medicine Technologist	Dance Therapist
Nurse	Music Therapist
Nurse Practitioner	Veterinarian

Health Education, Information and Promotion

Epidemiologist / Infection Control Agent	Medical Informatics Specialist
Health Care Administrator	Medical / Health Science Writer
Health Educator / Health Promoter	Rural Health Educator
Health Information Administrator	School Health Educator
Medical Illustrator	Smoking Cessation Counselor

Graduate Study (Master's or Doctorate Degree) in Biological or Health Sciences

Biochemistry	Microbiology
Biomechanics, Biomedical Engineering	Molecular and Cellular Biology
Cell Biology and Anatomy	Motor Control, Motor Behavior
Endocrinology	Neurobiology/Neurophysiology
Exercise Physiology	Nutritional Sciences/Dietetics
Corporate Fitness/Wellness	Physiology/Physiological Sciences
Gerontology	Sports Physiology, Sports Medicine
Immunology	Veterinary Science

EXAMPLES OF CAREERS IN HEALTH SCIENCES & HEALTH CARE

CAREER	DESCRIPTION & EDUCATIONAL REQUIREMENTS	PROFESSIONAL ORG & URL
Anesthesiologist Assistant	Works as member of anesthesia care team, performing pre-operative tasks and administering supportive therapy during surgery. Also may work in pain clinics. Requires two years of study post-bachelors degree (= post-bac).	American Society of Anesthesiologists: (info about anesthesiologist assistants) http://www.asahq.org/career/aa.htm
Art Therapist	Therapists use art media, images, and the creative art process to help individuals access and express memories, trauma, and conflicts often not easily reached by verbal means. Requires master's degree and certification.	American Art Therapy Association: http://www.arttherapy.org/
Audiologist & Speech-Language Pathologist	<u>Audiologists</u> evaluate the extent of hearing loss, and assist with selection and fitting of a hearing aid. <u>Speech-language pathologists</u> evaluate and treat communication and swallowing problems. Professional certification by ASHA requires graduate study of at least 30 units.	American Speech-Language-Hearing Association: http://www.asha.org/
Blood Bank Technologist	These specialists perform routine and specialized tests in blood centers and hospitals to determine blood types and blood abnormalities, and to support physicians in transfusion therapies. Twelve month post-bac program (usually in medical technology) required for certification.	American Association of Blood Banks: http://www.aabb.org/Content/Professional_Development/Specialist_in_Blood_Bank_Technology/sbb.htm
Cardiovascular Technologist	Trained to perform various cardiovascular/peripheral vascular diagnostic and therapeutic procedures (invasive and non-invasive), such as echocardiography, electrocardiograms, and exercise stress tests. Requires a 2- to 4-year undergraduate program, including a year of specialized training..	Career description: http://stats.bls.gov/oco/ocos100.htm
Chiropractor	Health provider using non-drug, non-surgical means. Chiropractors postulate that spinal manipulation will correct disturbances of the nervous system caused by derangement of the musculoskeletal structure. A bachelor's degree is followed by a 4-year professional degree program plus licensure.	American College of Chiropractic Consultants: http://www.accc-chiro.com/links.htm
Clinical Laboratory Scientist / Medical Technologist	Performs complex analyses and tests and develops data on the blood, tissues, and fluids of the human body (often in conjunction with pathologists) by using a variety of precise methodologies and technologies. Requires 4- to 5-year undergraduate program, including 12-18 months of specialized training.	American Society for Clinical Laboratory Science: http://www.ascls.org
Cytotechnologist	Works with pathologist to detect changes in body cells that may be important in the early diagnosis of cancer and other diseases. The cytotechnologist prepares cellular samples for study under the microscope and assists in diagnosis of disease. Bachelor's or master's degree plus certification.	American Society for Cytotechnology: http://www.asct.com/
Dentist	Diagnoses and treats diseases of the hard and soft tissue of the mouth. Most dentists are in a general practice, while specialties include periodontics, orthodontics, oral and maxillofacial surgery. A 3-4 year post-bac professional degree program is required, plus more training for specialties.	American Dental Education Association: http://www.adea.org/
Dental Hygienist	Works with dentist to provide a range of patient services including taking and developing dental x-rays, removing calculus and plaque from teeth, counseling patients on oral hygiene and good nutrition, etc. University-based dental hygiene programs may offer bachelor's and master's degrees.	American Dental Hygienists' Association: http://www.adha.org/
Diagnostic Medical Sonographer	Provides patient services using medical ultrasound under the supervision of a physician. Includes performing appropriate procedures and recording anatomical, pathological, and/or physiological data for interpretation by a physician. Training is 1-4 years in length, depending on degree awarded.	Society of Diagnostic Medical Sonographers: http://www.sdms.org/
Dietitian/Nutritionist	Dietitians work in various settings (hospitals, clinics, nursing homes, HMOs, health agencies, schools, and government agencies) to educate and apply principles of proper nutrition, physiology, food management, and behavior. Requires 1-2 year post-bac program of supervised practice plus certification.	American Dietetic Association: http://www.eatright.org/
Doctor of Medicine (M.D.)	An allopathic physician performs medical examinations, diagnoses illnesses, and administers treatments. A physician may be a general practitioner or may specialize in one of at least 24 specialties. Requires a 4-year professional M.D. degree program plus 3-8 years of residency and/or fellowship training.	Career description: http://www.bls.gov/oco/ocos074.htm Assoc. of American Medical Colleges: http://www.aamc.org/
Doctor of Osteopathy (D.O.)	The major distinction between the D.O. and M.D. is that the D.O. receives specialized training in the treatment method of <i>manipulation</i> in addition to the core of medical training common to all physicians. Osteopathy emphasizes primary care. Requires 4-year D.O. program plus internships from 1-6 years.	American Association of Colleges of Osteopathic Medicine: http://www.aacom.org/
Electro-neurodiagnostic Technologist	Records and studies the electrical activity of the brain and nervous system. Uses recording electrodes and techniques of electroencephalography, evoked potential, and polysomnography to document clinical condition of patients. Requires 1-year accredited program (which may be part of a 4-year degree).	American Society of Electroneurodiagnostic Technologists: http://www.aset.org/
Emergency Medical Technician / Paramedic	Works under the direction of a physician (often through radio communication) to recognize, assess, and manage medical emergencies of acutely ill or injured patients in prehospital care settings. Training is offered at 4 progressive levels with EMT-4 (EMT-paramedic), the highest, requiring 2 years or 1000+ hours.	National Association of Emergency Medical Technicians http://www.nremt.org/ http://www.bls.gov/oco/ocos101.htm

CAREER	DESCRIPTION & EDUCATIONAL REQUIREMENTS	PROFESSIONAL ORG & URL
Epidemiologist	Investigates disease outbreaks, conducts research (based on statistics) on causes of disease and its progression, and develops prevention and intervention programs. Epidemiology is the science of diseases in human populations. Training requires completion of master's degree or doctorate.	Epidemiologist – included among “medical scientists” http://www.bls.gov/oco/ocos008.htm
Exercise Physiologist - Clinical	Works in the application of exercise and physical activity for those clinical and pathological situations where it has been shown to provide therapeutic or functional benefit. Performs exercise testing, prescription, and outcomes assessment. Requires master's degree, clinical experience, and certification.	American Society of Exercise Physiologists: http://www.asep.org/
Genetic Counselor	Provides medical and technical information to individuals and families about the occurrence, or risk of occurrence, of a genetic condition or birth defects. Genetic counselors are both scientists and counselors who work in medical centers and clinics. Most complete a 2-year master's degree program.	National Society of Genetic Counselors: http://www.nsgc.org (click on “Career”)/
Health Educator / Health Promoter	Focuses on the prevention of critical societal health problems by working as a school health educator, or an educator in community, governmental, clinical, worksite, or commercial health promotion settings. Undergraduate, masters, and doctoral degrees in these specializations provide training.	Assoc. of Schools of Public Health: http://www.sophe.org/ http://www.aahperd.org/aahe/template.cfm
Health Information Administrator	Interacts with all levels of the health organization—clinical, financial, administrative—that employ patient data in decision making and every day operations. Works with computer-based record systems and enterprise-wide information systems. Bachelor's degree + 1-year post-bac certificate program.	American Health Information Management Association: http://www.ahima.org/
Kinesiotherapist	Provides rehabilitation (therapeutic) exercise and education under the prescription of a licensed physician for persons with chronic disease or disability. Bachelor's degree with included (or additional) academic and clinical work to meet requirements for certification.	American Kinesiotherapy Association: http://www.akta.org/
Medical Illustrator	Creates visual material designed to facilitate the recording and dissemination of medical, biological and related knowledge. The medical illustrator must have a strong foundation in biological sciences. Complete a two-year accredited master's degree program.	Association of Medical Illustrators: http://medical-illustrators.org/
Medical Informatics	A rapidly developing scientific field dealing with the storage, retrieval, and optimal use of biomedical information, data, and knowledge for problem solving and decision support to health care professionals and biomedical scientists. Typically offered as a master's or doctoral program.	American Medical Informatics Association: http://www.amia.org/
Medical / Health Science Writer	Communicates new and research findings, and prepares technical reports, features, and documents on content related to health and medicine. Preparation includes undergraduate training in biological science and journalism combined with writing and editing experience via internships.	National Association of Science Writers: http://www.nasw.org/
Music Therapist	Therapists use music in various settings (hospitals, rehabilitation centers, nursing homes, mental health agencies, etc.) to develop therapeutic relationships that address physical, psychological, cognitive, and social needs of individuals. Bachelor's degree + internship, or master's degree.	American Music Therapy Association: http://www.musictherapy.org/
Nuclear Medicine Technologist	Uses knowledge of radiation physics and safety regulations to limit radiation exposure, administer radiopharmaceuticals, and perform diagnostic imaging procedures. One year professional curriculum as part of bachelor's degree or as an additional post-bac certification program.	Nuclear Medicine Technology Certification Board: http://www.nmtcb.org/ http://www.jrcnmt.org/
Nurse	A registered nurse (R.N.) cares for sick people and helps them stay well, emotionally as well as physically. With advanced education beyond the bachelor's degree, and with additional experience, levels of specialization and responsibility increase (i.e., Nurse Practitioner career).	American Nurses Association: http://www.nursingworld.org/ Nursing Colleges: http://www.aacn.nche.edu/
Occupational Therapist	Uses specialized physical activities and rehabilitative technology to help patients master skills necessary to perform daily tasks at home, at work, and in the community. Training typically requires a master's degree + certification. The clinical Doctor of Occupational Therapy degree is being developed.	American Occupational Therapy Association: http://www.aota.org
Optometrist	A doctor of optometry examines, diagnoses, treats, and manages diseases and disorders of the visual system, the eyes, and associated structures. Also, prescribes eyeglasses and contact lenses, and provides vision therapy. Requires a 4-year post-bac professional degree program.	American Optometric Association: http://www.aoanet.org/ Schools of Optometry: http://www.opted.org/info_faq.cfm
Orthoptist	Evaluates and treats disorders of vision, eye movements, and eye alignment in children and adults; performs diagnostic tests on patients with visual disorders; helps ophthalmologist design a treatment plan. Requires two years of full-time study following the bachelor's degree.	American Association of Certified Orthoptists: http://www.orthoptics.org/
Orthotist/Prosthetist	The <u>orthotist</u> designs and fits devices (i.e., braces, supports) to patients who have disabling conditions of the limbs and spine. The <u>prosthetist</u> designs and fits devices (i.e., artificial limbs) for patients who have partial or total absence of a limb. Requires post-bac certificate course of 1-2 years.	American Academy of Orthotists and Prosthetists: http://www.oandp.org/ http://www.oandp.com/

CAREER	DESCRIPTION & EDUCATIONAL REQUIREMENTS	PROFESSIONAL ORG & URL
Pathologists' Assistant	Works under direct supervision of a licensed and board-certified pathologist. Participates in surgery pathology and/or autopsy pathology by preparing tissue specimens, dissecting surgical specimens, and assisting in postmortem examination. Requires bachelors or master's degree with special curriculum.	American Association of Pathologists' Assistants: http://www.pathologistsassistants.org/
Perfusionist – (cardiac)	As a member of an open-heart, surgical team, is responsible for selection, set-up, and operation of the heart-lung machine that removes blood from the patient's body, oxygenates it, and returns it to the patient. Training occurs in some specialized bachelor's programs, or in 2-year master's programs.	American Academy of Cardiovascular Perfusion http://www.theaacp.com/
Pharmacist	Responsible for professional interpretation and review of prescription orders, medical record screening and review, accurate dispensing of medications, and providing advice on health and medications. The Pharm.D. curriculum requires 4 years following at least 2 years of college.	American Pharmacists Association: http://www.aphanet.org Amer. Assoc. of Colleges of Pharmacy: http://www.aacp.org
Physical Therapist	Provides services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients suffering from injuries or disease. Training requires 2-year master's program + certification or clinical Doctor of Physical Therapy degree.	American Physical Therapy Association: http://www.apta.org/
Physician Assistant	Works in physician's office, clinic, or hospital performing patient screening and histories, physical exams, giving electrocardiograms and blood transfusions, managing emergencies, casting and splinting. Requires specialized bachelor's degree program or 2-year master's program.	American Academy of Physician Assistants: http://www.aapa.org/
Podiatrist	A podiatric physician (D.P.M.) deals with the examination, diagnosis, treatment, and prevention of diseases and disorders affecting the feet and lower leg. Requires a 4-year professional degree program in a College of Podiatric Medicine, plus 1-2 years of residency training.	American Podiatric Medical Association: http://www.apma.org/
Radiation Therapist Radiographer	A <u>radiation therapist</u> delivers radiation to patients for therapeutic purposes (i.e., radiation for a cancer tumor). A <u>radiographer</u> uses imaging equipment to produce x ray films (radiographs) of parts of the human body for use in diagnosing medical problems. Requires a 2-4 year program.	American Society of Radiologic Technologists: https://www.asrt.org/asrt.htm
Rehabilitation Counselor	Assists people with physical, mental, or emotional disabilities to become or remain self-sufficient, productive citizens. Evaluates patient's potential for independent living and employment, and works with employers to modify job responsibilities. Most training is in 2-year master's programs.	National Rehabilitation Counseling Association: http://nrca-net.org/
Respiratory Therapist	Evaluates, treats, and cares for patients with breathing disorders; tests lung capacity and blood pH levels; and performs chest physiotherapy. Training requires a 2-year associate's degree or a 4-year bachelor's degree.	American Association for Respiratory Care: http://www.aarc.org/
Therapeutic Recreation Specialist	Provides treatment and recreation services to persons with illnesses or disabling conditions with the goals of improving function and independence and reducing effects of illness or disability. Training is incorporated in bachelor's or master's degree program, and includes supervised internship experience.	American Therapeutic Recreation Association: http://www.atra-tr.org/atra.htm

Health Professions Web Resources *(listed in order of career information quality and completeness)*

Occupational Outlook Handbook, 2008-09 Edition (Bureau of Labor Statistics) — <http://stats.bls.gov/oco/home.htm>

THIS IS THE BEST HEALTH CAREER SOURCE – Search in the “Professional and Related” occupation categories.

State-Based Health Career Exploration Sites: – <http://www.explorehealthcareers.org/en/Page.Links.CareerExploration.State.aspx>

Wisconsin Health Careers – http://www.wihealthcareers.org/career_occ_toc.cfm

Illinois Health Careers – http://www.ihec.org/content/health_careers/index.shtml

New York Career Zone **(includes video clips)** – <http://www.nycareerzone.org/index.jsp>

North Carolina Health Careers – <http://www.nchealthcareers.com/browse.asp>

Florida Health Careers – <http://flahec.org/hlthcareers/>

Center for Health Careers – <http://www.hcwp.org/Amerinet.aspx?tabid=151&NavId=72>

Georgia Health Careers – <http://www.sowega-ahec.org/2007CareerGuide/TableOfContents.htm>

AMA American Medical Association: Careers in Allied Health – <http://www.ama-assn.org/ama/pub/category/10481.html>

UCLA Career Center (careers listed at left border) – <http://career.ucla.edu/gradschool/health/>

Oregon Healthcare Careers (use “Career Selector” at top-right) – <http://www.oregonhealthcareers.net/>

Stanford, CA Health Careers – <http://smysp.stanford.edu/students/profiles/index.html>

Fun Facts about Health Careers – <http://www.gahec.org/aheckids/facts.htm>

Healthcare Career Information (alphabetical listing) – <http://library.thinkquest.org/15569/car1a.html>

AspiringDocs (American Association of Medical Colleges) – <http://www.aspiringdocs.org>

Tomorrow's Doctors (American Association of Medical Colleges) – <http://www.aamc.org/students/start.htm>

CAAHEP Health Occupational Profiles – <http://www.caahep.org/Content.aspx?ID=19>

Health Care Disciplines & Education (a Canadian “list of lists”) – <http://hsl.mcmaster.ca/tomflem/disciped.html>

University of Arizona Pre-Health Professions Office – <http://www.prehealth.arizona.edu/>