

# College of Health Related Professions

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Catalog  
2010-2011

University of Arkansas for Medical Sciences

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<sup>1</sup>Formerly Nuclear Medicine Technology

<sup>2</sup>Formerly Radiologic Technology

# GENERAL INFORMATION

## THE UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

### MISSION STATEMENT

**To Teach**—The University of Arkansas for Medical Sciences prepares excellent health care professionals and scientists who are committed to high ethical and professional standards, life-long learning, and skill advancement in health care for Arkansas, the nation, and the world

**To Heal**—The University of Arkansas for Medical Sciences provides comprehensive, nationally and internationally recognized, health care in many specialties and disciplines for Arkansas, the nation, and the world

**To Search**—The University of Arkansas for Medical Sciences conducts pioneering research that leads to new knowledge with application and integration into the health care disciplines, systems of care public policy, and economic progress for all people

**To Serve**—The University of Arkansas for Medical Sciences provides leadership and service in the health care disciplines and in public health policy for the benefit of the citizens and communities of Arkansas.

### ROLE AND SCOPE

The mission of the University of Arkansas for Medical Sciences is to provide excellent educational opportunities for students of the health care professions in a stimulating environment of basic and clinical research, integrated with the delivery of superb, comprehensive health care services.

The University of Arkansas for Medical Sciences (UAMS) is Arkansas' only institution of professional and graduate education devoted solely to the health and biological sciences. First founded as a School of Medicine in 1879, UAMS became a medical sciences campus in 1951 with the addition of the College of Pharmacy. The College of Nursing was established in 1953, and the University Hospital was built in 1956. The College of Health Related Professions was organized as a separate college within UAMS in 1971. The College of Public Health was established in 2001. The Graduate Program was organized as an extension of the Graduate School of the University of Arkansas at Fayetteville in 1943, and was approved for independent status by the Board of Trustees in 1995. The Area Health Education Centers (AHECs) Program was established in 1973. The Winthrop P. Rockefeller Cancer Institute was established in 1984. The Harvey and Bernice Jones Eye Institute (HBJEI) was established in 1993. The Donald W. Reynolds Center on Aging was established in 1996. Today, UAMS is one of eight campuses of the University of Arkansas. It has grown into an academic health sciences center that encompasses broad aspects of education, research, and service. The institution offers programs that improve the physical, economic, and intellectual well-being of the citizens of Arkansas.

In fulfilling its educational mission, the six academic units of UAMS—the Colleges of Medicine, Nursing, Pharmacy, Health Related Professions, and Public Health, and the Graduate School—as well as the UAMS Medical Center, the Area Health Education Centers, the Winthrop P. Rockefeller Cancer Institute, the Harvey and Bernice Jones Eye Institute, the Donald W. Reynolds Center on Aging, the Myeloma Institute for Research and Therapy, and the Jackson T. Stephens Spine & Neurosciences Institute—provide the environment and opportunities for students and practitioners alike to learn and maintain the knowledge and skills they need. These programs integrate the liberal arts with the biological, physical, and behavioral sciences, and emphasize life-long learning for practitioners in the health professions.

UAMS is the principal biomedical research center for the state of Arkansas. In its programs of research, UAMS seeks to stimulate and support scholarly inquiry for both faculty and students aimed at maintaining and preserving knowledge, and making discoveries that address the health needs of the state, nation, and world.

These research programs enhance the economic and educational progress of Arkansas through technology transfer and collaborative arrangements with other qualified individuals, groups, companies, and institutions. The research mission involves the quest for new information, the organization of known information in new ways, and the sharing of this information with the scientific community.

The service mission of UAMS is fulfilled by providing comprehensive health care services to meet both the educational needs of students and the special health care needs of the state. As the only academic medical center in Arkansas, the unique role of UAMS is to provide services requiring highly specialized personnel and technology. These services are delivered in an interdisciplinary environment to all Arkansans regardless of their ability to pay.

In addition, comprehensive services in health, wellness, and rehabilitation are offered in a statewide context. The service mission is enhanced by affiliations with Arkansas Children's Hospital (ACH), John L. McClellan Memorial Veterans Administration Medical Center, the Arkansas Rehabilitation Institute, the Central Arkansas Radiation Therapy Institute (CARTI), and the Arkansas State Hospital. Additional cooperative programs are offered with other hospitals and practitioners affiliated with the AHEC Programs. UAMS has a responsibility to provide health care services in a manner that ensures the long-range financial viability and continued quality of its programs, while providing the most cost-effective care for its patients.

The UAMS mission encompasses a responsibility to its alumni and other health care practitioners of Arkansas to help them continue to improve their professional knowledge and skills. All schools and departments offer life-long learning opportunities as appropriate to their missions.

The UAMS Library also serves as a resource for all health professionals by maintaining a portfolio of information services needed to support their information needs.

UAMS values its role of service to the general welfare of the state of Arkansas. This service includes action as a partner in science and health areas to all levels of the educational systems of the state. As the leader in health care, the institution provides educational programs, consultation, and technical advice to other institutions, agencies, and local communities for the purpose of improving and maintaining the health of citizens.

The role of UAMS in the economic life of the community is significant. A major element of the central Arkansas economy, the salaries of a highly educated work force contribute substantially to the regional economy.

UAMS fulfills its mission through coordinated action of the following units:

- ◆ College of Medicine
- ◆ College of Pharmacy
- ◆ College of Nursing
- ◆ College of Health Related Professions
- ◆ College of Public Health
- ◆ Graduate School
- ◆ Area Health Education Centers
- ◆ Donald W. Reynolds Center on Aging
- ◆ Harvey and Bernice Jones Eye Institute
- ◆ Jackson T. Stephens Spine & Neurosciences Institute
- ◆ Myeloma Institute for Research and Therapy
- ◆ Northwest Regional Campus
- ◆ Psychiatric Research Institute
- ◆ UAMS Medical Center
- ◆ Winthrop P. Rockefeller Cancer Institute

## **THE COLLEGE**

### **MISSION OF THE COLLEGE**

The College of Health Related Professions (CHRP) serves the state of Arkansas as the primary arm of the University of Arkansas in offering programs that provide education, service, and research in the allied health professions. The College was organized as a separate college within the University of Arkansas for Medical Sciences in 1971.

In fulfilling its mission, the College of Health Related Professions offers education and training opportunities for students of the allied health professions to prepare them as graduates to assume the roles of the professional. The College curricula coordinate the professional course work with the arts, humanities, and basic and social sciences into a total educational experience that emphasizes life-long learning in the allied health professions.

Patient and public health education is an important part of the mission of the College of Health Related Professions. In its public service role, programs in the College render patient care services as part of their educational efforts under the supervision of faculty. Technical advice and

consultative services are available from the College to institutions and agencies throughout the state. The professional service mission of the College includes the offering of continuing education courses to practitioners to enhance teaching, administration, and professional skills.

Research in the College of Health Related Professions involves the educational process as well as professional fields. The research mission involves the quest for new information which addresses the health and health care educational needs of the state, and the sharing of this information with the scientific community.

### **CHRP ROLE AND SCOPE**

The CHRP mission is achieved through the varied offerings of its departments. The College, the only one of its kind at an academic health science center in Arkansas, has as its main role the education of allied health professionals to serve in the health care delivery system in the state. The specific educational programs currently offered within the College of Health Related Professions are provided by ten academic departments. They include: Audiology and Speech Pathology; Dental Hygiene; Dietetics and Nutrition; Emergency Medical Sciences; Genetic Counseling; Health Information Management; Imaging and Radiation Sciences (Diagnostic Medical Sonography, Medical Dosimetry, Nuclear Medicine Imaging Sciences, Radiation Therapy, Radiologic Imaging Sciences); Laboratory Sciences (Cytotechnology, Medical Technology); Ophthalmic Technologies; and Respiratory and Surgical Technologies. Programs range from academic requirements of one semester to programs that require four or more years. Academic awards include the certificate and the associate, bachelor, master, and doctoral degrees. Nearly all the programs stipulate prerequisites for admission that must be completed at another (general undergraduate) institution.

Other roles of the College of Health Related Professions include public and professional service, and research. The College offers professional continuing education opportunities to enhance the abilities of practicing allied health professionals; serves as a resource center for allied health planning, education, and delivery systems in Arkansas, and develops applied research programs in allied health. All of these roles combine to support the overall mission of the College.

The University of Arkansas for Medical Sciences fully supports, both in spirit and practice, Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Executive Order 11246, the Rehabilitation Act of 1973 (Sections 503 and 504), Titles I and II of the Americans with Disabilities Act of 1990, and Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, which prohibit discrimination on the basis of race, sex, color, national origin, religion, age, marital status, ethnic origin, disability and/or disabled veterans and veterans of the Vietnam Era. Student complaints concerning any policy, procedure or practice prohibited by these Acts should be addressed to the Associate Dean for Academic and Student Affairs in the College of Health Related Professions Dean's Office (501-686-5732) for assistance in addressing such concerns. The UAMS Office of Human Relations, Room M1/112, is also available to assist with these concerns.

## DEPARTMENT LISTING

The following departments comprise the College:

- Audiology and Speech Pathology
- Dental Hygiene
- Dietetics and Nutrition
- Emergency Medical Sciences
- Genetic Counseling
- Health Information Management
- Imaging and Radiation Sciences
- Laboratory Sciences
- Ophthalmic Technologies
- Respiratory and Surgical Technologies

## CERTIFICATES AND DEGREES

These certificates and degrees are awarded by departments in the College:

### Certificates:

- Diagnostic Medical Sonography
- Emergency Medical Sciences
- Medical Dosimetry

### Associate of Science (A.S.) Degrees:

- Dental Hygiene
- Emergency Medical Sciences
- Health Information Management
- Medical Radiography
- Surgical Technology

### Bachelor of Science (B.S.) Degrees:

- Cardio-Respiratory Care
- Cytotechnology
- Dental Hygiene
- Diagnostic Medical Sonography
- Medical Dosimetry
- Medical Technology
- Nuclear Medicine Imaging Sciences
- Ophthalmic Medical Technology
- Radiation Therapy
- Radiologic Imaging Sciences

### Post-Bachelor's Certificate:

- Dietetic Internship (Joint UAMS—CAVHS)

### Master of Imaging Sciences (M.I.S.) Degree:

- Nuclear Medicine Advanced Associate
- Radiologist Assistant

### Master of Science (M.S.) Degrees:

- Clinical Nutrition
- Communicative Disorders (Speech-Language Pathology)
- Genetic Counseling

### Doctor of Audiology (Au.D.) Degree

### Doctor of Philosophy (Ph.D.) Degree:

- Communication Sciences and Disorders

## PROFESSIONAL ROLES

The following briefly describes the professional roles of the various health professionals.

### Audiology and Speech Pathology

Evaluation and therapeutic procedures for clients with auditory and speech-language disorders

### Cytotechnology

Microscopic interpretation of cancer and other diseases from cells obtained from various body sites

### Dental Hygiene

Dental health procedures and education concerned with the treatment and prevention of dental disease

### Diagnostic Medical Sonography

Use of high frequency sound waves for diagnosis of disease

### Dietetics and Nutrition

Assessment, management, and counseling concerning nutritional care in hospital, business, and community settings

### Emergency Medical Sciences

Assessment, evaluation, and treatment of acutely ill and injured patients in the prehospital setting

### Genetic Counseling

Counseling of individuals who have disorders which may have a genetic basis, such as cancer, mental illness, and birth defects

### Health Information Management

Compilation, coding, analysis, and preparation of health information for members of the health care team and patients

### Medical Dosimetry

Design radiation treatment plans for cancer patients

### Medical Technology

Definitive analyses of blood, spinal, and other body fluids which provide data essential to diagnosis and treatment

### Nuclear Medicine Advanced Associate

Assisting nuclear medicine physicians in the performance of advanced imaging procedures

### Nuclear Medicine Imaging Sciences

Use of radionuclides in conjunction with various imaging modalities for the diagnosis of disease

### **Ophthalmic Medical Technology**

Assisting Ophthalmologists in assessment and care of patients with eye disorders

### **Radiation Therapy**

Treatment of patients with cancer using radiation

### **Radiologic Imaging Sciences**

Employment of various imaging radiographic (x-ray) modalities for the diagnosis and treatment of disease

### **Radiologist Assistant**

Assisting Radiologists in the performance of complex imaging procedures

### **Respiratory Care**

Treatment, evaluation, and management of patients with cardiopulmonary deficiencies and abnormalities

### **Surgical Technology**

Technical procedures in settings requiring aseptic techniques and the use of surgical equipment and instrumentation

## **PRIMARY AFFILIATIONS**

A unique partnership in health manpower training exists between the College; the Department of Veterans Affairs, Central Arkansas Veterans Healthcare System; and the University of Arkansas at Little Rock. Each institution strives to coordinate and complement the resources necessary for the student's total education.

## **CLINICAL SITES**

The following is a list of the major clinical sites.

### **Arkansas Children's Hospital**

Children's Hospital, located at 804 Wolfe Street in Little Rock, is Arkansas' only pediatric hospital providing medical care for children from each of the state's 75 counties.

### **Baptist Health**

Baptist Health is a non-profit, private, general hospital located at 9600 Interstate 630 with a second facility located in North Little Rock.

### **Central Arkansas Radiation Therapy Institute, Inc.**

CARTI is a community facility operated by a non-profit organization. CARTI's primary purpose is to provide the most sophisticated and technically modern radiation therapy to cancer patients in Arkansas.

### **St. Vincent Infirmiry Medical Center**

St. Vincent Infirmiry Medical Center is a general hospital located at Markham and University Streets.

### **UAMS Medical Center--University Hospital**

University Hospital of Arkansas, located at 4301 West Markham, serves as the principal clinic for several programs in the College. This hospital is primarily a teaching and referral hospital.

## **Department of Veterans Affairs, Central Arkansas Veterans Healthcare System**

The Department of Veterans Affairs, Central Arkansas Veterans Healthcare System (CAVHS) plays a vital role as a major affiliate and in provision of financial support to the CHRP programs. Full-time instructors, classrooms, laboratories, offices and equipment are provided. Professional and administrative resources are shared. CAVHS full-time staff are given faculty appointments with the UAMS. The CAVHS is a jointly accredited sponsor of the Dietetic Internship Program. The Education Office of the CAVHS, headed by the Associate Chief of Staff for Education who serves his role with UAMS as Associate Dean of the CHRP for VA Affairs, plays an important role in the planning, administration, and supervision of the programs.

Additional sites in Arkansas for various programs in the College are:

314th Medical Group, Little Rock Air Force Base  
Access Medical Sales and Service  
Advance Care Hospital  
Aesthetic Plastic Surgery, LLC  
Alliance Homecare Equipment  
Arkansas Cardiology Clinic  
Arkansas Central Cancer Registry  
Arkansas Culinary School, Inc.  
Arkansas Department of Education, Child Nutrition Program  
Arkansas Department of Health and Human Services  
Arkansas Eye Center  
Arkansas Foundation of Medical Care  
Arkansas Health Center  
Arkansas Health Education Center-Southwest  
Arkansas Heart Hospital  
Arkansas Hospice  
Arkansas Methodist Medical Center  
Arkansas Nephrology Services, TLD  
Arkansas Pathology Associates  
Arkansas Regional Organ Recovery Agency  
Arkansas Renal Systems  
Arkansas Reproductive Health Monitoring System  
Arkansas Specialty Orthopedics  
Arkansas State Hospital  
Arkansas State University, Mountain Home  
Arkansas Surgical Hospital  
Arkansas Urology Associates  
Baptist Health Medical Center-Heber Springs  
Baxter Regional Medical Center  
Bell Winston Clinic  
Benny J. Green, M.D., P.A.  
Benton Fire Department  
Benton School District  
Bradley County Medical Center  
Bridgeway Hospital, The  
Cabot Public Schools  
Cardinal Health Nuclear Pharmacy Services-Jonesboro  
Cardinal Health Nuclear Pharmacy Services-Little Rock  
Cardinal Health Nuclear Pharmacy Services-Springdale  
Care Group, LLC, The  
CAREfully Catered  
Central Arkansas Cardiovascular Institute

Children International  
Children's Clinic, The  
Christus Family Clinic  
Clopton Clinic  
Conway Public Schools  
Conway Regional Health & Fitness Center  
Conway Regional Medical Center  
Cooper Clinic, PA, Ft. Smith  
DaySpring of Arkansas  
DeQueen Regional Medical Center  
DeWitt Hospital and Nursing Home  
Doctors Anatomic Pathology Services  
Drew Memorial Hospital  
Fresenius Medical Care  
Genesis Center for Women  
Good Samaritan Healthcare Center  
Gran Villas Residential Care Facility  
Harmony Health Clinic  
Health Park Hospital  
Healthsouth Rehabilitation Hospital of Texarkana  
Heart Clinic Arkansas  
Helena Regional Medical Center  
Highland Oncology Group  
Hot Springs County Medical Center  
Jacksonville Fire Department  
Jefferson Regional Medical Center  
John Ed Chambers Regional Center  
Johnson Regional Medical Center  
Kilgore Vision Center, Inc.  
Laboratory Corporation of America  
Lawrence Memorial Health Services  
Lee, Mimi, M.D., P.A.  
LifeNet  
Little River Memorial Hospital  
Little Rock Cardiology Clinic  
Little Rock Children's Clinic, PA  
Little Rock Community Mental Health Center, Inc.  
Little Rock Eye Clinic  
Little Rock Surgery Center  
Magie Mabrey Eye Clinic, PA  
Magnolia City Hospital  
Medical Center of South Arkansas  
Medical Park Hospital  
Medical Services of Northwest Arkansas  
Mena Medical Center  
Mercy Health Clinic  
Mercy Health System  
Mercy Health System of Northwest Arkansas  
Mercy Medical Center  
Methodist Behavioral Hospital  
Metropolitan Emergency Medical Sciences  
Mid-South Health Systems  
Midwest Dairy Council-Arkansas and Eastern Oklahoma  
Millennium Rehab of Arkansas  
Monfee Medical Center  
Mountain Home Christian Clinic  
National Park Medical Center  
North Arkansas Regional Medical Center

North Little Rock School District  
North Metro Medical Center  
North River Surgery Center  
Northridge Healthcare & Rehabilitation Center  
NorthStar EMS  
Northwest Arkansas Heart and Vascular Center  
Northwest Arkansas Hospitals - Northwest Medical Center  
Northwest Arkansas Radiation Therapy Institute  
Ortho Arkansas, PA  
Ouachita Valley Health System  
Ozark Orthopedic and Sports Medicine Clinic, LTD  
Phillip Suffridge, M.D.  
Phyllis Howe, RHIT  
Piggott Community Hospital  
Pinnacle Point Hospital  
Pleasant Valley Ophthalmology  
Radiology Associates, P.A.  
Randolph County Medical Center  
Renal Center of Mountain Home  
Retina Associates, PA  
Saint Mary's Regional Medical Center  
Saline Memorial Hospital  
Searcy Special School District  
Select Medical Corporation  
Select Specialty Hospital of LR/BMC  
Select Specialty Hospital of LR/SVI  
SemperCare Hospital of Pine Bluff  
Siloam Springs Memorial Hospital  
Sparks Regional Medical Center  
St. Anthony's Medical Center  
St. Bernards Regional Medical Center  
St. Edward Mercy Medical Center  
St. Joseph's Mercy Health Center  
St. Mary's Hospital  
St. Vincent Rehabilitation Hospital  
Stuttgart Regional Medical Center  
Surgical Hospital of Jonesboro  
Surgical Pavilion  
SYSCO of Arkansas  
Texarkana Cardiology Associates  
United Medical Infusion Pharmacy  
University of Arkansas Cooperative Extension Service  
US Food Service  
Veteran's Health Care Center of the Ozarks  
Vista Health, Forth Smith  
Washington Regional Medical Center  
Webber Family Practice  
White County Medical Center  
White River Health System

Additional sites in other states for various programs in the College are:

Adventist Health System/Sunbelt, Inc.  
Atlanta Memorial Hospital  
Baton Rouge General Medical Center  
Baylor Regional Medical Center  
Cape Radiology Group, Inc.  
Cardinal Health Nuclear Pharmacy Services-Baton Rouge

Cardinal Health Nuclear Pharmacy Services-Springfield  
 Cardinal Health Nuclear Pharmacy Services-Tulsa  
 Cardiology Consultants of Texas, LLP  
 Charlie Norwood VA Medical Center  
 Children's Hospital Boston  
 Children's Medical Center, Dallas  
 Children's Mercy Hospital  
 Christus Schumpert Health System  
 Christus St. Michael Health System  
 Christus St. Michael Rehabilitation Hospital  
 Clarian Health Partners  
 Cleveland Clinic  
 Collum-Carney Clinic  
 Coastal Bend Family Medicine  
 Commonwealth Health Corporation  
 Cooper Clinic, Dallas  
 Cox Health Systems  
 Crossroads Community College  
 Dubuis Hospital, The  
 Duke University Health Systems, Inc.  
 East Georgia Regional Medical Center  
 East Texas Medical Center  
 Fairfield Memorial Hospital  
 Florida Radiology Associates, PA  
 Freeman Hospital  
 Glenwood Regional Medical Center  
 HCA North Texas Division Hospitals  
 Innovis Health, LLC  
 Kelton Home Health Care  
 LifeNet, Inc., Texarkana  
 Louisiana State University Health Sciences Center  
 Maimonides Medical Center  
 Mallinckrodt Radiopharmacy  
 Marquette General Hospital  
 Major Hospital  
 Medical Center of Lewisville  
 Medical University Hospital Authority  
 Medical University of South Carolina  
 Memphis Heart Hospital  
 Methodist Healthcare Memphis Hospital  
 Methodist Hospital  
 Mount Carmel Regional Medical Center  
 Nemours Children's Clinic  
 North Louisiana Orthopaedic & Sports Medicine Clinic  
 North Oaks Medical Center  
 Northern Louisiana Medical Center  
 Northside Hospital  
 NuTech, Inc.  
 OSF Saint Francis Medical Center  
 Ottawa Regional Hospital and Healthcare Center  
 Our Lady of Lourdes Memorial Hospital, Inc.  
 Our Lady of the Lake Regional Medical Center  
 Parma Community General Hospital  
 P.E.T. Imaging Center, Biomedical Research Foundation  
 PET-Net Pharmaceuticals, Inc.  
 Phelps County Regional Medical Center  
 Popular Bluff Regional Medical Center, Inc.  
 Presbyterian Hospitals of Dallas

Red River Pharmacy Services  
 Research Medical Hospital  
 Robert Wood Johnson University Hospital Hamilton  
 Saint Francis Hospital, Inc.  
 Saint Vincent Health Center  
 Sanford Health  
 Skaggs Regional Medical Center  
 SKY Rehabilitation Hospital  
 South Texas Health System  
 Southeastern Cardiovascular Consultants  
 St. Clare's Health System  
 St. Francis Hospital  
 St. John Health System  
 St. John's Clinics  
 St. John's Regional Health Center  
 St. Joseph's Candler Health System  
 St. Mary's Duluth Clinic Health System  
 St. Luke's Episcopal-Presbyterian Hospitals  
 Stormont-Vail Healthcare  
 Texarkana PET Imaging Institute, LP  
 Titus Regional Medical Center  
 Trinity Mother Frances Regional Healthcare System  
 Twin Rivers Regional Medical Center  
 Tyler Cardiovascular Consultants  
 University of Nebraska Medical Center  
 University of Texas Health Center at Tyler  
 University of Texas Southwestern Medical Center  
 Veterans Affairs Medical Center-Dallas  
 Veterans Affairs Medical Center-Fayetteville  
 Veterans Affairs Medical Center-Shreveport  
 Wabash General Hospital  
 Wadley Regional Medical Center - BRIM  
 William Beaumont Hospital  
 Willis Knighton Health System  
 Wilson N. Jones Medical Center

## THE CAMPUS AND FACILITIES

The University of Arkansas for Medical Sciences campus is located in western Little Rock near War Memorial Park. The new UAMS Medical Center is the focal point of the campus. East of the Medical Center are the Outpatient Center, the Harvey and Bernice Jones Eye Institute, the Jackson Stephens Spine and Neurosciences Institute, and the Winthrop P. Rockefeller Cancer Institute. The Barton Institute for Medical Research and the Biomedical Research Center are northeast of the Medical Center and the John L. McClellan Memorial Veterans Hospital and the Donald W. Reynolds Aging Institute are south.

The Shorey, Education II, and College of Public Health Buildings are located to the north, with the Wilson Education Building, Residence Hall, and newly remodeled facilities for the College of Health Related Professions in the northwest part of the campus. Area Health Education Centers (AHECs) are located at Fort Smith, Fayetteville, Jonesboro, Pine Bluff, El Dorado, Texarkana, Helena, and Batesville-Mountain Home.



## **ACCREDITATION**

The University of Arkansas for Medical Sciences is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools and the departments are accredited as appropriate by their national and state agencies.

## **EQUAL OPPORTUNITY**

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration. Students who have concerns should contact Dr. Diane Skinner, the CHRP Associate Dean for Academic and Student Affairs.

# ADMISSION/ACADEMIC INFORMATION

## ADMISSION TO THE COLLEGE

**Individuals who have not decided upon a specific health career may obtain counseling through the Dean's Office. Telephone (501) 686-5730 for an appointment.**

Admission to all programs is by formal application only and is selective, as enrollment for each program is limited. **Early consideration** will be given to those who have completed the application process by the published **early consideration** deadline. Completing the application process includes submission of the application form and fee, all official transcripts to date, all references, and any other materials required by the department to which application is being made. Departmental admissions committees establish pre-determined criteria for selection from this early consideration group and admit no more than a specified percentage of the total class capacity from early applicants who meet these criteria. The specified percentage, early consideration deadline, and application deadline follow in the table entitled, "2011–2012 Admission Deadlines."

Applicants not selected at the time of early consideration (first round), but who meet or exceed the College's and the respective department's minimum criteria (published by department), and complete the application process will be so notified and continue to be considered for the remaining positions along with all other individuals who have submitted complete applications by the published application deadline (second round). If the class is filled by second round applicants, but vacancies subsequently develop before the start of the first semester's classes (e.g., due to withdrawal of previously accepted students), third round applicants (those who applied after the published deadline) will be combined with any second round applicants who may be on the waiting list and that entire list will be ranked. Programs may consider applicants from that combined list who will be offered admission in rank order until the class is filled. See individual department descriptions to determine to which programs the third application round applies. Applications and its accompanying fee received by the published application deadline will be assured consideration in the second round.

Students of potential merit as future health professionals are accepted into the College of Health Related Professions without regard to race, sex, color, religion, age, marital status, or ethnic origin. Otherwise qualified individuals with disabilities receive equal consideration.

In admissions reviews, first consideration is given to Arkansas residents. In recognition of the significant support of CHRP programs by private and federal health care facilities, however, highly qualified applicants who are residents of another state or citizens of a foreign country may successfully compete for admission.

Prior to their first semester's registration, all individuals admitted must submit proof of a physical examination using the UAMS Physical Examination Form. This examination is used by the Student and Employee Health Service to verify required immunizations and to establish a baseline for treating illnesses occurring after admission.

Students are strongly encouraged to get the Hepatitis B vaccine. If the student does not wish to take the vaccine, he/she must sign a waiver accepting responsibility for that decision. The waiver must be completed and turned in at registration. The waiver must be signed by the student.

Applicants who are not United States citizens or permanent resident aliens or for whom English is not their native language must take the Test of English as a Foreign Language (TOEFL). A student may petition for waiver of the TOEFL requirement if he/she has completed all primary, secondary, and higher education in the United States or one of its English-speaking protectorates. The TOEFL requirement is waived for applicants to the graduate programs in CHRP who meet all of the following criteria: a) received a bachelor's or master's degree from a regionally accredited U.S. institution with the course work completed in the U.S., b) currently certified in the U.S. to practice in the related discipline in which graduate work will be completed, and c) practiced in this discipline in the U.S. for at least two (2) years.

A total score of at least 570 on the TOEFL or the equivalent score of 230 on the computer version, or 88 on the Internet-based version, with no less than 55 on the paper version or 20 on the computer version or 18 on the Internet-based version in each of the three subtest scores (listening, structure/writing, and reading) that comprise the total score must be earned for the applicant to be eligible for consideration for admission. An official report of these scores must be received by the College of Health Related Professions prior to the date(s) on which admission decisions are made for the program(s) to which the applicant has applied. To obtain the Bulletin of Information to register to take the TOEFL, write directly to: **The Education Testing Service, PO Box 6151, Princeton, New Jersey 08541-6151.** The applicant should indicate on his/her application for the examination that results should be sent to institution code number #R6901-3.

## 2011-2012 APPLICATION DEADLINES

Program	Maximum % To Be Selected Early	Early Consideration Deadline	Application Deadline*
<b>Audiology (Au.D.)</b>	Not Applicable	Contact Department	February 1, 2011
<b>Clinical Nutrition (M.S. Clinical Nutrition)</b>	Not Applicable	Not Applicable	Contact Graduate Office
<b>Communication Sciences and Disorders (Ph.D.)</b>	Not Applicable	Not Applicable	Contact Department
<b>Cytotechnology</b>	Variable	Variable	May 15, 2011
<b>Dental Hygiene</b>	Not Applicable	Not Applicable	March 1, 2011
<b>Diagnostic Medical Sonography</b>	Not Applicable	Not Applicable	March 1, 2011
<b>Dietetic Internship</b>	Not Applicable	Not Applicable	February 14, 2011
<b>EMS-EMT (Fall, Spring, and Summer Semesters)</b>	Variable	Not Applicable	Contact Department
<b>EMS-Paramedic (Fall Entry)</b>	Variable	March 31, 2011	June 15, 2011
<b>EMS-Paramedic (Spring Entry and Fast Track)</b>	Variable	October 1, 2011	December 1, 2011
<b>Genetic Counseling</b>	Not Applicable	Not Applicable	February 15, 2011
<b>Health Information Management</b>	Not Applicable	Not Applicable	July 1 for fall admission December 1 for spring admission
<b>Medical Dosimetry</b>	Not Applicable	Not Applicable	April 1, 2011
<b>Medical Technology</b>	Variable	March 1, 2011	May 15, 2011
<b>Nuclear Medicine Advanced Associate</b>	Not Applicable	Not Applicable	Contact Department
<b>Nuclear Medicine Imaging Sciences</b>	Not Applicable	Not Applicable	March 1, 2011
<b>Ophthalmic Medical Technology</b>	Variable	April 15, 2011	May 15, 2011
<b>Radiation Therapy</b>	Variable	Not Applicable	March 1, 2011
<b>Radiologic Imaging Sciences</b>	80%	January 31, 2011	March 1, 2011
<b>Radiologist Assistant</b>	Not Applicable	Not Applicable	Contact Department
<b>Respiratory Care</b> Therapist-B.S., Little Rock, Texarkana, and Batesville	Variable	Variable	May 15, 2011
<b>Speech-Language Pathology (M.S.-Communication Disorders)</b>	Variable	Contact Department	February 15, 2011
<b>Surgical Technology</b>	Variable	Variable	May 15, 2011

\*Applications must be post-marked no later than the application deadline.

## HIGH SCHOOL GRADUATE/GED APPLICANTS

**Minimum Criteria:** Individuals who have completed no college/university course work and are applying to programs with no prerequisite (transfer credit) requirements must meet the following minimum criteria:

1. A 2.0 Cumulative Grade Point Average (CGPA) based on all high school course work.
2. The applicant must be a high school graduate who has completed a minimum of 15 high school units including at least three (3) units of English, one (1) unit of mathematics, and two (2) additional units of mathematics and/or science.
3. Satisfactory scores on the General Education Development Test (GED) may be substituted for the above criteria. (The GED is administered through various armed forces and state agencies).
4. Conditional Admission: Students seeking A.S. and/or B.S. degrees who do not complete the core high school requirements, graduate with a GED, graduates from out-of-state or private schools, and graduates after 1999 may be admitted conditionally to the CHRP programs. For the most current information, contact the CHRP Office of Student Affairs.

### Application Procedures:

1. Obtain an Application for Admission Form from the Office of Student Affairs. Telephone (501) 686-5730, or go to the College Webpage (see: [www.uams.edu/chrp](http://www.uams.edu/chrp)).
2. Return the completed application, with a non-refundable application fee of \$20.00 to the address listed on the form.
3. Arrange for each high school attended to forward an official transcript to the Office of Student Affairs.
4. Consult the Program Information section in this catalog for further specific requirements of the department to which applying. Applicants who are not United States citizens or for whom English is not their native language must also consult the Foreign Applicants section for additional requirements.

## TRANSFER APPLICANTS

**Minimum Criteria:** The following apply to applicants who have completed academic credits at other colleges or universities:

1. A 2.0 (on a 4.0 scale) Cumulative Grade Point Average (CGPA) based on all college and university course work (excluding remedial courses) completed at regionally accredited institutions.\*

2. Only courses in which a grade of C (2.0 on a 4.0 scale) or higher was earned are accepted in transfer to meet prerequisite and/or graduation requirements.
3. The CHRP college transcript will list prerequisite courses accepted in transfer (consult the Evaluation of Transcripts for Transfer section) and all professional and concurrent courses completed while enrolled in the CHRP.
4. Transfer credit is granted only for course work completed at a regionally accredited institution of higher education. Departments reserve the right to disallow credit for course work completed more than seven (7) years before the date of anticipated entry into their program(s).

\*Some programs may require a CGPA greater than 2.0 for consideration. Contact the department for specific program requirements.

### Application Procedures:

1. Obtain an Application for Admission Form from the Office of Student Affairs. Telephone (501) 686-5730, or go to the College Web site at [www.uams.edu/chrp](http://www.uams.edu/chrp) to download a paper form or use the online application.
2. Return the completed application, with a non-refundable application fee of \$20.00 to the address listed on the form.
3. Arrange for each college and university attended to forward an official transcript to the Office of Student Affairs. **Transcripts mailed or hand-delivered by students are not acceptable.**
4. Consult the Program Information section in this catalog for further specific requirements of the department to which applying. Applicants who are not United States citizens or for whom English is not their native language must also consult the Foreign Applicants section for additional information.

## ACADEMIC FORGIVENESS POLICY

Applicants to undergraduate programs in the College of Health Related Professions (CHRP) may request consideration under the Academic Forgiveness Policy. This policy does not apply to currently enrolled students in the CHRP or to admission to a CHRP graduate program.

Under the Academic Forgiveness Policy, applicants to undergraduate programs may request that all academic credits, as well as the grades assigned to them, that they earned more than seven (7) years before the anticipated date of registering for classes in the CHRP program to which they have applied shall not be considered by the CHRP in determining 1) their acceptance to that program or 2) the prerequisites, electives, or professional courses they have completed. If the request is granted, all courses taken at all colleges and/or universities that are more than

seven (7) years old by this date will be removed from consideration irrespective of the grades earned. That is, the Academic Forgiveness Policy may not be applied to selected courses in a given term or terms or to only those with certain grades. Thus, none of the courses excluded by granting such a request may be counted toward completion of any prerequisites, electives, or professional courses.

If the request for academic forgiveness is granted, only academic work completed less than seven (7) years prior to the date of registration in the intended program will be used in calculating the applicant's grade point average (GPA) and determining transfer credit for admissions. This will be so noted on the CHRP academic transcript if the applicant is admitted. Academic forgiveness may be granted only once to any student. Academic forgiveness is not to be confused with the prerogative each CHRP department has to selectively decline to accept for transfer credit any course or courses taken more than seven (7) years before the intended date of registration on the grounds that the knowledge in the discipline(s) in question, and thus the content of the course(s) as currently taught, has changed so extensively in the interim that it(they) no longer will fulfill the prerequisite or other transfer requirement for the given CHRP program.

To review the entire Academic Forgiveness Policy, see <http://www.uams.edu/chrp/about/AcademicForgiveness.pdf> or request a copy from the Admissions Officer, College of Health Related Professions, University of Arkansas for Medical Sciences, 4301 West Markham Street, #619, Little Rock, AR 72205, (501) 686-5730.

## NONDEGREE/NONCERTIFICATE STUDENTS

**Minimum Criteria:** Department chairmen (with approval of the Dean or his designee) may elect to admit nondegree/noncertificate students to selected courses in their department on a space available basis. The Dean may elect to admit nondegree/noncertificate students to CHRP interdisciplinary courses. Nondegree/noncertificate students are students who register for one or more courses, but who do not want to pursue a formal credential or follow the entire curriculum of a professional program in the College.

1. Applicants who are accepted as nondegree/noncertificate students may enroll in no more than one course each semester and may not accumulate more than 10 semester credits in a given program while in this status. Nondegree/noncertificate students may earn some or all of those 10 semester credits by successful performance on challenge examinations, recognizing that not more than 25% of a program's total professional credit hours may be taken by examination. Each department reserves the right to determine which, if any, of its professional courses may be challenged by examination. There is no limit to the number of approved courses that may be challenged by examination in a given semester,

provided the "10 SC/25% of the total" rule is observed. Nondegree/noncertificate students challenging a course or courses by examination in a given semester may also be enrolled in not more than one course during that semester.

2. There is no assurance that courses completed by a nondegree/noncertificate student will be transferred toward degree or certificate program requirements should the student later be admitted as a candidate for a degree or certificate, nor does completion of courses by nondegree/noncertificate students in any way obligate the College to admit those students to a particular professional program.
3. While a nondegree/noncertificate student may, at the discretion of the department chairman, be excused from program prerequisite requirements, the student must otherwise complete all course prerequisites prior to enrollment in the given course.
4. Admission to nondegree/noncertificate status will be based on the applicant's objective, the appropriateness of the course sought to meet the objective, the applicant's academic qualifications, and the space available, if any, in the course in question.

### Application Procedures:

1. Obtain an Application for Admission Form from the Office of Student Affairs. Telephone (501) 686-5730, or go to the College Webpage. [www.uams.edu/chrp](http://www.uams.edu/chrp)
2. Return the completed application, with a non-refundable application fee to the address listed on the form.
3. If requested by the chairman of the department, arrange for all colleges and universities attended to forward an official transcript to the Office of Student Affairs. If no college/university level course work has been completed, arrange for each high school attended to forward an official transcript to the Office of Student Affairs.
4. Forward to the Office of Student Affairs a letter outlining the course(s) sought and the objective to be achieved through completion of the course(s).
5. Forward to the Office of Student Affairs a signed statement that indicates the applicant has read, understands, and agrees to the requirements governing nondegree/noncertificate applicants. A standard form is available from the Office of Student Affairs for this purpose.

## HIGH SCHOOL SENIORS

**Minimum Criteria:** The College of Health Related Professions welcomes qualified high school seniors to enroll on a space-available basis in specified courses as nondegree/noncertificate students (see criteria and procedures in the preceding section). The following conditions apply:

1. Each student must be recommended by the principal of the high school in which the student is enrolled.
2. The student must document that his/her score on the portion of the ACT, PSAT, or SAT in the subject matter area of the course(s) is at the 80th percentile or higher based on national norms. If the subject matter area is not related to a portion of one of these tests, a composite score no less than the 80th percentile will be required. Scores may be documented on an official high school transcript or sent directly from the testing agency.
3. The student must document (via an official high school transcript) a grade point average (GPA) of at least 3.5 (on a 4.0 scale) in high school courses in the relevant subject matter or a cumulative grade point average (CGPA) of at least 3.5.
4. Exceptions to any part of the above policy are considered on an individual basis.

## APPLICANTS FOR A CHRP BACCALAUREATE DEGREE WHO ALREADY HOLD A CHRP ASSOCIATE DEGREE OR CERTIFICATE IN THE SAME DISCIPLINE

**Minimum Criteria:** The following conditions apply to applicants who have completed a certificate or an associate's degree in a CHRP discipline and want to complete the next highest award (*i.e.*, the associate's or the baccalaureate degree) in the same discipline.

1. If a degree plan for the next highest award was filed while the student was enrolled in the initial program, the student must complete the remaining requirements within the time limits specified in the degree plan, forward official transcripts which verify the completion of all requirements, file an application for graduation, and pay the graduation fee. The application and fee for graduation must be received by the College Registrar at least 30 days prior to the end of the semester in which the student wants to graduate. If the student wants to participate in the annual UAMS Commencement, the application and fee for graduation must be received by the Registrar no later than January 31 of the year in which the commencement exercises are to occur.

2. If a degree plan was not filed, or if one was filed, but requirements were not completed within the specified time limits, the former CHRP student must apply for admission to the program which offers the next highest degree award. Upon acceptance, the student must complete a degree plan in accordance with the degree requirements stated in the catalog in force at the time of the most recent admission. To ensure that these students will have knowledge and skills comparable to those with whom they graduate, the admitting department evaluates each applicant's level of knowledge and clinical competence. In addition to catalog requirements, current standards for the profession will be used to determine if any general education, science, or professional courses are necessary. The degree plan will include these additional requirements. Upon completion of all requirements specified in the degree plan, the student must arrange for official transcripts, file an application for graduation, and pay the graduation fee. The application and fee for graduation must be received by the College registrar at least 30 days prior to the end of the semester in which the student wants to graduate. If the student wants to participate in the annual UAMS Commencement, the application and fee for graduation must be received by the Registrar no later than January 31 of the year in which the commencement exercises are to occur.

## INTERNATIONAL APPLICANTS

**Minimum Criteria:** As nearly **all undergraduate applicants** who complete the application process must be interviewed as part of the selection process, the College of Health Related Professions encourages prospective international students residing outside the United States to apply first for admission to a general college or university in this country, complete any science and/or general education prerequisite requirements that they lack, then apply for admission to the College of Health Related Professions. International students who meet the other requirements and who **present themselves for an interview, if invited**, will be considered for admission.

All applicants who are not United States citizens or permanent resident aliens or for whom English is not their native language must meet the following admission requirements in addition to those stated in the Program Information section of the College's catalog.

1. If an applicant is basing his/her eligibility on credits from an international university, the official transcript or copy must first be evaluated by the **Education Credential Evaluators, Inc., P.O. Box 514070, Milwaukee, WI, 53203-3470 or World Education Services, P.O. Box 5087, Bowling Green Station, New York, NY, 10274-5087**. An official copy of the evaluation from either the Education Credential Service or World Education

Services must be forwarded directly to the College of Health Related Professions, Office of Student Affairs. A fee list and application forms for this service may be obtained from the agencies.

2. A total score of at least 570 on the Test of English as a Foreign Language (TOEFL) or the equivalent score of 230 on the computer version, or 88 on the Internet-based version, with no less than 55 on the paper version or 20 on the computer version or 18 on the Internet-based version in each of the four subtest scores (listening, structure/writing, reading, and speaking) that comprise the total score must be earned for the applicant to be eligible for consideration for admission. An official report of these scores must be received by the College of Health Related Professions prior to the date(s) on which admission decisions are made for the program(s) to which the applicant has applied. To obtain the Bulletin of Information to register to take the TOEFL, write directly to: **The Education Testing Service, P.O. Box 6151, Princeton, New Jersey 08541-6151, U.S.A.** The applicant should indicate on his/her application for the examination that results should be sent to institution code number #R6901-3. A student may petition for waiver of the TOEFL requirement if he/she has completed all primary, secondary, and higher education in the United States or one of its English-speaking protectorates.

The TOEFL requirement is waived for applicants to the graduate programs in CHRP who meet all of the following criteria: a) received a bachelor's or master's degree from a regionally accredited U.S. institution with the course work completed in the U.S., b) currently certified in the U.S. to practice in the related discipline in which graduate work will be completed, and c) practiced in this discipline in the U.S. for at least two (2) years.

3. There are currently no student aid funds available at UAMS to support international students. Completion of a financial affidavit and documentation indicating that the applicant has sufficient funding to pay for his/her educational and personal expenses while enrolled are required. The United States Department of Justice's Immigration and Naturalization Service Affidavit of Support form must be used. It currently costs a student with no dependents approximately \$25,000 in United States currency for each full calendar year (12 months) of study.
4. Because accidents and sickness can require expenses for which many persons are not prepared, all students are required to purchase health insurance through a program approved

by the University of Arkansas for Medical Sciences or an equivalent coverage from a private source. Applicants who choose not to purchase appropriate insurance **will not be allowed to register.**

5. Those applicants selected for admission must arrange through the Immigration and Naturalization Service of the United States Department of Justice for the transfer of their Certificate of Eligibility (I-20) to the University of Arkansas for Medical Sciences.

In admissions reviews, first consideration is given to Arkansas residents. In recognition of the significant support of CHRP programs by private and federal health care facilities, however, highly qualified applicants who are residents of another state or citizens of a foreign country may successfully compete for admission.

## REAPPLYING TO THE COLLEGE

Students who have been denied admission, withdrew their application prior to an admission decision being made, or were admitted but decided not to matriculate may reapply the next year. To do so, they must complete a new application and pay another application fee. Students may be required to provide additional documentation in support of their candidacy. Each department or program has a readmission policy. Contact the department chairman for specific requirements for readmission.

## EVALUATION OF TRANSCRIPTS FOR TRANSFER

Only officially signed and sealed transcripts received directly from another academic institution are accepted for evaluation by the College. Transcripts are evaluated for:

1. Course subject and content equivalency to the department requirements.
2. Grade point acceptability per credit. Only courses in which a grade of C (2.0 on a 4.0 scale) or higher was earned are accepted in transfer.
3. Course content equivalency to degree requirements. Only courses that count toward the total credits for a degree at the institution offering the courses will be accepted in transfer ("remedial" and "developmental" courses are not acceptable). **Not more than one course in the following group will be accepted in transfer to meet degree requirements:** band, studio, physical education, military science, English as a second language (ESL), manual skills.
4. Accreditation of institution. Transfer credit is granted only for course work completed at a regionally accredited institution of higher education.

Applicants must include complete records of course work from all institutions attended. In no case is the application process complete until all official transcripts are on file.

Upon request, an appropriate catalog for the years covered by a transcript must be submitted before evaluation can take place. Applicants who have attended another college on the UAMS campus but did not graduate must submit a letter from that College stating that they are eligible for readmission to that program.

## ADVANCED PLACEMENT

The following mechanisms for advanced placement in a program may be available. Contact the respective department chairman for additional information.

**Program Evaluation:** A department's admissions committee may sometimes recommend advanced placement upon consideration of an applicant's background and experience, subject to approval by the Dean.

**Military Service:** A student who has been in active military service may submit a copy of his/her separation notice for possible award of credit for satisfactory completion of relevant course work taken as part of military training.

**Credit by Examination and Correspondence:** With departmental approval, credits established by examination and/or correspondence appearing on an official transcript of a regionally accredited college or university may be transferred to fulfill elective and general education requirements with the exception of speech and laboratory science courses.

A maximum of 15 semester credits (SC) earned by examination may be applied to meet certificate and associate's degree program requirements. A maximum of 30 SC earned by examination may be applied to meet baccalaureate program requirements. A maximum of nine (9) SC earned by correspondence, not more than six (6) of which may be earned from an institution outside of the University of Arkansas system, may be applied to meet certificate, associate's degree, or baccalaureate elective and general education program requirements. (Internet courses are not considered correspondence courses and can be applied to meet program requirements if they are earned from regionally accredited institutions and are included on official transcripts from the institutions.)

**Credit by Challenge Examination of Professional Courses:** A student who is enrolled in or admitted to a department in the College may establish professional credit by challenge examination in courses approved by the department. Such credit will be limited to a maximum of 25% of the total professional credits required for the specific certificate or degree. Professional credits may not be established by CLEP or correspondence credit. A fee of one-half of the SC registration fee will be charged for courses challenged by examination.

When credits are earned by challenge examination, "CR" will be entered into the student record. This credit will not be used in computing GPA or CGPA.

**The total semester credits established by correspondence, CLEP, and challenge examinations are limited to 25% of the total credits required for the specific certificate or degree.**

# ACADEMIC REGULATIONS

## COURSE LOAD

The maximum load is 20 semester credits for the Fall or Spring Semester, and a total of sixteen (16) SC for the Summer Sessions. To take a course load exceeding the maximum, approval by the department chairman is required.

Students may enroll for classes on other campuses in the University of Arkansas system as a part of their normal course load, but such concurrent enrollment must be approved by the appropriate CHRP department chairman prior to registration.

Students receiving financial aid through student loans, grants, scholarships, or Department of Veterans Affairs benefits are required to maintain specified course loads to continue eligibility for aid. For specific information about loans, grants, or scholarships, students should contact the **UAMS Student Financial Services Office, Awards Division, University of Arkansas for Medical Sciences, Room CPH/1252B. Telephone: (501) 686-5451.** For specific information about Department of Veterans Affairs benefits, students should contact the **CHRP Office of Student Affairs, Administration West, 328A. Telephone: (501) 686-5730.**

## REGISTRATION

Formal admission by the department/college as well as completion of registration in accordance with instructions issued by the Office of Student Affairs is a prerequisite to class attendance. Registration after the close of the announced registration period requires the payment of a late registration fee of ten (10) percent of the applicable tuition. Registration is not permitted after the fifth day of classes. A student is not considered registered until the appropriate forms have been filed with the CHRP Office of Student Affairs and payment or special arrangements regarding tuition and fees have been made with the UAMS Treasurer.

## CHANGE OF REGISTRATION

A student may change registration (add or delete a course) only by written request on the appropriate form with approval by the department chairman and filed with the CHRP Office of Student Affairs. A \$10.00 fee per change will be charged to the student.

## REPEATING A COURSE

When a course is repeated, the grade earned in the repeated course is used to assess the student's fulfillment of the academic plan. Though all enrollments, original and repeated, will be shown on the student's transcript, only the grade in the repeated course (even if it is lower than the first) will be used to calculate the cumulative grade point average.



## WITHDRAWAL

A student withdrawing from one or more courses will pay a \$10 fee for each course. A student withdrawing from the University must sign the Student Action Form, complete the Student Clearance Certificate, and have an exit interview with a staff member in the College's Office of Student Affairs. If a student does not formally withdraw by following the above procedures, a grade of "F" will be assigned in all courses in which the student has not completed all requirements.

## WITHHOLDING OF GRADES AND TRANSCRIPTS

The Registrar is authorized to withhold grades and transcripts and refuse registration to any student or former student or who fails to complete a degree plan in the first semester of attendance in a program, or who fails to return athletic, military, library, or other University property entrusted to his or her care, or who fails to comply with rules governing the audit of student organization accounts, or who has failed to pay any fees, tuition, room and board charges, fines or other charges assessed against him or her by a University official or by the campus judicial system, or who fails to officially withdraw from the University prior to graduation.

## GRADUATION

The student must file an application for graduation and pay the graduation fee at least 30 days prior to the end of the semester in which the student wants to graduate. If the student wants to participate in the annual UAMS Commencement, the application for graduation and the graduation fee must be received by the Registrar no later than January 31 of the year in which Commencement occurs. Forms are provided for this purpose at registration and may also be requested from the CHRP Office of Student Affairs.

Students must complete by the end of Spring Semester all degree or certificate requirements, except for professional (*i.e.*, CHRP) courses that will be taken in the following summer session, in order to be eligible to participate in Commencement as a candidate for that degree or certificate. All transcripts should be forwarded to the CHRP Registrar prior to the end of the semester in which the student is scheduled to graduate. Only transcripts sent directly from the institution are official. Transcripts mailed or hand-delivered by students are not acceptable.

At the conclusion of the semester in which degree/certificate requirements are completed, the student must complete the Student Clearance Certificate. Failure to do so will result in withholding of grades, transcripts, and diploma. Degrees are awarded by the University on designated dates each Fall, Spring and Summer. Diplomas are issued on those dates.

## CLASSIFICATION OF COURSES

A four-digit numbering system is used to classify each course. The first digit identifies the level of the course content (difficulty of course content, not necessarily the year in which the course is taught): 1 for freshman; 2 for sophomore; 3 for junior; 4 for senior; 5, 6, or 7 for graduate. The second digit is the number of semester credit hours. (Courses with greater than nine [9] semester credit hours will be identified by the letter "X" in place of the second digit.\* Courses with a variable number of semester credit hours will be identified by the letter "V" in place of the second digit). The third and fourth digits are assigned by the department to identify specific courses.

\*In cases where the letter "X" replaces the second digit, the number of semester credit hours will be indicated in the course descriptions.

## CREDIT HOURS

The standard unit of measurement for course work in the College is the semester credit. One semester credit hour is equal to 750–800 minutes of classroom instruction, 2250–2400 minutes of laboratory instruction, or 3750–4000 minutes of clinical instruction.

## CHANGE OF NAME/ADDRESS

The student must report in writing any change in his/her name or address to the department chairman and to the CHRP Office of Student Affairs within ten (10) days of the change.

## GRADES AND MARKS

### Grades

Final course grades are recorded and preserved in the Office of Student Affairs. The following Grades and Grade Point (GP) values are used in the College:

GRADE	DENOTATION	GP
A	Outstanding	4
B	Above Average	3
C	Average	2
D	Poor	1
F	Failure	0

The grade of "A" is given for superior achievement to excellent scholars. "B" represents above average achievement. "C" represents average achievement. "D" (poor achievement) is considered the minimum passing grade; while academic credit is awarded for a D grade, some CHRP departments (see departmental policies) do not accept D grades for progression into subsequent semesters. (Note that a minimum of a 2.0 Cumulative Grade Point Average is required in order to qualify for graduation, and similar standards described in the following pages apply to progression as well. Departments reserve the right to establish higher standards.) The grade of "F" denotes failure and is given for unsatisfactory performance. No credit is earned for courses in which the grade of F is recorded.

**GPA:** Grade Point Average (GPA) refers to the average Grade Point (GP) value achieved in graded courses in a given semester. Only courses in which regular letter grades (see above) are earned are used in GPA calculations. To

calculate the GPA for a semester, the number of grade points for each letter grade earned is multiplied by the number of credit hours for that course, and the products are summed for all graded courses in the given semester. This sum of weighted grade points is then divided by the total number of graded credit hours for which the student was registered, and the subsequent quotient is the GPA.

**CGPA:** Cumulative Grade Point Average (CGPA) refers to the average Grade Point (GP) value achieved in all graded courses appearing on the CHRP transcript. Only courses in which regular letter grades (see above) are earned are used in CGPA calculations. CGPA is calculated similarly to the calculation of GPA (above), except that all graded courses on the transcript are used in the calculation.

**PGPA:** Program Grade Point Average (PGPA) refers to the average Grade Point (GP) value achieved for the CHRP courses taken in a given program. Only courses in which regular letter grades (see above) are earned are used in PGPA calculations. PGPA is calculated similarly to the calculation of GPA (see above) except that only graded courses taken in the program at UAMS/CHRP are used in the calculation.

In determining “Candidates for Undergraduate Degrees with Honors,” all grades recorded on the CHRP transcript will be utilized. This includes all professional and concurrent course grades and grades in all courses accepted in transfer. Undergraduate students with a CGPA equal to at least 3.5 will be identified as graduating with “Honors” while those with a CGPA of at least 3.7 will be identified as graduating with “High Honors.”

### Marks

The following marks are used in the College:

MARK	DENOTATION
I	Incomplete
IP	In Progress
AU	Audit
CR	Credit
NC	No Credit
S	Satisfactory
U	Unsatisfactory
W	Withdrew
WP	Withdrew Passing
WF	Withdrew Failing

A mark of “I” may be assigned to a student who has not completed all course requirements, but has demonstrated work of passing quality. It is the student’s responsibility to arrange completion of the course requirements with the instructor. The “I” mark must be removed from the student’s transcript by the last day of the semester subsequent to the scheduled completion of the course, or it is automatically replaced by the grade of “F.” An extension of time past the last day of the semester subsequent to the scheduled completion of the course is permitted only in unusual circumstances and must be approved in advance by the course instructor and department chairman. Students who are members of military reserve or national guard units who

must arrange an “I” as a result of activation authorized by the President of the United States are governed by a separate policy (see Military Duty Policy in the CHRP Student Handbook).

For a course requiring more than one semester to complete and where evaluation of the student’s performance is deferred until a subsequent semester, a mark of “IP” may be assigned for the initial semester (the student does not register for the course in question during subsequent semesters while completion of assignments is in progress). The “IP” mark will be replaced by the final course grade when the student completes all course requirements.

A mark of IP:

1. May be assigned only in a course officially designated for such a mark.
2. May persist on a student’s transcript for no more than three consecutive semesters in a given course, including summer session.
3. Must be replaced by a letter grade on the student’s transcript by the last day of the fourth consecutive semester or it will be automatically replaced by the grade of “F”. [An extension of time to remove the mark of “IP” past the last day of the fourth semester for the course may occur only in unusual circumstances and must be approved in advance by the course instructor and department chairman.]

The mark of “AU” (audit) denotes participation in a course for which no grades are assigned nor credit given. Students auditing a course pay full semester credit fees. Entry into an audited course and scoring of examinations while enrolled are at the discretion of the instructor. Neither grade points nor credits are assigned upon completion of audited course work.

The marks “CR” (credit) and “NC” (no credit) may be used in seminar and CHRP elective courses. Performance in courses taken CR/NC is rated as credit (C or higher level work) or no credit (D or F level work). CR is also used in denoting successful challenge of a course by examination. Courses with marks of CR or NC are not computed in a student’s CGPA.

The marks “S” (satisfactory) and “U” (unsatisfactory) may be used in practicum and clinical courses. Courses offered only on a S/U basis are so designated in this Catalog. Performance in courses taken S/U is rated as satisfactory (C or higher level work) or unsatisfactory (D or F level work). A mark of U in a required course precludes progression to the next semester. Courses taken under the S/U option are not computed in a student’s CGPA.

The marks of “W,” “WP,” or “WF” will be assigned upon official withdrawal from a course. W is assigned up to the midpoint of a course. Afterwards, either WP (Withdrew Passing) or WF (Withdrew Failing) is assigned until five working days (one week) before the end of the semester. At that time, a grade of F is assigned where official withdrawal procedures have not been completed (for students who have not finished course requirements nor completed arrangements for assignment of a temporary mark of “I” for

the course). Students who repeat a course will have only the last grade received used in computing GPA and CGPA. Students requiring additional information should contact their department chairman.

**Inspection of Records:** Students may review their academic records which qualify as “educational records” under the Privacy Act. Exceptions are:

- ◆ Personal notes of faculty/staff
- ◆ Employment records
- ◆ Medical and counseling records used solely for treatment
- ◆ Department of Public Safety records
- ◆ Financial records of parents
- ◆ Confidential recommendations regarding admission, employment, or honorary recognition

## ACADEMIC REQUIREMENTS

**Progression:** For a student to progress in a CHRP professional program from one semester to the next, including progression from one year to the next, each semester he/she must achieve a grade of “C” or higher in all professional courses designated by the respective program (see individual departmental sections of this catalog) as prerequisite to progression to subsequent course work. In addition, students are required to maintain a program grade point average (PGPA) of at least 2.0 with the following stipulations:

1. A **first semester** student who meets the specific course grade(s) and other program requirements but has **not** maintained a PGPA of 2.0 for all courses taken since entering the program **will** be allowed to progress **on probation** to the second semester. Since a student cannot be on probation for two consecutive semesters, however, a student on probation because of insufficient PGPA at the end of the first semester must raise his/her PGPA to at least 2.0 by the end of the next (probationary) semester in order to remain in the program. Students failing to do so will be dismissed from the College.
2. For a student who is in the **second or subsequent semester** of a program to continue to progress, however, he/she must maintain a PGPA of not less than 2.0 for all courses taken since entering the program, including both professional and concurrent courses. These students, therefore, are not eligible for probation if their PGPA falls below 2.0 (eligibility for probation on other grounds is described elsewhere in this catalog, in the CHRP Student Handbook, and in various program materials). Students who fail to meet this requirement will be dismissed from the College.

**Academic Probation and Dismissal:** A student who fails to achieve a GPA of at least 2.0 in any given semester will be placed on academic probation for the following semester, providing that student meets the CHRP Progression Requirements (see above). At the end of the probationary semester:

1. Students who achieve at least the minimum CGPA will be reinstated in good standing.
2. Students who fail to achieve at least the minimum CGPA (*i.e.*, 2.0) will be dismissed from the College.

Departments reserve the right to impose more stringent requirements beyond these minimal provisions for the College as a whole. Students who fail to meet departmental regulations pertaining to academic standing will be placed on academic probation or dismissed and are subject to the policies regarding progression within their respective departments to regain or retain student status.

**Denial of Entry into Clinical Phases:** A grade of C or higher is required for designated courses which are prerequisites to subsequent clinical course work. Students failing to achieve this requirement may be denied entry into subsequent course work.

**Drug Testing and Criminal Background Checks:** A critical part of health professions education involves learning experiences in hospitals and other health care facilities. Use of these facilities for instruction is essential, and students must be able to complete their assigned rotations. Many hospitals and health care facilities have policies requiring drug testing and/or criminal background checks for employees, students, and volunteers. Facilities that provide instruction to College of Health Related Professions students may have, or may adopt in the future, drug testing and/or criminal background check policies. Some facilities provide that students who test positive for drugs, or who have certain types of information in their criminal background checks, are ineligible to work in that facility.

Because the use of these health care facilities is part of the curriculum and essential to health professions education, students should be prepared to comply with the policies and procedures at any facility where they engage in rotations or other learning experiences. Students may not request facility assignments in an effort to avoid criminal background checks or drug screening requirements. Students may not refuse to participate in educational activities at these facilities because they do not want to submit to drug testing and/or criminal background checks. Students who fail to attend assigned activities, or who are terminated from rotations in these facilities because they violate the drug testing or drug use policies of the facilities, or who are found to have objectionable information in their criminal background checks, will be unable to complete the college requirements for graduation and will be subject to dismissal from the College of Health Related Professions on academic grounds.

**Clinical Probation and Dismissal:** Since patient well-being is a major concern of the University, action will be taken when a student's clinical practice poses a potential threat to patient health, welfare, or safety. Students, therefore, are subject to the department's specific regulations governing clinical practice and may be placed on clinical probation by the department and/or dismissed from the department and the College for unsatisfactory clinical behavior as defined by his/her department. The specific regulations are contained in the respective departmental handbook and/or clinical course syllabi and distributed to students prior to their entering the clinical area.

## CERTIFICATE AND DEGREE REQUIREMENTS

**Preprofessional and Professional Course Requirements:** Students enrolled in certificate or degree programs in the College of Health Related Professions must complete both Preprofessional and Professional program components in order to graduate.

**Preprofessional Course Work:** Course work required as a prerequisite for admission, varies by program but is a required program component for most certificate and degree programs of the College. Students should consult the individual program section of the CHRP catalog for specific program information.

**Professional Course Work:** Course work required as part of each student's program area or area of specialization, also varies by program. For certificate, associate's, and bachelor's degree programs, students must complete at least 32 SC of professional course work in residence at the College.

## GENERAL EDUCATION COURSE REQUIREMENTS

Students enrolled in associate's and bachelor's degree programs, in addition to preprofessional and professional course requirements, must also fulfill a general education component for graduation. General education requirements for both associate's and bachelor's degree programs are outlined below.

**Associate's Degree General Education Requirements:** A minimum of 23 SC of general education course work is required for graduation and must include:

Area	Semester Credits
<b>COMMUNICATION</b>	
Speech	2
<b>LIBERAL ARTS</b>	
English Composition	6
American History or National Government	3
	<u>9</u>
<b>SOCIAL SCIENCES</b>	
Sociology	3
Psychology	3
	<u>6</u>
<b>HUMANITIES</b>	3

<b>FINE ARTS</b>	3
<b>COMPUTER SCIENCE</b>	
Computer Fundamentals/Applications	3
<b>MATHEMATICS</b>	
College Algebra (or higher level mathematics)	3
<b>TOTAL</b>	<u>29*</u>

Under Arkansas law or regulations, no associate's degree may be granted without a three (3) SC course in American history or national government, a three (3) SC course in computer fundamentals/ applications, and a three (3) SC course in college algebra or higher level mathematics. It is recommended strongly that prospective CHRP students contact the CHRP program of their interest to determine the acceptability of all preprofessional and general education courses before enrolling in them.

The student entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP associate's degree: (a) 32 SC in residence; (b) all specific program mathematics, biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a three (3) SC college/university course in American history or national government, a three (3) SC course in computer fundamentals/applications, and a three (3) SC course in college algebra or higher level mathematics.

\*The additional courses required in Humanities and Fine Arts apply to programs established after 2000. (See department listing for specific requirements.)

**Bachelor's Degree General Education Requirements:** A minimum of 32 SC of general education course work is required for graduation and must include:

Area	Semester Credits
<b>COMMUNICATION</b>	
Speech	2
<b>FINE ARTS*</b>	
Art (including architecture and film), Music, or Theatre Art	3
<b>HUMANITIES**</b>	
Philosophy, Political Science, Literature, or Humanities	3
<b>LIBERAL ARTS</b>	
English Composition	6
History of Civilization or World History	6
American History or National Government	3
	<u>15</u>
<b>SOCIAL SCIENCE***</b>	
Sociology, Anthropology, Geography, Economics, or Psychology	6
<b>MATHEMATICS</b>	
College Algebra (or higher level mathematics)	3
<b>TOTAL</b>	<u>32</u>

\*The Fine Arts requirement cannot be fulfilled with a studio course.

\*\*Humanities requirements may be selected from the courses in the subject areas of philosophy, political science, literature and the humanities. The course in National Government, if selected to meet the US History/National Government requirement, cannot also be used to meet the Humanities requirement in Political Science. Acceptable courses in literature must be broad survey courses; world literature is especially recommended.

\*\*\*The CHRP departments/programs of Dental Hygiene, Medical Dosimetry, Radiation Therapy, Radiologic Technology, and Respiratory Care require sociology (3 SC) and psychology (3 SC) to fulfill the Social Science requirements.

For those students coming to the college from out-of-state schools, these general education requirements must be completed as part of their preprofessional course work.

Under Arkansas law or regulations, no baccalaureate degree may be granted without a three (3) semester credit (SC) course in American history or national government, a three (3) SC course in college algebra or higher level mathematics, and a three (3) SC course in either philosophy or the humanities.

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics, biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

**It is strongly recommended that prospective CHRP students contact the CHRP program of their interest to determine the acceptability of all preprofessional and general education courses before enrolling in them.**

## **REQUIREMENTS FOR PROGRAM COMPLETION**

**Certificate Programs:** Students enrolled in certificate programs of the College must successfully complete approved preprofessional and professional course work composed of at least 32 SC.

**Associate's Degree Programs:** A minimum of 64 approved SC of preprofessional, professional, and general education course requirements must be successfully completed in order for a student to be awarded an associate degree.

**Bachelor's Degree Programs:** Students are required to complete successfully at least 124 SC of approved preprofessional, professional, and general education course work in order to be eligible for graduation in a bachelor's degree program in the College. In addition, at least 45 SC of the total must be taken from upper-level (*i.e.*, 3000 and 4000: junior and senior) courses.

The above semester hour requirements for program completion are the College's minimum requirements and do not represent specific degrees. Individual programs in the College may require additional semester credit hours.

# FINANCIAL INFORMATION

## FEES

Payment of all fees is due upon registration. Students who have not paid tuition, course, and other required fees, or received a deferment for payment by the date specified at registration, will be notified (orally and in writing, if possible) that they have an additional three working days to pay the charges. If full payment is not received during that period, the students will be administratively suspended from classes within the following two working days. (Submission of a check which is not honored by the bank does not constitute payment, and the rules described above apply.)

## REGISTRATION FEES

Undergraduate and graduate students enrolled in CHRP programs, including post-bachelor's degree certificates and the M.I.S. and Au.D. degree programs, pay an hourly rate for tuition. Graduate students enrolled in the UAMS Graduate School, including M.S. and Ph.D. degree programs, and who are enrolled in 9 SC or fewer pay an hourly rate, with 10 SC or more considered a full-time load.

Shown below are fees for **2010-11**. Fees are subject to change without notice by action of the Board of Trustees, so contact the department chairman prior to registration to learn the exact fees. **Again, payment of all fees is due upon registration.**

Status	Classification	Fee/Semester Credit
Undergraduate	Arkansas Resident	\$208.00-220.00*
Undergraduate	Non-resident	\$504.00
Graduate	Arkansas Resident	\$292.00-330.00*
Graduate	Non-resident	\$627.00-714.00*

\*Tuition rates vary by program. Please contact the department of the individual programs to determine tuition rate.

**Note:** Some undergraduate CHRP programs admit only full-time students (at least 12 SC).

For the latest information on registration fees, please call the **CHRP Office of Student Affairs (501) 686-5730**.

The classification of Arkansas resident vs. non-resident is determined on the basis of the legal domicile of students. In general, an applicant must be a *bona fide* resident of Arkansas for at least six (6) consecutive months prior to registration to be classified as a resident student. Complete regulations and forms for requesting a change in classification may be obtained from the **Office of the Vice Chancellor for Academic Affairs. Telephone: (501) 686-5689**.

Native Americans in other states belonging to tribes which formerly lived in Arkansas before relocation, and whose names are on the rolls in tribal headquarters, shall be classified as in-state students of Arkansas for tuition and fee purposes (but not for consideration for admission) on all campuses of

the University of Arkansas. Tribes so identified include the Caddo, Cherokee, Choctaw, Osage, and Quapaw.

For off-campus programs, students residing in certain counties in Texas, Mississippi, Louisiana, and Oklahoma may be eligible for in-state tuition and fees (but are not considered Arkansas residents for purposes of admission). For more information about registration fees, contact the **CHRP Office of Student Affairs, Administration West, 328C. Telephone: (501) 686-5730**.

University Administrative Memorandum 540.1 allows waiving of tuition and fees for dependents of Arkansas citizens who are prisoners of war or missing or killed in action. "Dependent" means a spouse of prisoner of war or person declared to be missing or killed in action, or any child born before or during the period of time its father served as a prisoner of war or was declared a person missing or killed in action, or any child legally adopted or in the legal custody of the father prior to and during the time the father served as a prisoner of war or was declared to be a person missing or killed in action. Contact the Dean's Office for details.

## SPECIAL FEES

Special fees, subject to change, which may be charged by the College are as follows:

Application Fee*	\$20.00
Drop/Add Fee per course	\$10.00
Graduation Fee**	\$75.00
Student Health Fees	\$.76.10/semester
Technology Fee	\$.44.10/semester
Late Registration Fee	10% of applicable tuition
Anatomical Rental Fee	\$.12.00/semester
Microscope Rental Fee	\$.110.00/year
Credit by Examination Fee	1/2 of SC registration fee
Student Liability Insurance	\$.13.00/year
Student Clinic Fee***	\$.60.00/semester

\*The application fee is assessed to defray costs associated with initiating and maintaining applicant records and must accompany the application form. The application fee is \$20 for first program, \$10 for each additional program.

\*\*Beginning July 1, 2010, CHRP will increase the Graduation Fee by \$25 for all students who are eligible to graduate. The fee will be assessed at registration of their last semester. The revenue from this fee will be applied to the cost of security paper, postage, and other expenses incurred by the Registrar's Office in preparing and mailing transcripts to individuals, schools, and organizations for work, reference, and/or higher education purposes. The expanded Graduation Fee will replace the Duplicate Transcript fee of \$2.20 per transcript.

\*\*\*The Student Clinic Fee is new for FY 2010-11. It will help support a student (sick patient) clinic in the Department of Family Medicine. It differs from the Student Health Fee which provides financial support for 1) a well patient clinic for student vaccinations and physicals and 2) access to mental health visits through the Department of Psychiatry.

## HOUSING

A newly constructed residence hall opened in the fall of 2006. Room descriptions, rates, and application procedures can be found on the UAMS student activities and housing Webpage at: [www.uams.edu/studentlife](http://www.uams.edu/studentlife).

For further information contact: **Director of Student Activities and Housing, University of Arkansas for Medical Sciences, 4301 West Markham, Slot 536, Little Rock, Arkansas 72205. Telephone: (501) 686-5850.**

## LABORATORY FEES

Laboratory fees are charged by some departments and vary by semester and program as follows:

Department/Program	Fall	Spring	Summer
Audiology and Speech Pathology	\$50.00	\$50.00	\$50.00
Cytotechnology	\$55.00	\$55.00	\$55.00
Dental Hygiene	\$125.00	\$125.00	\$125.00
Diagnostic Medical Sonography	\$25.00	\$25.00	—
Dietetics and Nutrition*	—	\$75.00	—
Dietetic Internship	\$27.00	\$112.00	—
Emergency Medical Sciences (Paramedic)	\$25.00	\$25.00	\$25.00
Emergency Medical Sciences (EMT)	\$40.00	\$40.00	—
Genetic Counseling	\$150.00	\$150.00	—
Health Information Management	\$50.00	\$50.00	\$50.00
Medical Dosimetry	\$140.00	\$140.00	\$140.00
Medical Technology (Junior year only)	\$50.00	\$50.00	—
Nuclear Medicine Advanced Associate**	\$150.00	—	—
Nuclear Medicine Imaging Sciences	\$30.00	\$30.00	\$30.00
Ophthalmic Medical Technology***	—	\$340.00	—
Radiation Therapy	—	—	—
Radiologic Imaging Sciences	\$30.00	\$30.00	\$30.00
Radiologist Assistant **	\$100.00	—	—
Respiratory Care (B.S.) (Junior year)	\$70.00	\$70.00	—
Respiratory Care (B.S.) (Senior year)	\$40.00	—	—
Respiratory Care (Part-Time) (Year 2)	\$70.00	\$70.00	—
Surgical Technology	\$125.00	—	—

\*This fee is applicable for students registering for NUTR 5112 or 5233.

\*\*Semester may vary depending on when courses are offered.

\*\*\*Spring of senior year only.

## ENROLLMENT DEPOSIT

Although not a fee, an enrollment deposit of \$57.00 is due upon acceptance into the College and is not refundable, but it is applied to the first term tuition if the applicant is accepted and enrolls. (Contact the department chairman for further information.) If a student who has been accepted has submitted the enrollment deposit and is unable to enroll, the deposit will be held for application to the first term tuition of the next year should the student reapply and receive acceptance. If more than one year has passed, the deposit is forfeited.

## REFUND OF FEES

Students officially withdrawing may be eligible for a refund calculated as a percentage of the registration fees. (See next column for definition of class days.) Such refunds are determined according to the schedules below. Special fees are not refundable. Refund of housing deposits and overpayment of rental fees are made after the occupant has checked out of University Housing and after all Housing Policy requirements have been met.

Students officially withdrawing from the University during a Fall or Spring semester shall be entitled to a refund of registration fees as follows:

### Fall and Spring Semesters

Semester	Students Who Withdraw:	Will Receive Refund of:
Fall	by August 25	100%
	by September 1	50%
	after September 1	0%
Spring	by January 13	100%
	by January 21	50%
	after January 21	0%

Students officially dropping one or more courses and who continue to be enrolled in the University during a Fall or Spring semester shall be entitled to individual course refunds as follows:

### Fall and Spring Semesters

Semester	Students Who Withdraw:	Will Receive Refund of:
Fall	by August 25	100%
	after August 25	0%
Spring	by January 19	100%
	after January 19	0%

Students who drop a course or officially withdraw from the University during a summer session shall be entitled to an adjustment as follows:

### Summer Session

Length of Course	Students Who Withdraw:	Will Receive Refund of:
1-4 weeks	by May 31	100%
	after May 31	0%
5-6- weeks	by June 1	100%
	by June 6	50%
	after June 6	0%
7-9 weeks	by June 2	100%
	by June 13	50%
	after June 13	0%
10-12 weeks	by June 6	100%
	by June 13	50%
	after June 13	0%

The date you file a completed Application for Official Withdrawal at the Dean's Office governs the amount of your refund. An Application for Official Withdrawal is not considered complete without all necessary signatures.

Withdrawing from a course without doing so officially will adversely affect your transcript and grades. See the section on Grading for details.

## INSURANCE

**Health Insurance:** Full-time students admitted to a CHRP degree or certificate program must have major medical health insurance coverage at all times. During registration, students may purchase insurance coverage through the University-sponsored plan or sign a waiver stating that they have major medical coverage insurance through private sources. Students are encouraged to confirm their existing insurance coverage or obtain such coverage prior to registration.

**If the student's insurance lapses after registration, the University will assume no responsibility for expenses incurred for health care services rendered to the student or his/her dependents. Lack of required health insurance may also affect student status.**

Students admitted as Nondegree/Noncertificate students are strongly encouraged, though not required, to purchase health insurance through a private source. **The University will assume no responsibility for expenses incurred for health care services rendered to these students or their dependents.**

**Student Liability Insurance:** The CHRP requires **all students** to purchase liability insurance effective during their enrollment in any course requiring active participation in a patient care setting. Students should contact the Department Chairman for current information regarding this requirement.

## UAMS STUDENT FINANCIAL SERVICES

UAMS Student Financial Services is divided into two divisions: Awards and Disbursements/Billing.

### AWARDS DIVISION

The role of the Awards Division is to actively assist students in seeking and securing financial resources. Please visit [www.uams.edu/studentfinancialservices](http://www.uams.edu/studentfinancialservices) for more information on determining financial aid eligibility and the application process.

The resources available to the College in any year determine how many students can be assisted and to what extent. Funds to assist students are provided by state and federal governments, philanthropic organizations, alumni, and other individuals. To be eligible for any form of financial aid, one must have been accepted for admission or be currently enrolled. Current and prospective students who plan to apply for financial aid should request the UAMS Consumer Information Guide which outlines the financial aid process, defines eligibility requirements, and gives a complete description of the various financial aid programs available.

Contact: **UAMS Student Financial Services Awards Division, University of Arkansas for Medical Sciences, 4301 West Markham Street, #864, Little Rock, Arkansas 72205. Telephone: (501) 686-5451.**

The Awards Division is located in the Administration West Building, Room 1.120. The hours are 8:00 a.m. to 4:30 p.m., Monday through Friday. It is not necessary to make an appointment to visit with the staff in the Awards Division.

In order to be considered a full-time student for financial aid purposes, undergraduate students must be enrolled in a minimum of 12 credit hours per semester (fall and spring) and six (6) semester credit hours in summer session; CHRP graduate students must be enrolled in at least 10 semester credit hours per semester (fall and spring) and six (6) semester credit hours in the summer session.

All students receiving financial aid are required to maintain satisfactory academic progress in order to continue receiving funds. If a student fails to maintain the academic progression standards set forth by the College and is subsequently dismissed, the student must contact the UAMS Student Financial Services Office, Awards Division, for any reinstatement of aid at a future date.

### FINANCIAL NEED DETERMINATION

The Free Application for Federal Student Aid (FAFSA) is used to evaluate the needs of students who are applying for financial assistance. This application is available at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). An attempt will be made to provide, from one source or another, the difference between the reasonable cost of attending UAMS and the amount of resources already available to the student. If aid requests exceed available funds, a selection process will be necessary to ensure that the most deserving and best qualified students' needs are met first.

### DATES OF APPLICATION

Students are encouraged to make application for financial assistance between January and March of the academic year they plan on attending (**acceptance in a program of study is not required to apply for financial aid, and it is suggested that students complete the application as soon as they decide to pursue their education**). Applications which are complete prior to **May 1** each year will receive first consideration. All other applications will be reviewed in the sequence in which they are completed. Funds will not be disbursed prior to registration. Financial aid is not automatically renewed; therefore, students must reapply for aid every year.

### TYPES OF AID

The University of Arkansas for Medical Sciences participates in the full range of financial aid opportunities to include:

**Grants:** Federal Pell Grant  
Federal Supplemental Educational Opportunity Grant  
Arkansas Student Assistance Grant  
Academic Challenge Scholarship  
Governor's Scholarship



**Loans:** Federal Carl Perkins Loans  
Federal Stafford Student Loans  
Federal Parent Loan for Undergraduate  
Students

**Employment:** Federal Work Study

A detailed description concerning all aspects of these and other available programs is contained within the UAMS Consumer Information Guide which can be obtained through the UAMS Student Financial Services Awards Division.

In addition, a limited number of academic scholarships are awarded each year by the College of Health Related Professions and some of its departments. Consideration is given to scholastic merit, potential for professional development, and financial need. For information about these awards, please contact the chairman of your department.

A number of the CHRP students are eligible for the workforce education on loan forgiveness program. For information about this program, including eligible disciplines, contact the UAMS Student Financial Services Awards Division.

Also, the UAMS Student Financial Services Awards Division coordinates financial aid provided through local agencies such as the Job Training Partnership Act (JTPA). Students who are eligible to receive benefits from the Veterans Administration should contact the College of Health Related Professions VA Certifying Official (the College registrar) in the College office and their VA Regional Office representative.

#### **RETURN OF FINANCIAL AID**

If a student receives either a Pell, Perkins, SEOG, Stafford or Grad PLUS student loan and withdraws/separates prior to the completion of the enrollment period, a Title IV Return of Funds will be processed. Based on federal regulations, UAMS will return the funds to the lender and the student will be billed for this amount.

#### **DISBURSEMENTS/BILLING DIVISION**

The role of the UAMS Student Financial Services Disbursements/Billing Division is to coordinate the disbursement of awarded financial aid, process tuition payments, and manage UAMS federal and institutional student loan programs.

Visit [www.uams.edu/studentfinancialservices](http://www.uams.edu/studentfinancialservices) for more information on paying your tuition or receiving your financial aid refund check. The Disbursements/Billing Division is located in the Administration West Building, Room 1.106 and is open Monday-Friday 8 a.m. - 4:30 p.m. Call (501) 686-6128 for more information. The address is **UAMS Student Financial Services Disbursements/Billing Division, University of Arkansas for Medical Sciences, 4301 West Markham Street, #758, Little Rock, Arkansas, 72205.**

# PROGRAM INFORMATION

## AUDIOLOGY PROGRAM (Au.D.)\*

### Department of Audiology and Speech Pathology

*The Audiology and Speech Pathology Programs are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.*

**Nannette Nicholson, Ph.D., C.C.C.-A.;** *Director of the Audiology Program*

*Department of Audiology and Speech Pathology*

*University of Arkansas for Medical Sciences*

*University of Arkansas at Little Rock*

*Speech, Language and Hearing Clinic*

*2801 South University Avenue, Little Rock, Arkansas 72204*

*Telephone: (501) 569-3155*

*E-mail: nn@uams.edu*

**Faculty:** *R. Atcherson, S. Atcherson, B. Eaton, B. Gentry, T. Guyette, P. Highley, T. Hutton, D. Kelly, R. Kelly, S. Mahurin, B. McWeeny, P. Monoson (Emerita), J. Montague (Emeritus), N. Nicholson, S. Pine (Emerita), G. Robinson, K. Shapley, L. Smith-Olinde, M. Weatherton (Emeritus), G. Weddington, R. Zraick*

**Clinical Faculty:** *J. Brucks, K. Douglas, C. Ford, A. Harmon, A. Hedges, C. Henderson, L. Karpe, J. King, P. Martin, T. McCoy, F. Olinde, D. Smiley, T. Sowell*

**Thomas W. Guyette, Ph.D.,** *Chairman and Professor, Department of Audiology and Speech Pathology*

*(See pages 33 for information about the Communication Sciences and Disorders Program (Ph.D.) or page 105 for information about the Speech-Language Pathology Program (M.S.-Communication Disorders).*

## THE PROFESSION

Audiologists are health care professionals who are experts in the non-medical management of the auditory and balance systems. Audiologists evaluate hearing and hearing loss; recommend, fit, and verify personal amplification systems; and assist in school-based amplification decisions as well as many other activities. Graduates of this program are prepared for positions in a variety of professional settings including hospitals and private clinics; private practice; community speech, language, and hearing centers; college and university programs; rehabilitation centers; residential institutions; school systems; and industrial settings.

## THE PROGRAM

The Department of Audiology and Speech Pathology offers a Doctor of Audiology (Au.D.) degree program through the College of Health Related Professions at the University of Arkansas for Medical Sciences in a consortium with the College of Professional Studies at the University of Arkansas at Little Rock. This unique educational consortium combines the academic and clinical resources of a major medical sciences

campus with those of a large, comprehensive, metropolitan university. The curriculum is designed to emphasize the science of hearing, speech, and language; the acquisition of knowledge about human communication disorders; and the study and practice of methods for evaluation and treatment. Practicum experiences are provided in a number of different settings primarily in the central Arkansas area. Two program tracks are offered to students, a post-bachelor's degree track and a post-master's degree track.

## ACCREDITATION, LICENSURE AND CERTIFICATION

The doctoral (Au.D.) education program in audiology at the University of Arkansas for Medical Sciences/University of Arkansas at Little Rock is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Boulevard #310, Rockville, Maryland 20850, 800-498-2071 or (301) 296-5700. Graduates of the Au.D. program will be eligible to apply to the Arkansas Board of Examiners in Speech Pathology and Audiology for a license to practice audiology in the state. Graduates will also be eligible to apply for optional certification through the American Speech-Language-Hearing Association (ASHA) and/or the American Board of Audiology (ABA). Successful completion of the program does not itself ensure licensure and/or certification. It is the student's responsibility to be familiar with licensure and certification requirements.

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\*Students pursuing the Doctor of Audiology degree should consider the College of Health Related Professions Catalog the primary catalog. All provisions (including grievance procedures) in the catalog of the College of Health Related Professions are the authority applicable to students pursuing the Doctor of Audiology degree.

## GRADUATE ASSISTANTSHIPS

In addition to the financial aid opportunities described in the UAMS Student Financial Services section of the College of Health Related Professions Catalog, the department has a limited number of program-specific graduate assistantship opportunities; these awards typically do not include tuition remission. Contact the department at (501) 569-3155 for further information regarding graduate assistantships which may be available to qualified, full-time, audiology graduate students. For other forms of financial aid, students should contact the UAMS Student Financial Services Office (501-686-5451).

## PREPROFESSIONAL REQUIREMENTS

Students applying for admission to the Au.D. program in the post-bachelor's degree track must have earned at least a bachelor's degree from a regionally-accredited college or university. Undergraduate course work in mathematics (college algebra or higher) and in biological, physical, and behavioral sciences is required. A course in statistics is strongly encouraged but is not required. Although there are no prerequisite courses in audiology or speech pathology, the program does require that all students have one course in phonetics and one in language acquisition. If these are not completed prior to admission they must be completed during the course of study for the Au.D.

## APPLICATION PROCEDURES AND DEADLINES

Application for the Au.D. program is made through the College of Health Related Professions, University of Arkansas for Medical Sciences, 4301 West Markham Street, #619, Little Rock, Arkansas, 72205-7199. Application procedures for the post-baccalaureate track and the post-master's track require applicants to mail documentation to **two different addresses**. The Application for Admissions, non-refundable application fee, official transcripts, and official GRE scores should be mailed to CHRP-UAMS, 4301 West Markham Street, #619, Little Rock, Arkansas, 72205-7199. The letter of application and three letters of recommendation should be sent to AUSP-UALR, 2801 South University Avenue, Little Rock, Arkansas, 72204.

**Post Baccalaureate:** Completed application materials must be received by **February 1** of each year for consideration for admission the following fall semester. Earlier submission of applications is strongly recommended. Students are admitted for the fall semester only. Application procedures are delineated below:

1. The CHRP Application for Admission is required. A copy of the application can be found at <http://www.uams.edu/chrp/apply/>.
  - a. A non-refundable application fee of \$20.00 is required and must accompany the CHRP application.
  - b. Contact the department office or the CHRP Office of Student Affairs for more information.

2. Transcripts provided to CHRP must be official; *i.e.*, sent directly to CHRP from the issuing institution(s). A transcript "issued to the student" or received from the student or anyone else is not acceptable.
  - a. Arrange for each college or university attended to forward an official transcript to the CHRP Admissions Office.
  - b. Applicants whose bachelor's degree is not completed at the time of application will be considered for admission; if accepted, the applicant must submit a supplementary transcript showing completion of the degree before registration.
3. Arrange for an official copy of the General Test of the Graduate Record Examination (GRE) to be sent to the UAMS College of Health Related Professions: Institution Code 6146.
4. Prepare an application letter to the Audiology Admissions Committee (business format, 12-pt font and  $\leq$  2 pages) addressing:
  - a. An explanation of your interest in audiology.
  - b. Your long-term and short-term goals.
  - c. Other information you deem relevant to the committee's decision-making process.
5. Three letters of recommendation on the official recommendation form are required for consideration for admission (<http://www.uams.edu/chrp/audiospeech/>).
  - a. Recommendations should be from professors with whom you have worked and who are familiar with your ability and academic performance.
  - b. Reference letters must be sent by the recommending individual directly to AUSP-UALR, 2801 S. University Avenue, Little Rock, Arkansas, 72204.
6. TOEFL scores as applicable. See International Applicants on pp. 12-13.

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

**Post-Master's:** Application procedures for the post-master's track follow steps 1 - 6 above. In addition, the date of the GRE score must be within the past five (5) years, proof of current state licensure in audiology and/or national certification in audiology (CCC-A or ABA) must be provided. Eligible applicants will have completed a master's degree program in audiology, communication sciences and disorders, or the

equivalent approved by the Council on Academic Accreditation of the American Speech-Language-Hearing Association (at least 36 semester credits of graduate level courses specified by the department). Contact the department for more specific requirements.

## PROFESSIONAL CURRICULUM

The program requires a minimum of 118 graduate semester credits (SC). Students should expect to travel two to four hours away from central Arkansas for practicum experiences during their second and third years. Housing is arranged, if available, in local dormitories/apartments operated by the Arkansas Area Health Education Centers (AHEC) <http://www.uams.edu/ahec>. A degree is awarded upon successful completion of all academic and practicum requirements for the College of Health Related Professions at the University of Arkansas for Medical Sciences. More specific information about program requirements can be obtained by contacting the Department of Audiology and Speech Pathology (501-569-3155).

### POST-BACCALAUREATE REQUIREMENTS

The post-baccalaureate Au.D. degree is designed to be completed in four years (including three summers with a common entry point in the fall). Exceptions to these timelines may occur on an individual basis. All work must be completed within eight (8) calendar years of initial admission. A minimum of 118 semester credit hours are required for completion of the Au.D. degree. The following 118 graduate semester credits represents a sample degree plan.

Course #	Title	Semester Credit
<b>Fall (1)</b>		
AUD 5023	Basic Diagnostic Audiology	3
AUD 5043	Anatomy and Physiology of the Auditory and Vestibular Systems I	3
AUD 5053	Acoustics and Psychoacoustics	3
AUD 5113	Instrumentation in Audiology and Speech Pathology	3
AUD 540V	Audiology Practicum	1
AUD 5041	Clinical Laboratory	1
		<u>14</u>
<b>Spring (2)</b>		
AUD 5073	Advanced Diagnostic Audiology	3
AUD 5193	Anatomy and Physiology of the Auditory and Vestibular System II	3
AUD 5183	Outcomes Research and Evidence-Based Practice	3
AUD 5223	Amplification	3
AUD 540V	Audiology Practicum	1
AUD 5041	Clinical Laboratory	1
		<u>14</u>

<b>Summer (3)</b>		
AUD 5162	Genetics of Hearing Loss	2
AUD 5222	Professional Issues in Audiology and Speech Pathology	2
AUD 5192	Cultural Competence in Audiology	2
AUD 540V	Audiology Practicum	1
AUD 5041	Clinical Laboratory	1
		<u>8</u>

<b>Fall (4)</b>		
AUD 5153	Pediatric Audiology	3
AUD 5083	Clinical Electrophysiology	3
AUD 5013	Research Methods in Communication Disorders	3
AUD 5253	Amplification II	3
AUD 540V	Audiology Practicum	1
AUD 5041	Clinical Laboratory	1
		<u>14</u>

<b>Spring (5)</b>		
AUD 5233	Pediatric Amplification and Intervention	3
AUD 5103	Medical Audiology	3
AUD 5243	Audiologic Rehabilitation: Adult	3
AUD 5263	Evaluation and Treatment of the Balance System	3
AUD 540V	Audiology Practicum	1
AUD 5041	Clinical Laboratory	1
		<u>14</u>

<b>Summer (6)</b>		
AUD 5232	Audiology: Practice Management	2
AUD 536V	Directed Research	3
AUD 540V	Audiology Practicum	2
AUD 5041	Clinical Laboratory	1
		<u>8</u>

<b>Fall (7)</b>		
AUD 5283	Gerontology in Audiology	3
AUD 5033	Educational Audiology	3
AUD 5273	Implant Device Technology	3
AUD 536V	Directed Research	2
AUD 540V	Audiology Practicum	2
AUD 5041	Clinical Laboratory	1
		<u>14</u>

<b>Spring (8)</b>		
AUD 5063	Auditory Processing	3
AUD 5212	Hearing Conservation	2
AUD 520V	Topics in Audiology	1
AUD 5173	Counseling in Communication Disorders	3
AUD 536V	Directed Research	1
AUD 540V	Audiology Practicum	2
AUD 5041	Clinical Laboratory	1
		<u>13</u>

<b>Summer (9)</b>		
AUD 536V	Directed Research (if not complete)*	1
AUD 546V	Clinical Externship	4
AUD 5041	Clinical Laboratory	1
		<u>5</u>

<b>Fall (10)</b>		
AUD 536V	Directed Research (if not complete)*	1
AUD 546V	Clinical Externship	6
AUD 5041	Clinical Laboratory	1
		<u>7</u>

**Spring (11)**

AUD 536V Directed Research (if not complete)*	1
AUD 546V Clinical Externship	6
AUD 5041 Clinical Laboratory	<u>1</u>
	<u>7</u>
<b>TOTAL</b>	<b>118</b>

\*Research not included in total.

This course work represents a minimum of 72 SC of classroom courses, 6 SC in independent (directed) research with successful completion of a research project, 11 SC of clinical laboratory, 13 SC of practicum, and 16 SC of clinical externship during the final academic year. Performance-based examinations during the first and second summers in the program must be successfully completed to continue in the program. Successful completion of a comprehensive written and oral examination is required prior to placement for the fourth year externship experience. **Note:** The student may be required to pass an oral examination if she/he does not successfully complete the third year written examination.

**POST-MASTER’S TRACK REQUIREMENTS**

Admission to the post-master's Au.D. degree program can occur in any semester. The time to complete the program will vary depending on individual requirements. All work must be completed within eight (8) calendar years of initial admission.

- A minimum of 118 semester credits (SC) are required for graduation (28 SC of clinical practicum will be waived for those who can provide proof of ASHA certification, and up to 30 SC may be transferred from ASHA accredited programs).
- A research project will be required if evidence of satisfactory completion of a Master's thesis is not provided (completion of a master’s level research project will not satisfy the research requirement).

**PROFESSIONAL COURSE WORK\*\***

The first number listed for courses is for the UAMS College of Health Related Professions; the second (in parenthesis) is for the University of Arkansas at Little Rock.

**AUD 5013 (7360)—Research Methods in Communication Disorders**

Introduction to research methodologies in audiology and speech pathology. Includes prospectus development, funding sources, data collection and analysis, and professional research writing and editing in communicative disorders and/or speech sciences.

\*\*Courses listed are for the post-bachelor's degree track. The post-master's degree track course requirements will vary, depending on the applicant's previous course work and clinical experience.

**AUD 5023 (7380)—Basic Diagnostic Audiology**

Principles and techniques for basic audiologic evaluation, including pure tone testing, speech audiometry, and the clinical application of masking, immittance, and otoacoustic emissions. Relevant calibration issues will also be discussed.

**AUD 5033 (7330)—Educational Audiology**

The delivery of audiology services to a school-based population. Includes the development, management, and utilization of hearing and middle ear system screening programs, classroom acoustics, selection and fitting of classroom-based amplification, and federal laws associated with children who have special needs.

**AUD 5041 (7181)—Clinical Laboratory**

Lab instruction in clinical procedures and methods for evaluation and treatment of clients and care, maintenance and use of technology in audiology clinical practice. Perform evaluation and rehabilitation procedures under faculty supervision.

**AUD 5043 (7331)—Anatomy and Physiology of the Auditory and Vestibular Systems I**

Detailed information of the anatomy, physiology, electrophysiology, and neurophysiology of the auditory and vestibular systems.

**AUD 5053 (7332)—Acoustics and Psychoacoustics**

Basic information regarding the physics of sound, the measurement of sound and an introduction to the psychoacoustic basis of hearing and its clinical applications.

**AUD 5063 (7333)—Auditory Processing**

Theoretical overview, differential assessment, and treatment of adults and children with auditory processing disorders (APD). Intended to blend theoretical knowledge with practical clinical methods and techniques. Prerequisites: ASP 5023 (7380).

**AUD 5073 (7381)—Advanced Diagnostic Audiology**

Principles of and techniques for advanced audiometric evaluation, including speech audiometry, reflex decay, audiometric special tests and otoacoustic emissions. Report writing and making appropriate recommendations will also be discussed.

**AUD 5083 (7382)—Clinical Electrophysiology**

Principles and techniques in the use of evoked potentials to assess auditory function. Includes case studies and analysis of waveforms. Lecture and laboratory.

**AUD 5103 (7383)—Medical Audiology**

Introduction to the major pathologies of the auditory and vestibular systems, as well as medical/surgical treatment of those pathologies. Audiologic assessment and management of the disorders will also be discussed. Prerequisites: ASP 5023 (7380) and ASP 5043 (7331).

**AUD 5113 (7321)—Instrumentation in Audiology & Speech Pathology**

Introduction to basic principles of electronics and electrical safety and to proper use and care of equipment used in the evaluation and treatment of the auditory and vestibular systems.

**AUD 5123 (7335)—Advanced Psychoacoustics**

Advanced information regarding how listeners with normal hearing and those with hearing loss process sound. Topics include: loudness, frequency selectivity, temporal processing, pitch perception, space perception, object/pattern perception, speech perception, experimental design, and signal detection theory. Prerequisites: ASP 5053 (7332).

**AUD 5132 (7222)—Speech Perception**

Production and perception of speech sounds and the prosodic features of speech. Several theories of speech perception presented and discussed, and the effects of hearing loss on speech production and perception explored.

**AUD 5133 (7367)—Infant-Toddler Communication: Development-Assessment**

Investigates prelinguistic/early linguistic communication and feeding/swallowing development. Multidisciplinary assessment and intervention for infants and toddlers (birth to five) with special needs and their families. Current formal and informal assessment tools and techniques, current intervention strategies, enhancing the therapeutic process across environments, utilizing team collaboration, and facilitating parent-infant interaction.

**AUD 5143 (7323)—Advanced Electrophysiology**

Principles and techniques in the use of mid- and late-evoked potentials to assess auditory function. Prerequisite: ASP 5083 (7382).

**AUD 5152 (7261)—Organization and Administration**

Organization, administration and accreditation of school, university, and community programs. Private practice and billing procedures. Various and alternative career opportunities including corporate speech pathology practice. Issues related to medicaid, medicare and other third party payers, as well as current legislation. Governmental and professional practice issues.

**AUD 5153 (7334)—Pediatric Audiology**

Normal auditory development and theoretical, clinical, and practical issues involved in screening, assessment, and management of children with hearing loss. Prerequisite: ASP 5023 (7380).

**AUD 5162 (7224)—Genetics of Hearing Loss**

Basic information on the genetic basis of hearing loss and an overview of syndromic and non-syndromic hearing losses. Strategies for referral to genetic counselors and other health care professionals will be included. Prerequisite: ASP 5103 (7383).

**AUD 5163 (7320)—Auditory Based Speech/Language Intervention**

Auditory-based speech and language intervention with infants and toddlers who are deaf and hard of hearing. Emphasis is on the principles of the normal development sequence of the listening skills, assessment of skills obtained within the hierarchy, and intervention aimed at teaching skills not yet acquired. Auditory based intervention for infants and toddlers requires family participation; therefore, learning styles of parents and caregivers will be discussed.

**AUD 5173 (7365)—Counseling in Communication Disorders**

Principles of counseling for working with persons with communication disorders and their families throughout the life span. Students will review major theories of counseling and will select those most useful for the various settings and practices of audiology and speech pathology.

**AUD 5183 (7326)—Outcomes Research and Evidence-Based Practice**

Principles of outcomes research, and the levels of evidence supporting clinical practice. Students will understand the principles of critical evaluation of diagnostic procedures and critical evaluation of the evidence for treatment efficacy and effectiveness as well as the importance of practice guidelines that define best practices.

**AUD 5192 (7230)—Cultural Competence in Audiology**

Knowledge and skills needed by audiologists to provide culturally competent services to diverse clients. Sources of diversity and application of concepts to the field of audiology will be discussed.

**AUD 5193 (7336)—Anatomy and Physiology of the Auditory and Vestibular Systems II**

Continuation of the first anatomy and physiology course with greater focus on skull anatomy and on peripheral and central nervous system embryology, neuroanatomy, and neurophysiology.

**AUD 520V (7087)—Topics in Audiology**

Graduate seminar with emphasis on topics related to clinical or rehabilitative audiology. May be repeated for additional credit not to exceed 6 hours total. Prerequisite: Consent of instructor.

**AUD 5212 (7227)—Hearing Conservation**

Noise measurement, OSHA requirements, occupational noise management, recreational audiology, and designing and implementing hearing conservation programs for adults and children. Prerequisites: ASP 5023 (7380); ASP 5112 (7221).

**AUD 5222 (7228)—Professional Issues in Audiology & Speech Pathology**

Personal and professional ethical values and their applications to dilemmas encountered in the clinical practices of audiology and speech pathology will be explored with students. Preferred practices and criteria for quality services will be topics for discussion.

**AUD 5223 (7384)—Amplification**

Effective use of hearing aids and auditory training equipment. Includes their component parts, electroacoustic analysis, hearing aid orientation/counseling, and approaches to hearing aid evaluation. Prerequisite: ASP 5023 (7380).

**AUD 5232 (7229)—Audiology: Practice Management**

Roles of audiologists in meeting the needs of the communicatively impaired. Students will understand preferred practices, criteria for quality services and quality improvement through the evaluation of service delivery models and exploration of the laws affecting service delivery in health care and educational settings.

**AUD 5233 (7385)—Pediatric Amplification and Intervention**  
Advanced strategies specific to pediatric hearing assessment, applicable technologies and management utilizing a family centered approach to intervention.

**AUD 5243 (7386)—Audiologic Rehabilitation: Adult**  
Principles of audiologic rehabilitation for adults, including diagnosis, counseling, use of amplification and other assistive devices, and communication strategies. Various models of audiologic rehabilitation will be presented. Prerequisite: ASP 5023 (7380).

**AUD 5253 (7351)—Amplification II**  
Advanced study of amplification systems, including strategies to assess benefit and satisfaction, binaural/bilateral considerations, alternatives to conventional hearing aids, and speech perception issues related to hearing loss. Prerequisite: ASP 5223 (7384).

**AUD 5263 (7350)—Evaluation & Treatment of the Balance System**  
Basic information on the evaluation and treatment of balance disorders. Topics: anatomy and physiology of the vestibular, oculomotor, and proprioceptive systems; clinical tests of electronystagmography, dynamic posturography, and rotary chair. Medical and surgical treatments and rehabilitation strategies for vestibular/balance pathologies. Prerequisite: ASP 5043 (7331).

**AUD 5273 (7325)—Implant Device Technology**  
Overview of history of cochlear implants, corporation technology in the cochlear-implant industry, and contemporary speech processing strategies for cochlear implants. Discussion of surgeries, audiological evaluation procedures used pre- and post-operatively, patient performance, counseling, and current research topics. Prerequisite: ASP 5223 (7384).

**AUD 5282 (7282)—Learning Disabilities**  
An introduction to the characteristics, definitions, etiologies, assessment, and therapeutic procedures in the treatment of children diagnosed with learning disabilities. Emphasis placed on the scope of practice for speech-language pathologists and audiologists in the due process procedures for these children.

**AUD 5283 (7371)—Gerontology in Audiology**  
Basic information on the aging process and a discussion of how the aging process affects people with hearing loss. The cognitive, physical, and social aspects of aging will be discussed.

**AUD 530V (7000)—Independent Study**  
Prerequisites: graduate standing and consent of instructor. Directed readings in audiology and/or speech/language pathology, individual discussion with a faculty member. (1-3 hours) May be repeated for up to 6 hours credit.

**AUD 5313 (BIOM 5013)—Biometrical Methods**  
Introductory topics in descriptive biostatistics and epidemiology, database principles, basic probability, diagnostic test statistics, tests of hypotheses, sample-size estimation, power of tests, frequency cross-tabulations, correlation, non-parametric tests, regression, randomization, multiple comparisons of means and analysis of variance for one and two-factor experiments. Prerequisite: Consent of instructor.

**AUD 5352 (7263)—Sociolinguistics**  
The linguistic structure of language, nature, and forms of symbolic behavior. Human uses of symbols from various groups and socio-economic levels, particularly in communication. Prerequisite: Courses in phonetics and normal language acquisition.

**AUD 536V (7094)—Directed Research**  
Research or individual investigation for graduate students. Credits earned may be applied toward meeting degree requirements if the program approves and if a letter grade is given. Repeated registration is permitted.

**AUD 540V (7091)—Audiology Practicum**  
Applied, supervised practicum experiences for graduate students that encompass the breadth of the current scope of practice with both adults and children from culturally diverse backgrounds. Repeated registration is permitted.

**AUD 546V (7091)—Clinical Externship**  
Full-time, applied, supervised practicum experience for graduate students in residence, encompassing the broad scope of diagnostic and rehabilitative audiology clinical practice (4-9 hours). Repeated registration is permitted.

# CLINICAL NUTRITION PROGRAM (M.S. IN CLINICAL NUTRITION)\*

## Department of Dietetics and Nutrition

**Reza Hakkak, Ph.D.**, Chairman, Department of Dietetics and Nutrition

*Department of Dietetics and Nutrition*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #627*

*4301 West Markham Street, Little Rock, Arkansas 72205*

*Telephone: (501) 686-6166*

*E-mail:*

*Web site: <http://www.uams.edu/chrp/dietnutrition>*

**Faculty:** *V. Baker, M. Bogle, P. Carroll, L. Christie, A. Dawson, N. Deutz, D. Gonzales, R. Hakkak, N. Hays, M. Hinton (Emerita), J. Jensen, D. Mock, R. Rodibaugh*

**Reza Hakkak, Ph.D.;** *Chairman, Department of Dietetics and Nutrition*

*(See page 48 for information about the Dietetic Internship Program)*

### THE PROFESSION

As the overall recognition of the importance of nutrition increases in both disease treatment and prevention, highly specialized and advanced level roles are emerging for dietitians. These advanced level roles require practice as an entry-level dietitian with professional development of additional knowledge and skills. Graduate programs are designed to develop both advanced level knowledge and skills in various specialty areas such as pediatrics, geriatrics, community nutrition, clinical management, wellness counseling, nutrition support, and many others.

Graduates of the Master's Program are employable in academic, research, clinical, and community nutrition facilities.

### THE PROGRAM

The Master of Science degree program in Clinical Nutrition is designed to prepare dietitians to practice at an advanced or specialized level. Currently, four areas of emphasis are offered: community nutrition; geriatric nutrition; pediatric nutrition; and nutrition, health promotion and wellness. A thesis or nonthesis option may be selected. Classes are offered primarily in the late afternoon and evening to allow practicing dietitians to enroll in the program. Students may enroll as degree candidates or as special non-degree students on a limited basis. Degree candidates apply through the UAMS Graduate Office. Practitioners or other graduate students may apply as special non-degree students directly to the Department of Dietetics and Nutrition. Special continuing education courses will be offered on occasion and information will be available through the Department.

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\*Students pursuing the Master of Science degree in Clinical Nutrition are considered to be students in the UAMS Graduate School who are taking courses offered by the faculty of the College of Health Related Professions. Accordingly, the Graduate School Catalog is considered the primary catalog for all students in this program. All provisions (including grievance procedures) in the Graduate School Catalog and the Graduate School Handbook are the authority applicable to students pursuing the Master of Science degree in Clinical Nutrition.

### FINANCIAL ASSISTANCE

In addition to the general financial aid opportunities previously described in the UAMS Student Financial Services section of this catalog, the department can provide information on program-specific financial assistance. Contact the department chairman for further information regarding the different sources of aid which may be available:

**The American Dietetic Association Scholarships:** The American Dietetic Association offers several scholarships of \$500–\$3000 to dietetic interns and dietetic graduate students each year. Applications for these scholarships are available between mid-September and mid-January. The annual deadline for applications is mid-February. Scholarships are awarded for the following academic or program year (e.g., applications for the 2011-2012 academic year must be completed by mid-February 2011). Application forms may be requested from **The Scholarship Committee, The American Dietetic Association, 120 South Riverside Plaza, Suite 2000., Chicago, IL 60606** or at: <http://www.eatright.org/Foundation/scholarships/>.

### PROFESSIONAL CURRICULUM

**Master of Science in Clinical Nutrition:** Degree requirements include 19 SC of core courses, eight (8) SC of supportive and elective courses, a three (3) SC clinical practicum, and six (6) semester hours of thesis credit for a total of 36 semester hours. In the nonthesis option, the requirements are for an additional three (3) SC course plus a three (3) SC research project instead of the six (6) hours of thesis. A list of required and potential elective courses appears below. A combined maximum of twelve (12) SC of course work may be transferred from the UAMS/CAVHS dietetic internship and a maximum of six (6) SC from other accredited colleges and universities. A specific degree plan will be prepared for each student.



Master of Science students seeking admission to the Dietetic Internship Program must use the Dietetic Internship application process. That is, acceptance to the Master of Science Program does not ensure admission to the Dietetic Internship Program.

## APPLICATION PROCEDURES AND DEADLINES

**Master of Science in Clinical Nutrition:** Admission to the degree program includes the completion of a baccalaureate degree and other requirements of the UAMS Graduate School. The degree applicant first applies for admission to the UAMS Graduate School by completing the application forms and requesting official transcripts from all colleges attended. The UAMS Graduate School forwards all eligible applications to the Department of Dietetics and Nutrition for an admission decision. Program requirements include: a cumulative grade point average of at least 2.85 on a 4.0 scale, a satisfactory score on the Graduate Record Examination (GRE), and three (3) reference letters from an undergraduate professor in your major, a director of internship or other practice program, or an employer. For all international applicants, official test results (*i.e.*, scores) of the TOEFL and the GRE examination must be sent directly to UAMS by the Educational Testing Service.

Application for graduate study is made through the **Graduate School Office, University of Arkansas for Medical Sciences, 4301 West Markham, #601, Little Rock, AR 72205. Telephone: (501) 686-5454.**

## PROFESSIONAL COURSE WORK

### **NUTR 5032—Assessment of Nutritional Status**

A study of nutritional assessment systems and methodology including the latest technology in dietary, biochemical, anthropometric, and clinical evaluation. Emphasis placed on the design of systems, the interpretation of indices for all age groups in health and disease, and the application of data in nutrition counseling and consultation. Prerequisites: undergraduate courses in biochemistry, anatomy, physiology, nutrition, food science or equivalents.

### **NUTR 5033—Advanced Clinical Nutrition**

Integration of principles of biochemistry, physiology, pathology, anatomy, psychology, anthropology, epidemiology, nutrition and food science into therapeutic use of foods and nutrients in disease prevention and treatment through a case-oriented approach. Prerequisites: Biochemistry, Diet in Disease, Nutrition, Anatomy and Physiology, or consent. NUTR 5333 in the Dietetic Internship Program may be substituted for this course.

### **NUTR 5043—Diet and/or Cancer Prevention**

Focused on clinical and preclinical studies that address how dietary related factors, such as nutrients, bioactive food components and obesity, influence cancer development and cover major mechanisms by which dietary factors modify cancer risk. Prerequisites: A previous course in nutrition, biology, biochemistry, or physiology, and consent.

### **NUTR 5063—Medical Nutrition Therapy**

Online course introducing nutrition as a medical specialty from the perspective of disease prevention and treatment including assessment, patient interviewing strategies, medical terminology, nutrition care plan techniques, and prevention strategies. Prerequisites: a course in nutrition and inorganic biochemistry or equivalent, and consent.

### **NUTR 509V—Independent Study in Clinical Nutrition (1-6)**

This option may be used by students seeking to define a thesis topic or to pose a research question about a specific aspect of clinical nutrition. The student will prepare a written report following designated guidelines.

### **NUTR 5102—Management Principles in Dietetics**

Application of current higher level management skills in clinical nutrition and dietetics. Emphasis on incorporation of latest technological developments, management theories, and future trends in legal aspects, cost analysis, personnel and resource management, quality control, and reimbursements.

### **NUTR 5103—Nutrition and Metabolism: Macronutrients**

Reviews cell function, including acid-base balance, utilization of macronutrients in metabolic processes, and roles of specific nutrients in human metabolism. Relationship of physiology and organ system functions to nutrition is addressed. Alterations in metabolic processes caused by specific diseases will be discussed.

### **NUTR 5112—Nutrition Counseling**

Provides an understanding of the methods, strategies, and evaluation of nutrition and diet counseling to modify eating habits for health promotion and increase compliance with therapeutic regimens. Consideration of learning styles, nutritional anthropology, and effective application of instructional technology in the health care setting. Prerequisite: NUTR 5033 or equivalent; and consent of faculty.

### **NUTR 5122—Principles of Advanced Nutrition Support**

Advanced study in the art and science of nutrition support explored through a comprehensive review of the literature; discussion of the biochemical, psychological, and medical aspects of nutrition support; and application of principles in clinical practice through case study presentation. Students participate in the literature analysis and case discussions. Prerequisites: NUTR 5033 or equivalent, NUTR 5103 or equivalent, NUTR 5032 or equivalent, and consent of faculty.

### **NUTR 5143—Nutrition Research and Statistical Methods**

A study of research designs, statistics, and data collection methods used in nutrition research. Emphasis on planning metabolic, epidemiological, education, and clinical studies including food composition and nutritional assessment surveys with basic and advanced statistical applications. Prerequisite: Graduate level course in Statistics and consent of faculty.

**NUTR 5153—Nutrition and Metabolism Micronutrients (II)**  
Reviews the roles of vitamins, minerals, and trace elements in metabolic processes and their roles in human metabolism. Alterations in metabolic processes caused by specific vitamin deficiency diseases will be discussed. Metabolism of common drugs and drug-nutrient interactions will be reviewed. Prerequisite: NUTR 5103 or equivalent.

**NUTR 5161—Advanced Nutrition Seminar**

Graduate seminar of important current research in clinical nutrition to reflect content, application to clinical practice, and study parameters and design. Students will read original papers, write critiques, and make presentations for discussion.

**NUTR 5203—Geriatric Nutrition**

Examines the relationships between nutrition and physiologic aging. The impact of aging on nutritional requirements, effects of chronic and acute disease, effects of nutrition on the aging process, and nutrition programs for older adults are explored. Students will actively analyze and discuss research literature. Prerequisite: graduate courses in metabolism, nutrition assessment, and advanced clinical nutrition and consent of faculty.

**NUTR 5213—Pediatric Nutrition**

Describes the relationship of growth and development to nutrient requirements from infancy to adolescence. The assessment of feeding practices, food habits, and nutritional status in growth problems, health and disease will be discussed. Nutritional interventions and therapies for specific conditions will be planned. Prerequisites: NUTR 5103, NUTR 5153, NUTR 5033 and consent of faculty.

**NUTR 5223—Nutrition in Health Promotion, Wellness, and Athletics**

Describes the application of advanced principles of normal and preventive nutrition in health and fitness, physical performance, disease prevention, and health promotion in dietetic practice. It relates clinical research in exercise physiology to decision-making in wellness and sports nutrition counseling. Prerequisites: NUTR 5103, NUTR 5153, NUTR 5033 and consent of faculty.

**NUTR 5243—Community Nutrition**

This course will provide students with a framework to approach, analyze and work with community nutrition problems. Needs of different populations and various resources within the community will be discussed. The course will cover areas such as community needs assessment, nutrition education, public policy, grant writing and communication skills needed for various audiences. Prerequisites include either NUTR 5103 or NUTR 5153 or NUTR 5333 or consent of the faculty. Off-site activities will be necessary to fulfill the requirements for this course.

**NUTR 523V—Advanced Clinical Practicum (I-III)**

Based on individual needs and prior clinical experiences, the student may elect an area of advanced clinical nutrition practice for in-depth experiences after determining the goals, objectives, and major experiences desired. A total of three semester credits (3 SC) are required. Prerequisites: NUTR 5033, NUTR 5032, NUTR 5112, and NUTR 5203 or equivalent, and consent of faculty.

**NUTR 551V—Special Topics in Clinical Nutrition**

Advanced work in selected topics of current interest and investigation in clinical nutrition. Topics may include new research and guidelines in the use of nutrition or selected nutrients to prevent or treat a specific disease state, such as diabetes, digestive diseases, osteoporosis, obesity, or cardiovascular diseases.

**NUTR 600V—Master's Thesis in Clinical Nutrition**

Under supervision of graduate faculty, an original research study will be designed and conducted with written thesis following graduate college guidelines. Prerequisite: consent of faculty.

**NUTR 601V—Clinical Nutrition Special Project**

A capstone research project under direction of faculty advisor and project committee. Prerequisite: completion of, or concurrent enrollment in, all core courses in Clinical Nutrition. Corequisite: approval of project advisor. A grade of "R" is given until requirements of all three hours are met.

**NUTR 608V—Research in Nutrition (1-10)(I, II, S)**

Students will participate in a research project under the supervision of a faculty member.

# COMMUNICATION SCIENCES AND DISORDERS PROGRAM (Ph.D.)\*

## Department of Audiology and Speech Pathology

*The Audiology and Speech Pathology Programs are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.*

**Betholyn Gentry, Ph.D.,** UAMS/UALR Co-Director of the Ph.D. Program  
Department of Audiology and Speech Pathology  
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**Susan Moss-Logan, Ph.D.;** UCA Co-Director of the Ph.D. Program  
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**Faculty:** R. Atcherson, S. Atcherson, B. Eaton, B. Gentry, T. Guyette, P. Highley, T. Hutton, D. Kelly, S. Mahurin, B. McWeeny, P. Monoson (Emerita), J. Montague (Emeritus), N. Nicholson, S. Pine (Emerita), G. Robinson, K. Shapley, L. Smith-Olinde, M. Weatherton (Emeritus), G. Weddington, R. Zraick

**Thomas W. Guyette, Ph.D.,** Chairman and Professor, Department of Audiology and Speech Pathology  
(See pages 24 for information about the Audiology Program (Au.D.) or page 105 for information about the Speech-Language Pathology Program (M.S.-Communication Disorders).

### THE PROGRAM OBJECTIVE

The objective of the Ph.D. program in Communication Sciences and Disorders is to prepare individuals to conduct research, teach, and/or to participate in leadership roles in the evaluation and treatment of persons with articulation, language, hearing, voice, literacy and fluency disorders. Graduates of this Ph. D. program are prepared for careers as teachers and researchers in communication sciences and disorders, as well as positions in professional settings including school systems, community speech, language, and hearing centers, private practice, physician's offices, hospital clinics, and rehabilitation centers.

### THE PROGRAM

The Department of Audiology and Speech Pathology offers the Doctor of Philosophy degree in a consortium with the College of Health Related Professions at the University of Arkansas for Medical Sciences, the College of Professional Studies at the University of Arkansas at Little Rock, and the College of Health and Applied Sciences at the University of Central Arkansas. This unique educational consortium combines the academic

and clinical resources of a major medical sciences campus with those of two large, comprehensive, universities. The curriculum is designed to emphasize the science of speech, language, and hearing, the acquisition of knowledge through research about human communicative disorders, and the advanced study and practice of methods for evaluation and treatment of those disorders.

### FINANCIAL ASSISTANCE

In addition to the financial aid opportunities described in the UAMS Student Financial Services section of the UAMS Graduate School Catalog, the department has program-specific financial assistance for doctoral students. Contact Dr. Richard Zraick at (501) 569-8910 for further information regarding financial aid which may be available to qualified Ph.D. students.

### REQUIREMENT FOR ADMISSION

Students applying for admission to the Doctor of Philosophy program are required to have earned a bachelor's or master's degree in audiology or speech pathology from a program accredited by the American Speech-language Hearing Association or a degree in a related discipline.

### PROFESSIONAL CURRICULUM

The Doctor of Philosophy degree program requires satisfactory completion of a minimum of 70 semester credit hours of specified course work by individuals who currently hold a master's degree in speech-language pathology or audiology. The curriculum emphasizes the development of research skills and advanced study of communication sciences and disorders. Students must pass a comprehensive examination and successfully defend their dissertations. Degrees are awarded upon successful completion of all academic and research requirements.

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\*Students pursuing the Doctor of Philosophy degree are considered to be students in the UAMS Graduate School who are taking courses offered by the faculty of the UAMS College of Health Related Professions, the faculty of the UALR College of Professional Studies, and the faculty of the UCA Department of Speech-Language Pathology. All provisions (including grievance procedures) in the UAMS Graduate School Catalog, the UAMS Graduate School Handbook, and the Graduate Student Handbook for Students in Joint UALR/UAMS and UALR/UAMS/UCA Graduate Programs are the authority applicable to students pursuing the Doctor of Philosophy degree in Communication Sciences and Disorders.

## APPLICATION PROCEDURES

Application for the Doctor of Philosophy degree program is made through the Graduate School Office, University of Arkansas for Medical Sciences, 4301 West Markham Street, # 601, Little Rock, Arkansas, 72205. For all international applicants, official test results (*i.e.*, scores) of the TOEFL and the GRE examination must be sent directly to UAMS by the Educational Testing Service. In addition, applicants for the Doctor of Philosophy degree must complete a Ph.D. program application. This application is submitted to the Admissions Committee, *c/o* Dr. Kathy Shapley, Chair, Admissions Committee, UALR Speech and Hearing Clinic, 2801 University Avenue, Little Rock, AR 72204.

## PROFESSIONAL COURSE WORK

### ASP 6003 (8300)—Advanced Research Methods

Introduces theory, principals and practices of research design in communication sciences and disorders. Emphasis on methodology of collecting, organizing, analyzing and presenting both qualitative and quantitative data. Topics will include: research questions and problems, literature and background review, group and single-subject research design, data organization and manipulation, scientific writing, and the publication and presentation process.

### ASP 6023 (8302)—Special Topics in Speech

Engages students in the exploration and evaluation of current research, practice, and technology related to speech development and disorders. Content reflects recent developments in the literature and specific interests of participants. Relevant topics may include motor speech disorders, speech science, physiological and neurophysiological bases of speech production, voice, dysphagia, fluency, articulation, phonology, phonological theory, craniofacial anomalies, gerontology, AAC.

### ASP 604V (8104)—Research Project

This course covers skills necessary to complete a research project consisting of a research question, review of the literature, methodology, data collection, data analysis and written report.

### ASP 6052 (8205)—Grant Writing Pedagogy

Covers strategies for identifying funding agencies appropriate for research and special programs. Emphasis will be on techniques for writing grant proposals for both private and public funding.

### ASP 6062 (8206)—Supervision Pedagogy

Familiarizes students with the art and science of clinical teaching, supervision of clinical services, management of clinical programs, and instruction in communication disorders. Emphasis on clinical problem solving, maximizing student and client feedback, supervisory conferencing, evaluating student and client performance, clinical scheduling/record keeping, and clinical and program efficacy.

### ASP 6091 (8109)—Grant Writing Internship

Involves the student in the development, completion, and submission of a grant proposal to a private or public funding agency.

### ASP 6033 (8303)—Special Topics in Language

Engages students in the exploration and evaluation of current research, practice, and technology related to language development and disorders. Content reflects recent developments in the literature and specific interests of participants. Topics may include child language development and specific developmental disorders, neurophysiological bases of language and communication, neurogenic cognitive-linguistic disorders, AAC, multicultural issues, gerontology.

### ASP 6072 (8207)—Teaching Pedagogy

Introduces students to principles and practices of course development and teaching skills in communication sciences and disorders. Emphasizes understanding and integrating course content, targeted levels of learning, specific objectives, instructional strategies, and assessment to enhance the learning experience. Additional topics include motivating students, attributes of good teaching, professional development in teaching, distance education, and team/interdisciplinary teaching.

### ASP 6083 (8305)—Multicultural Issues

This course will engage students in discussions of multicultural and linguistic variables that must be recognized and applied in teaching, research, and clinical supervision in the field of speech-language pathology and audiology.

### ASP 610V (8110)—Teaching Internship

Provides students with supervised experience in academic instruction.

### ASP 611V (8111)—Supervision Internship

Provides students with supervised experience in clinical supervision and instruction.

### ASP 6013 (8301)—Special Topics in Hearing

Engages students in the exploration and evaluation of current research and practice related to hearing science, hearing disorders, evaluation and remediation. Content reflects recent developments in the literature and specific interests of participants. Topics may include the anatomical basis of hearing science, acoustics and instrumentation, psychoacoustics, physiological acoustics, physiological evaluation of hearing, hearing conservation, amplification, and aural habilitation and rehabilitation.

### ASP 700V (9199-9999)—Dissertation

Completion of an original research project in collaboration with the dissertation advisor and committee. Successful completion of an oral defense to the dissertation committee. Continual enrollment is required until all related requirements are completed.

# CYTOTECHNOLOGY PROGRAM

## Department of Laboratory Sciences

The Cytotechnology Program is accredited by the Commission on Accreditation of Allied Health Education Programs

**Donald D. Simpson, Ph.D., M.P.H., C.T. (A.S.C.P.)<sup>CM</sup>**; Program Director and Associate Professor

Cytotechnology Program

University of Arkansas for Medical Sciences

College of Health Related Professions, UAMS #597-1

4301 West Markham Street, Little Rock, Arkansas 72205

Telephone: (501) 686-5776

Fax: (501) 526-6563

E-mail: [simpsondonald@uams.edu](mailto:simpsondonald@uams.edu)

Web site: <http://www.uams.edu/chrp/cytotechnology/>

**Faculty:** L. Bloom, D. Simpson, C. Smith

**Medical Director:** M. Johnson

**Donald D. Simpson, Ph.D., M.P.H., C.T. (A.S.C.P.)<sup>CM</sup>**; Chairman, Department of Laboratory Sciences

(See page 68 for information about the Medical Technology Program)

### THE PROFESSION

With the use of a microscope, cytotechnologists use morphologic (size and shape) criteria to decide whether a cell sample is normal, inflamed, premalignant or malignant. Cytotechnologists may assist clinicians in obtaining cellular samples from various body sites. They then process these specimens, using a variety of techniques, in preparation for microscopic examination. The cytotechnologist signs out negative specimens, while reviewing abnormal cases with a pathologist. At that time, a final diagnosis is reported to the clinician who is treating the patient. The well-trained cytotechnologist is capable of distinguishing a variety of disease processes in arriving at a final diagnosis. In learning to do this, cytotechnologists must be able to understand symptomatology and relate these manifestations to cellular responses to disease. Cytotechnologists are part of the team involved with the total care of the patient. As such, they may work as laboratory scientists, or they may become involved in administration, education or research. These kinds of opportunities may exist in hospitals, private laboratories, university centers, government facilities or in industry.

### THE PROGRAM

The College of Health Related Professions' program in cytotechnology, jointly sponsored by the Department of Pathology of the College of Medicine, offers a Bachelor of Science degree. The professional portion of the curriculum encompasses 40 SC over 12 months of full-time study beginning in August. Contact the program director for further details.

### CERTIFICATION AND LICENSURE

Graduation from the program establishes eligibility to apply to take the national registry examination in Cytotechnology given by the America Society of Clinical Pathologists Board of Registry and become registered as a

cytotechnologist (CT(ASCP)). Successful completion of the program does not itself ensure registration. Each student is responsible for familiarizing himself/herself with the applicable registration requirements.

### PREPROFESSIONAL CURRICULUM

Students, to be eligible for admission, must have completed 20 SC of biological sciences (cell biology and histology are highly recommended courses), 8 SC of chemistry, 3 SC of mathematics, 29 SC of specified general education course work, and 24 SC of elective course work before the professional phase of the program begins. These credits may be completed at any regionally accredited college or university, but must fulfill all College of Health Related Professions requirements regarding acceptance of transfer credit.

Persons admitted into the professional portion of the cytotechnology program must have maintained a minimum GPA of 2.0 and completed a minimum of 84 SC, at least five (5) of which are upper level (junior/senior). These credits may be completed at any accredited college or university, but must fulfill all College requirements regarding acceptance of transfer credit. The 60 SC listed below must be included along with 24 SC of elective course work.

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE</b>	
<b>Biological Science</b>	
Cell Biology, Histology, Microbiology, Zoology, Genetics, General Biology, Bacteriology, Parasitology, Anatomy and Physiology	20
<b>Chemistry</b>	
Basic, two-semester sequence of principles of chemistry with laboratories; courses must be at least the equivalent of the University of Arkansas at Little Rock's Fundamental Chemistry I (1400) and Fundamental Chemistry II (1401).	8

## Mathematics

College Algebra or higher level mathematics	3
	<u>31</u>

## COMMUNICATIONS

Fundamentals of Speech or Speech Communication	2
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## LIBERAL ARTS

English Composition I	3
English Composition II	3
History of Civilization or World History	6
American History or National Government	3
	<u>15</u>

## FINE ARTS

Art or Music or Theater Art	3
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## HUMANITIES

Philosophy, Political Science, Literature, or Humanities	3
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## SOCIAL SCIENCES

Psychology, Sociology, Anthropology, Geography, or Economics	6
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## ELECTIVES

<b>TOTAL</b>	<u>24</u> <b>84</b>
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Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## PROFESSIONAL CURRICULUM

The following 40 SC are required in the professional program:

Course #	Title	Semester	Credit
<b>Fall (1)</b>			
CYTO 4411	Introduction to Cytotechnology		4
CYTO 4412	Gynecological Cytopathology I		4
CYTO 4313	Gynecological Cytopathology II		3
CYTO 4614	Non-Gynecological Cytopathology I		6
			<u>17</u>
<b>Spring (2)</b>			
CYTO 4221	Laboratory Operations		2
CYTO 4225	Molecular Diagnostics		2
CYTO 4126	Molecular Diagnostics Laboratory		1
CYTO 4623	Non-Gynecological Cytopathology II		6
CYTO 4424	Cytology Internship I		4
			<u>15</u>
<b>Summer (3)</b>			
CYTO 4531	Cytology Internship II		5
CYTO 4331	Comprehensive Cytotechnology		3
			<u>8</u>
<b>TOTAL</b>			<b>40</b>

A grade of "F" or a mark of "U" or "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the

program. A grade of "D" in the following professional courses is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program: Gynecological Cytopathology I (CYTO 4412) and Cytology Internship II (CYTO 4531).

## APPLICATION PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation in the program. Applications must be received by **May 15** (see page 9) to be assured of consideration for admission. A grade point average of at least 2.50 is required in the biology courses to be considered for admission to the program. See page 8 for further information on deadlines and procedures for admission.

Early consideration will be given to those who have submitted complete applications (see required items below) by the early consideration deadline. For applicants to the Fall semester, the early consideration deadline is March 1 (see page 9); applications must be received by May 15 to be assured of consideration for admission. In the event the class is not filled from those applicants, the application deadline may be extended to as late August 1. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the program office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work. A GPA of at least 2.50 is required in the biology courses for admission.
4. **Interview:** Qualified applicants are contacted to arrange an interview after receipt of application and all transcripts.
5. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the CHRP Office of Student Affairs by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## **PROFESSIONAL COURSE WORK**

### **CYTO 4126—Molecular Diagnostics Laboratory**

Laboratory for Molecular Diagnostics 4225. Emphasis on basic molecular techniques such as DNA extraction and quantitation, restriction enzyme digestion, polymerase chain reaction, and agarose gel electrophoresis.

### **CYTO 4221—Laboratory Operations**

Principles of management, supervision, and laboratory safety. A seminar and practicum approach will be utilized with an emphasis on problem-solving and ethical practice as related to cytopathology.

### **CYTO 4225—Molecular Diagnostics**

Explores the use of molecular techniques for the diagnosis of disease. Includes tests for genetic disorders (both inherited and acquired); infectious diseases, such as HIV and hepatitis C; tissue histocompatibility for organ transplants; and human identity testing.

### **CYTO 4313—Gynecological Cytopathology II**

Histopathology and cytopathology of endometrial hyperplasia; adenocarcinoma of the endocervix and endometrium; benign and malignant lesions of the tubes, ovaries, vulva, and vagina. Radiation biology, irradiation and chemotherapy induced atypia. Prerequisite: CYTO 4412.

### **CYTO 4331—Comprehensive Cytotechnology**

Discussions of the cytology of all major body sites, includes computer image reviews. Emphasis on preparation for comprehensive examinations in cytotechnology.

### **CYTO 4411—Introduction to Cytotechnology**

Introduction to cell morphology, cell cycle, and principles of cytopreparation. Emphasis on the anatomy, histology, and cytopathology of the female genital tract under normal conditions.

### **CYTO 4412—Gynecological Cytopathology I**

Histopathology and cytopathology of inflammation, benign proliferative reactions, pre-malignant lesions, carcinoma in situ, microinvasive, and invasive squamous carcinoma. Prerequisite CYTO 4411.

### **CYTO 4424—Cytology Internship I**

Supervised clinical internship within an accredited cytology laboratory with an emphasis on pre-screening cytopathology specimens from all body sites. Students may also participate in observing fine needle aspiration biopsies. Prerequisite: CYTO 4623.

### **CYTO 4531—Cytology Internship II**

Supervised clinical internship within an accredited cytology laboratory with an emphasis on pre-screening cytopathology specimens from all body sites. Students may also participate in observing fine needle aspiration biopsies. Prerequisite: CYTO 4424.

### **CYTO 4614—Non-Gynecological Cytopathology I: Respiratory, Gastrointestinal, and Urinary Tracts**

Cytopathology of respiratory, gastrointestinal, and urinary tracts. Includes methods of obtaining and processing specimens, microbiology, and the role of cytology in evaluating lung, gastrointestinal tract, and urinary tract diseases. Continuation of cytopreparation in prescreening of the female genital tract. Prerequisite: CYTO 4313.

### **CYTO 4623—Non-Gynecological Cytopathology II: Body Fluids and Fine Needle Aspirates**

Cytopathology of body fluids and fine needle aspirations from multiple body sites. Emphasis on anatomy, histology, and methods of specimen procurement, cytopreparation techniques, and histopathologic correlations. Prerequisite: CYTO 4614.

# DENTAL HYGIENE PROGRAM

## Department of Dental Hygiene

*The Dental Hygiene Program is accredited by the American Dental Association, Commission on Dental Accreditation.*

**Susan Long, Ed.D., R.D.H.,** *Chairman and Professor*  
Department of Dental Hygiene  
University of Arkansas for Medical Sciences  
College of Health Related Professions  
UAMS, #609; CHRP Building 4, Room G24  
4301 West Markham Street, Little Rock, Arkansas 72205  
Telephone: (501) 686-5734  
E-mail: [longsusanl@uams.edu](mailto:longsusanl@uams.edu)  
Web site: <http://www.uams.edu/chrp/dentalhygiene/default.asp>

**Faculty:** L. Bollen, Jr., V. Goral (Emerita), J. Hoelzeman, S. Long, T. Nelms (Emeritus), C. Pace, R. Sledge, N. Smith, K. Truax (Emeritus), C. Warren, M. Zoeller

**Clinical Faculty:** R. Abbott, J. Antonetz, K. Atkinson, P. Baker, F. Church, B. Coleman, R. Daves, M. De`Anda, C. Esquivel, J. Hazelwood, D. Johnson, L. Mouden, B. Petkovich, R. Pleis, H. Reed, C. Robinson, K. Simmons, R. Simpson, J. Spray, J. Taylor, T. Turpin, S. Vester, M. Wallis, F. Younger

### THE PROFESSION

The dental hygienist is a valuable member of the dental health team whose major responsibilities involve preventing oral disease through patient education, removing deposits from the teeth, exposing radiographs (x-rays), applying fluoride and sealants to the teeth, administering local anesthesia, and nutritional counseling. Opportunities for employment include working in a private dental office, state or federal government agencies, public and private schools, industry, dental product sales, and dental hygiene education. The future may bring employment opportunities in hospitals, nursing homes, and other treatment sites.

### THE PROGRAM

The Department of Dental Hygiene offers both Associate of Science and Bachelor of Science degree options. Graduation from either degree option qualifies the student to apply for state, regional, and national examinations required for licensure.

The professional portion of the curriculum consists of four (4) fall/spring semesters and one (1) summer semester. The program begins in the fall. Students completing this phase receive an Associate of Science degree. The majority of our recent graduates, however, have elected to pursue the bachelor's degree option. This requires additional general education course work plus 12 SC of upper-division (junior/senior) course work above and beyond the professional curriculum, and electives for a minimum of 124 SC.

The Department has two program sites: Little Rock and a distant site on the campus of Arkansas State University Mountain Home (ASUMH). Applicants to the ASUMH distant site who are residents of the following 10 counties served by the AHEC North Central are given first consideration in admissions to the ASUMH site: Baxter, Cleburne, Fulton, Independence, Izard, Marion, Searcy, Sharp, Stone, and Van Buren.

The program receives significant support from the Department of Veterans Affairs, Central Arkansas Veterans Healthcare System (CAVHS). A portion of the clinical education occurs at the CAVHS.

Program information sessions are offered each year. Please call the Department for more information.

### CERTIFICATION/LICENSURE

Satisfactory completion of the professional course work in either the associate or baccalaureate degree tracks satisfies academic and clinical eligibility requirements to apply for Arkansas licensure and national certification by the American Dental Association. Health care provider CPR certification is required for all dental hygiene students. CPR instruction is available through the American Heart Association, and students must arrange to take a course at their expense.

### FINANCIAL ASSISTANCE

In addition to the general financial aid opportunities previously described in the UAMS Student Financial Services section of this catalog, the Department can provide information on program-specific financial assistance. Contact the department chairman for further information regarding the sources of aid which may be available to qualified dental hygiene students.

### PREPROFESSIONAL CURRICULUM

Both the Associate of Science and Bachelor of Science degrees require 34 SC of preprofessional course work and 68 SC of professional course work.

The bachelor's degree requires an additional 12 SC of basic education course work and 12 SC of additional upper level course work.



At least 45 SC of the total course work appearing on the student's degree plan must be courses taken at the upper level (junior or senior). **Students are encouraged to consult with the department chairman regarding specific upper level course work requirements.**

The following 34 SC of courses marked with an asterisk (\*) are required for admission. All listed courses are required from a regionally accredited post-secondary academic institution, and must fulfill all College requirements regarding acceptance of transfer credit. If in doubt of the suitability of the following prerequisite courses, please call the Department for clarification.

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE</b>	
<b>Chemistry</b>	
Basic, one-semester principles of chemistry course with laboratory*	4
<b>Biology</b>	
Basic, one semester principles of biology course with laboratory. (A Zoology course is also acceptable.)*	4
<b>Microbiology</b>	
Basic one semester course with a laboratory*	3
<b>Mathematics</b>	
College Algebra or higher mathematics*	3
<b>Computer Science</b>	
Computer Fundamentals/Applications*	<u>3</u>
	17
<b>LIBERAL ARTS</b>	
<b>History</b>	
History of the United States or National Government*	3
History of Civilization <sup>1</sup>	6
<b>English Composition</b>	
Basic, two-semester sequence of English Composition*	<u>6</u>
	15
<b>FINE ARTS</b>	
Music, Art, Theater <sup>1</sup>	3
<b>HUMANITIES</b>	
Philosophy, Political Science, Literature, or Humanities <sup>1</sup>	3
<b>SOCIAL SCIENCES</b>	
<b>Psychology</b>	
General Psychology*	3
<b>Sociology</b>	
Introduction to Sociology*	<u>3</u>
	6
<b>COMMUNICATIONS</b>	
<b>Speech Communication</b>	
Fundamentals of Speech or Speech Communication*	<u>2</u>
<b>TOTAL</b>	<b>46</b>

Chemistry, biology, and microbiology courses must include laboratory sections and must have been completed not more than seven years prior to entry into the program.

<sup>1</sup>These 12 SC course work are required for the bachelor's degree.

Proof of successful completion of course work taken in a semester immediately preceding entry into the professional curriculum must be presented before registration.

**Bachelor's Degree Program.** In addition to the 34 SC of prerequisite course work and the 68 SC in the dental hygiene curriculum, the following 24 SC are required for the BS degree and must be completed prior to Commencement: 3 SC fine arts, 3 SC humanities, 6 SC world civilization, and 12 SC additional upper level electives.

## PROFESSIONAL CURRICULUM

The following 68 SC for both the Associate of Science and Bachelor of Science degrees are required in the professional program:

Course #	Title	Semester Credit
<b>Fall (1)</b>		
DHY 2311	Chemistry for Biological Sciences	3
DHY 2312	Dental Hygiene Theory	3
DHY 2413	Dental Hygiene Instrumentation	4
DHY 2314	Human Anatomy and Physiology I	3
DHY 2215	Oral Anatomy	2
DHY 2116	Oral Embryology and Histology	1
DHY 2217	Dental Radiography I	<u>2</u>
		18
<b>Spring (2)</b>		
DHY 2521	Dental Hygiene Clinic I	5
DHY 2322	Oral Medicine	3
DHY 2223	Dental Radiography II	2
DHY 2425	Human Anatomy and Physiology II	4
DHY 2327	Dental Materials	<u>3</u>
		17
<b>Summer (3)</b>		
DHY 3145	Dental Hygiene Clinic—Summer	1
DHY 3246	Local Anesthesia	<u>2</u>
		3
<b>Fall (4)</b>		
DHY 3531	Dental Hygiene Clinic II	5
DHY 3332	Pharmacology	3
DHY 3344	Dental Health Education and Community Dentistry	3
DHY 3334	Pathology	3
DHY 3335	Periodontology	<u>3</u>
		17
<b>Spring (5)</b>		
DHY 3541	Dental Hygiene Clinic III	5
DHY 3342	Management of Patients with Special Needs	3
DHY 3343	Practice Management	3
DHY 3233	Nutrition	<u>2</u>
		13
<b>TOTAL</b>		<b>68</b>

A grade of "F" or a mark of "U" or "NC" is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program. A grade of "D" in the following professional courses is not acceptable for progression to the next semester, nor is it

acceptable for graduation if it occurs in the last semester of the program: Dental Hygiene Theory (DHY 2312), Dental Hygiene Instrumentation (DHY 2413), Dental Radiography I (DHY 2217), Dental Hygiene Clinic I (DHY 2521), Dental Radiography II (DHY 2223), Local Anesthesia (DHY 3246), Dental Hygiene Clinic II (DHY 3531), Dental Hygiene Clinic III (DHY 3541), Dental Hygiene Clinic—Summer (DHY 3145).

## APPLICATION PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation in the program. All application materials must be received by **March 1** (see page 9) to be considered for admission. No applications will be reviewed after this date. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work. A minimum cumulative and prerequisite GPA of 2.75 is required for admission. Additionally, applicants must have completed a minimum of 18 SC of the prerequisite course work prior to the application deadline. Two of the three science prerequisite courses must be completed prior to the application deadline.
4. **ACT Scores:** Scores must be documented on an official high school transcript or sent directly from ACT. A minimum ACT composite score of 20 is required for admission.
5. **Professional Observation Form:** One (1) completed professional observation form from a dentist or a dental hygienist is required. That professional observation must reflect evidence of previous exposure to the profession of dentistry, such as observation of at least 20 hours in a dental office or actual dental assisting experience. The professional observation form will be provided with the application packet.
6. **Interview:** The most qualified applicants will be contacted by the department to arrange an interview after the application packet is complete.
7. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.

**Transcripts “issued to the student” will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone (501) 686-5730.**

**Re-application Policy:** Students who are dismissed from the Dental Hygiene Program for academic reasons or withdraw by their own decision and wish to be considered for readmission for a subsequent semester must reapply to the program as new applicants, adhering to all policies and requirements in effect at the time of their reapplication.

## PROFESSIONAL COURSE WORK

### DHY 2116—Oral Embryology and Histology

Development and composition of tissues of the oral cavity and related structures.

### DHY 2215—Oral Anatomy

Anatomy of dental structures.

### DHY 2217—Dental Radiography I

Introduction to radiographic essentials. Emphasis on safety precautions, paralleling technique, and processing of exposed film.

### DHY 2223—Dental Radiography II

History and development of radiography, biological effects of exposure, extraoral techniques, and interpretation of processed film. Prerequisite: DHY 2217.

### DHY 2311—Chemistry for Biological Sciences

Introduction to organic and biochemistry. Provides a foundation for anatomy, physiology, nutrition, pathology, microbiology, and pharmacology.

### DHY 2312—Dental Hygiene Theory

Orientation to preclinical procedures. Emphasis on prevention of disease transmission, examination techniques, medical histories, etiology of plaque, calculus, and periodontal disease.

### DHY 2314—Human Anatomy and Physiology I

Functions of the major organ systems. Emphasis on physiology, microanatomy, and macroanatomy.

### DHY 2322—Oral Medicine

Patient interviews, medical/dental history, clinical oral examination. Includes recognition and description of disease processes and oral pathology. Emphasis on microbiology and the role of microorganisms in the disease process.

### DHY 2327—Dental Materials

Restorative and impression materials and abrasive agents. Includes physical properties and manipulation variables.

### DHY 2413—Dental Hygiene Instrumentation

Orientation and clinical application of instruments and practical experience in performing the oral prophylaxis.

### DHY 2425—Human Anatomy and Physiology II

Continuation of Human Anatomy and Physiology I. Includes anatomy of the head and neck with emphasis on osteology, neurology, and the circulatory system.

**DHY 2521—Dental Hygiene Clinic I**

Clinical application of dental hygiene techniques. Emphasis on patient medical history, aseptic techniques, patient assessment procedures, instrumentation, patient management, professional behavior, and instrument sharpening. Prerequisite: DHY 2312, 2413, 2217.

**DHY 3145—Dental Hygiene Clinic—Summer**

Provides for continuous clinical experience to enhance skills and promote clinical competence. Offered in summer term only.

**DHY 3233—Nutrition**

Introduction to the science of nutrition and its oral relevance. Emphasis on preventive dentistry and counseling for dental disease prevention.

**DHY 3246—Local Anesthesia**

Introduces principles related to local anesthetic injections and provides for the clinical application of techniques. Reviews related anatomical, neuro-physiological, and pharmacological considerations. Prevention and treatment of local and systemic complications of local anesthesia are stressed.

**DHY 3332—Pharmacology**

Physiologic effects of medications. Emphasis on drugs used by the dental profession.

**DHY 3334—Pathology**

Basic concepts of pathology. Includes inflammation, immunology, changes due to microorganisms, neoplasms, nutrition, and hormonal influence.

**DHY 3335—Periodontology**

Periodontal diseases and the role of the dental hygienist in their diagnosis, prevention, and treatment.

**DHY 3342—Management of Patients with Special Needs**

Management techniques for geriatric, chronically ill and handicapped individuals. Includes topics and demonstrations related to head and neck cancer.

**DHY 3343—Practice Management**

Dental hygiene and its relationship to the practice of dentistry. Emphasis on procedures for patient management, recall, and record keeping. Includes ethical issues and the American Dental Hygienists Association Code of Ethics as well as jurisprudence topics.

**DHY 3344—Dental Health Education and Community Dentistry**

Dental health education and public health. Emphasis on the role of the hygienist in promoting dental health in the private office and community, education methods, biostatistics, and epidemiology.

**DHY 3531—Dental Hygiene Clinic II**

Continuation of Summer Clinic. Includes increased competency in instrumentation and patient management skills on periodontally involved patients. Prerequisite: DHY 2521, DHY 2223, and DHY 3145.

**DHY 3541—Dental Hygiene Clinic III**

Continuation of Dental Hygiene Clinic II. Includes increased competency in the use of curets on periodontally involved patients, root planing, subgingival curettage, use of the ultrasonic scaler, and time management. Prerequisite: DHY 2223, DHY 3531.

# DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM

## Department of Imaging and Radiation Sciences

*The Diagnostic Medical Sonography Program is accredited by The Commission on Accreditation of Allied Health Education Programs in cooperation with the Joint Review Committee on Education in Diagnostic Medical Sonography.*

**Anthony L. Baker, M.Ed., R.D.M.S., R.V.T.;** *Division Director and Assistant Professor*

*Division of Diagnostic Medical Sonography*

*Department of Imaging and Radiation Sciences*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #563*

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*FAX: (501) 686-6513*

*E-mail: bakeranthonyl@uams.edu*

*Web site: <http://www.uams.edu/chrp/Sonography>*

**Faculty:** *N. Agan, T. Angtuaco, A. Baker, K. Baldwin, S. Barringer, B. Butler, W. Diacon, T. DuBose, J. Eidt, I. Fahdi, R. Nation, W. Pedigo, D. Rands, E. Whitney*

**Rebecca L. Ludwig, Ph.D., R.T.(R)(QM)(ARRT);** *Chairman, Department of Imaging and Radiation Sciences*

The mission of the Diagnostic Medical Sonography Program is to provide a progressive academic and clinic educational environment for qualified students and prepare them as competent and compassionate health care workers.

### THE PROFESSION

Diagnostic Medical Sonography (DMS) is a specialized area of diagnostic imaging and the diagnostic medical sonographer is an integral part of the health care team. DMS is a technique that utilizes high frequency sound waves with appropriate detectors and display apparatus to produce diagnostic images of internal organs and structures. The diagnostic medical sonographer provides patient services using sonographic equipment in consultation with a physician. The sonographer assists the physician in gathering pertinent anatomical, physiological, and/or pathological sonographic data and images necessary to diagnose a variety of conditions and diseases.

Sonographers must demonstrate a high degree of motivation and good judgment and be able to work independently. The sonographer must work well with other health care professionals in providing quality service to the patient and must demonstrate empathy and ethical behavior in the practice of the profession.

Employment opportunities may be available throughout the state and nation in hospitals, clinics, physician offices, and industry. Suitably qualified educators, researchers, and administrators are also needed. The national demand for sonographers continues to exceed the supply of graduates.

### THE DMS PROGRAM

**Diagnostic Medical Sonography/Little Rock:** The College of Health Related Professions offers an Advanced Certificate and Bachelor of Science degree programs in Diagnostic Medical Sonography. Admission to the Advanced Certificate (basic) program requires applicants to have completed a two-

year allied health educational program that is patient-care related and be certified as a Registered Nurse, Nuclear Medicine Technologist, Radiologic Technologist, Respiratory Therapist, or Paramedic. In addition, applicants must complete the 17 semester credits (SC) of specified prerequisite courses (see page 44). The curriculum consists of 54 SC of specified course work offered over three (3) semesters and one (1) summer of full-time study. Admission to the Bachelor of Science program requires successful completion of 52 SC of specified prerequisite courses (see page 45). Prior allied health educational program completion and/or certification is not required for admission to the Bachelor of Science degree program. The professional curriculum for the program requires 72 SC of specified course work offered over four (4) semesters and one (1) summer of full-time study.

**Diagnostic Medical Sonography/Texarkana:** The Advanced Certificate and Bachelor of Science degree programs in Diagnostic Medical Sonography are offered in Southwest Arkansas in conjunction with the Area Health Education Center (AHEC) Southwest. The prerequisite and professional components of this program are the same as those of the Little Rock program as described above and on the following pages. For information contact: David Rands, B.A., R.D.C.S., R.V.T., R.D.M.S. or William Pedigo, R.D.M.S., R.T., (R)(ARRT); AHEC Southwest; 300 East 6th Street; Texarkana, Arkansas 75504. Telephone: (870) 779-6054.

**Career Ladder for Degree Completion:** The Division offers an on-line distance education career ladder opportunity for ARDMS-certified sonographers who want to pursue the Bachelor of Science in Diagnostic Medical Sonography. No additional clinical education is required, so the sonographer may continue to work at her/his job. The individual is responsible for meeting all required clinical prerequisites for specific ARDMS examinations: see [www.ARDMS.org](http://www.ARDMS.org). Contact the Division Director for more information.

## CERTIFICATIONS AND LICENSURES

Upon successful completion of the **Diagnostic Medical Sonography Program**, graduates are eligible to apply to take the national certifying examinations administered by the American Registry for Diagnostic Medical Sonography. See the on-line career ladder section above for exceptions.

To earn these credentials, candidates must pass the following American Registry for Diagnostic Medical Sonography (ARDMS) examinations:

**Registered Diagnostic Medical Sonographer (RDMS):** Sonographic Principles and Instrumentation **AND** Abdomen, **OR** OB/GYN, **OR** Neurosonology, **OR** Breast Sonography.

**Registered Vascular Technologist (RVT):** Sonographic Principles and Instrumentation **AND** Vascular Technology.

**Registered Diagnostic Cardiac Sonographer (RDMS):** Sonographic Principles and Instrumentation **AND** Adult Echocardiography, Pediatric or Fetal Echocardiography.

Successful completion of the program does not in itself ensure registration. Each student is responsible for familiarizing himself/herself with the applicable registration requirements. See: [www.ARDMS.org](http://www.ARDMS.org).

## TRACKS

There are three entry points for applicants to the DMS program. Those who completed a two-year allied health educational program that focuses on the care of patients, have successfully completed the 17 SC of specified prerequisite course work, and are certified as a Registered Nurse, Nuclear Medicine Technologist, Radiologic Technologist, Respiratory Therapist, or Paramedic may be accepted to enter the Advanced Certificate track. Upon completion of this approximately 18-month basic program, graduates will receive an Advanced Certificate in DMS. If they choose to continue for the B.S. in DMS, they must first successfully complete, or have completed, all 52 SC of specified prerequisite course work (of which the previous 17 SC is a part).

Applicants who have not completed a two-year allied health educational program that is patient-care related may be accepted into the B.S. program if they have completed all 52 SC of the specified prerequisite course work. When they successfully complete the final spring semester of the B.S. program they will be eligible to receive the B.S. degree in Diagnostic Medical Sonography.

Applicants who are certified by the American Registry for Diagnostic Medical Sonography (ARDMS) may be accepted into the online B.S. Career Ladder track if they have completed all 92 SC of the specified prerequisite course work. A minimum of one visit to the UAMS campus is required during the Career Ladder program. Applicants will normally complete the following:

1. ARDMS certification

2. 92 prerequisite semester credits transferred from any regionally accredited college or university, including:
  - a. A minimum of 52 semester credits of specific liberal arts and science courses (see the CHRP catalog, page 45).
  - b. 40 semester credits of electives; 13 semester credits of which must be upper level (3000 or 4000) electives. The upper level electives may be completed concurrently at UAMS or transferred from any 4-year regionally accredited college or university.
3. These prerequisite hours, from a regionally accredited institution of higher education, plus 32 or more semester credit hours of UAMS Diagnostic Medical Sonography online studies, must equal or exceed the 124 semester credits required for a Bachelor of Science degree in Diagnostic Medical Sonography. Of the 124 credits, a minimum of 45 must be upper level (3000 and 4000) courses.
4. The ARDMS certification is a mandatory prerequisite, since this degree completion program does not require additional clinical education. This may allow sonographers to continue to work in their current jobs while completing their degrees.
5. Essay: Submit an essay of 450-550 words describing your personal history in sonography and why you want to pursue a Bachelor of Science degree in Diagnostic Medical Sonography on-line. This essay must be submitted as an electronic attachment (Rich Text Format, .rtf file) to an email to the Division Director at: [bakeranthonyl@uams.edu](mailto:bakeranthonyl@uams.edu).

## ADVANCED CERTIFICATE (BASIC PROGRAM) PREPROFESSIONAL CURRICULUM

In addition to completing a two-year allied health education program that is patient-care related, the following 17 SC are required from an accredited college or university and must fulfill all College requirements regarding acceptance of transfer credit:

Area/Typical Course Title	Minimum Semester Credit
College Algebra (or higher level Mathematics)	3
Human Anatomy and Physiology**	8
Introductory College Physics***	3
Computer Fundamentals/Applications*	3
<b>TOTAL</b>	<b>17</b>

To be considered for acceptance into the program, the applicant must have earned a CGPA of 2.5 or higher at the time of application. In addition, only grades of "C" or higher are accepted in prerequisite course work.

\*Computer fundamentals must be completed no more than seven years prior to admission into the program.

\*\*Anatomy and physiology courses must cover all body systems and include accompanying laboratory sections. **NOTE CHANGE:** Effective August, 2009 Anatomy and Physiology I & II will be required, 8 SC (two 4 hour courses with laboratory).

\*\*\*Introductory College Physics must cover wave motion, heat, electricity, force, and energy.

Actual course titles may vary among institutions. Consult the Division Director for preprofessional counseling.

Fulfillment of the Diagnostic Medical Sonography preprofessional curriculum does not assure admittance into the professional program (please see Application Procedures and Deadlines). Not more than one course in the following group will be accepted in transfer to meet degree requirements: band, studio, physical education, military science, English as a second language (ESL), manual skills.

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## ADVANCED CERTIFICATE (BASIC PROGRAM) PROFESSIONAL CURRICULUM

**Advanced Certificate:** The following 54 SC are offered in the Advanced Certificate Diagnostic Medical Sonography professional program. All courses as listed below must be successfully completed to obtain the Advanced Certificate.

Course #	Title	Semester	Credit
<b>Fall (1)</b>			
DMS 3211	Sectional Anatomy		2
DMS 3312	Introductory Physics		3
DMS 3313	Abdominal Sonography		3
DMS 3221	Gynecologic Sonography		2
DMS 3514	Clinical Practicum I		5
			<u>15</u>
<b>Spring (2)</b>			
DMS 4242	Sonographic Conference		2
DMS 3222	Advanced Physics		2
DMS 3321	Sonographic Applications: Obstetrics		3
DMS 3824	Clinical Practicum II		8
			<u>15</u>
<b>Summer (3)</b>			
DMS 3541	Clinical Practicum III		5
DMS 4342	Introductory Cardiac & Vascular Sonography		3
			<u>8</u>
<b>Fall (4)</b>			
DMS 4241	Advanced Obstetrics, Genetics, and Pathology		2
DMS 3323	Sonographic Survey		3
DMS 4352	Doppler Sonography & Advanced Hemodynamics		3
DMS 4843	Clinical Practicum IV		8
			<u>16</u>
<b>TOTAL</b>			<b>54</b>

All professional courses must be completed with a grade of "C" or higher for progression to the next semester and for graduation.

**Advanced Certificate in Diagnostic Medical Sonography:** Qualified students who successfully complete all 17 SC of the preprofessional courses and 54 SC of the Advanced Certificate professional course work, for a total of 71 SC, are eligible upon graduation to receive the Advanced Certificate in Diagnostic Medical Sonography.

## ADVANCED CERTIFICATE (BASIC PROGRAM) APPLICATION PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation in the Diagnostic Medical Sonography program. Applications must be received by **March 1** (see page 9) to be assured of consideration for admission. See page 8 for further information on deadlines and procedures for admission. Applicants must provide:

- Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
- Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
- Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work. A minimum CGPA of 2.5 or higher for all undergraduate courses is required.
- Certification/Registration:** Provide official transcripts verifying completion of a two-year allied health education program that is patient-care related.
- Counseling:** Qualified applicants must present themselves in person for academic counseling in the department. This counseling session will be scheduled by the program.
- TOEFL scores as applicable. See International Applicants, pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## BACHELOR OF SCIENCE DEGREE PREPROFESSIONAL CURRICULUM

The following 52 SC are required from an accredited college or university and must fulfill all College requirements regarding acceptance of transfer credit:

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE</b>	
College Algebra (or higher level Mathematics)	3
Human Anatomy and Physiology**	8
Introductory College Physics***	3
	<u>14</u>
<b>LIBERAL ARTS</b>	
English Composition I	3
English Composition II	3
American History or National Government	3
History of Civilization or World History I	3
History of Civilization or World History II	3
	<u>15</u>
<b>SOCIAL SCIENCES</b>	
Psychology	3
Sociology	3
	<u>6</u>
<b>COMMUNICATIONS</b>	
Speech or Oral Communication	2
<b>COMPUTER SCIENCE</b>	
Computer Fundamentals/Applications*	3
<b>FINE ARTS</b>	
Art, Music, Theater, Architecture, or Film	3
<b>HUMANITIES</b>	
Philosophy, Political Science, Literature, or Humanities	3
<b>ELECTIVES</b>	
	<u>6</u>
<b>TOTAL</b>	<b>52</b>

To be considered for acceptance into the program, the applicant must have earned a CGPA of 2.5 or higher at the time of application. In addition, only grades of "C" or higher are accepted in prerequisite course work.

\*Computer fundamentals must be completed no more than seven years prior to admission into the program.

\*\*Anatomy and physiology courses must cover all body systems and include accompanying laboratory sections. **NOTE CHANGE:** Effective August, 2009 Anatomy and Physiology I & II will be required, 8 SC (two 4 hour courses with laboratory).

\*\*\*Introductory College Physics must cover wave motion, heat, electricity, force, and energy.

Actual course titles may vary among institutions. Consult the Division Director for preprofessional counseling.

Fulfillment of the Diagnostic Medical Sonography preprofessional curriculum does not assure admittance into the professional program (please see Application Procedures and Deadlines). Not more than one course in the following group will be accepted in transfer to meet degree requirements: band, studio, physical education, military science, English as a second language (ESL), manual skills.

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence;

(b) all program-specific mathematics, biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## BACHELOR OF SCIENCE DEGREE PROFESSIONAL CURRICULUM

**Bachelor of Science Degree:** In addition to the 52 SC of preprofessional courses, the following 72 SC are offered in the Bachelor of Science in Diagnostic Medical Sonography professional program. All courses as listed below must be successfully completed to receive the Bachelor of Science degree.

Course #	Title	Semester Credit
<b>Fall (1)</b>		
DMS 2310	Basic Patient Care	3
DMS 3211	Sectional Anatomy	2
DMS 3312	Introductory Physics	3
DMS 3313	Abdominal Sonography	3
DMS 3221	Gynecologic Sonography	2
DMS 3514	Clinical Practicum I	5
		<u>18</u>
<b>Spring (2)</b>		
DMS 4242	Sonographic Conference	2
DMS 3222	Advanced Physics	2
DMS 3321	Sonographic Applications: Obstetrics	3
DMS 3824	Clinical Practicum II	8
		<u>15</u>
<b>Summer (3)</b>		
DMS 3541	Clinical Practicum III	5
DMS 4342	Introductory Cardiac & Vascular Sonography	3
		<u>8</u>
<b>Fall (4)</b>		
DMS 4241	Advanced Obstetrics, Genetics, and Pathology	2
DMS 4353	Intermediate Vascular Sonography, OR	
DMS 4354	Intermediate Cardiac Sonography	3
DMS 4352	Doppler Sonography & Advanced Hemodynamics	3
DMS 4843	Clinical Practicum IV	8
		<u>16</u>
<b>Spring (5)</b>		
DMS 4251	Cardiovascular Pathophysiology	2
DMS 4261	Current Issues in Health Care	2
DMS 4363	Advanced Vascular Sonography OR	
DMS 4364	Advanced Cardiac Sonography	3
DMS 4854	Clinical Practicum V	8
		<u>15</u>
<b>TOTAL</b>		<b>72</b>

All professional courses must be completed with a grade of "C" or higher for progression to the next semester and for graduation.

**Bachelor of Science in Diagnostic Medical Sonography:** Students who successfully complete all 52 SC of preprofessional course work and 72 SC of the Bachelor of Science professional courses, for a total of 124 SC, are eligible upon graduation to receive the Bachelor of Science degree in Diagnostic Medical Sonography. Senior students will select one of two areas of concentration in either vascular sonography or echocardiography.

**Advanced Placement:** The Department offers an advanced placement opportunity for ARDMS-prepared applicants who want to pursue specialized instruction in vascular sonography or echocardiography. Contact the DMS Division Director for more information.

## **BACHELOR OF SCIENCE DEGREE APPLICATION PROCEDURES AND DEADLINES**

Class size is limited and all applicants may not be selected for participation in the Diagnostic Medical Sonography program. Applications must be received by **March 1** to be assured of consideration for admission. See page 8 for further information on deadlines and procedures for admission. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work. A minimum CGPA of 2.5 or higher for all undergraduate courses is required.
4. **Professional Observation:** Applicants are required to gain an understanding of the responsibilities and duties of the diagnostic sonographer through direct observation in a hospital department where sonography is practiced and through discussion with current sonographers in the field. Details of the observation and a verification form will be sent to the applicant upon receipt of the completed application and application fee.
5. **Counseling:** Qualified applicants must present themselves in person for academic counseling in the division. This counseling session will be scheduled by the program.
6. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## **PROFESSIONAL COURSE WORK IN DIAGNOSTIC MEDICAL SONOGRAPHY**

### **DMS 2310—Basic Patient Care**

Discussion of common patient care theories, procedures, and techniques emphasizing the physical and psychological wellness of the patient during diagnostic imaging procedures. Ethical and legal principles are included.

### **DMS 3211—Sectional Anatomy**

A study of sectional anatomy of the transverse, longitudinal, and coronal planes are included with an emphasis on the organs of sonographic interest. Correlation with other imaging procedures will be emphasized.

### **DMS 3221—Gynecologic Sonography**

Gynecological anatomy and physiology are the foci of this course. Laboratory tests, signs and symptoms of gynecologic disease will be discussed. Scanning techniques and protocols will be included.

### **DMS 3222—Advanced Physics**

Lectures and related demonstrations covering advanced areas of ultrasonic propagation principles, transducer parameters, interactive properties of ultrasound with human tissues, possible biologic effects, advanced equipment types, instrumentation, and quality control procedures. An introduction to Doppler physics is included.

### **DMS 3312—Introductory Physics**

Lectures and related laboratory exercises covering the areas of ultrasonic propagation principles, transducer parameters, interactive properties of ultrasound with human tissues, possible biologic effects, basic equipment types, instrumentation, and quality control procedures.

### **DMS 3313—Abdominal Sonography**

Clinical applications in the abdomen include a review of gross abdominal anatomy, physiology, and pathology of every organ imaged in the abdomen. Pertinent laboratory tests as well as signs and symptoms related to disease processes of each organ will be discussed. Basic scanning techniques and protocols will be included.

### **DMS 3321—Sonographic Applications: Obstetrics**

Normal maternal changes and fetal development throughout gestation are reviewed. Embryonic and fetal measurements, anatomy, and anomalies of the first, second and third trimesters are studied. Scanning techniques and protocols are included. Is offered on a satisfactory/unsatisfactory grading basis.

### **DMS 3323—Sonographic Survey**

A discussion of Doppler, small parts scanning, pediatrics, geriatrics, breast, and vascular imaging are included.

### **DMS 3514—Clinical Practicum I**

Supervised clinical experience emphasizing sonographic procedures of the abdomen.

### **DMS 3541—Clinical Practicum III**

Continuation of clinical course work at the intermediate skill level. Prerequisite: DMS 3824.



**DMS 3824—Clinical Practicum II**

Supervised clinical experience at an intermediate level emphasizing sonographic procedures of the gynecologic system. Prerequisite: DMS 3514.

**DMS 4241—Advanced Obstetrics, Genetics, and Pathology**

Advanced topics in obstetrical sonography and fetal disease, including an introduction to genetics and the range of pathologies related to genetics and teratogenesis.

**DMS 4242—Sonographic Conference**

Specialists in the field will present special lectures focusing on specific organs or disease entities. Historical and new developments in techniques or applications of ultrasound and safety are discussed.

**DMS 4251—Cardiovascular Pathophysiology**

An advanced study of the structure, function, and pathologies of vascular and cardiac anatomy of sonographic interest.

**DMS 4261—Current Issues in Health Care**

A discussion of the moral, ethical, economical, and legal issues that confront sonographers as they practice in the dynamic health care environment.

**DMS 4342—Introductory Cardiac and Vascular Sonography**

This course is an introductory study of the vascular and cardiac anatomy of sonographic interest and includes terminology and ECG interpretation.

**DMS 4352—Doppler Sonography & Advanced Hemodynamics**

A discussion of Doppler sonography that includes basic ultrasound physics and instrumentation, continuous-wave Doppler, pulsed Doppler, and duplex-triplex scanning with emphasis on the analysis of Doppler spectral waveforms and interpreting color Doppler images. An in-depth analysis of normal cardiac and vascular hemodynamics and the effects of pathology on the flow of blood within the heart and throughout the vascular circulation are presented.

**DMS 4353—Intermediate Vascular Sonography**

This intermediate-level vascular course includes arterial and venous anatomy, vascular imaging protocols, basic scanning techniques, and transducer manipulation. B-Mode imaging, color flow image interpretation, and spectral Doppler waveform analysis will be discussed. Vascular disease and its effect on blood flow will be covered.

**DMS 4354—Intermediate Cardiac Sonography**

Cardiac anatomy, physiology, and hemodynamics will be the focus of this course. Laboratory tests, and signs and symptoms of cardiac disease will be discussed. Scanning techniques and protocols for pediatric and adult procedures will be included.

**DMS 4363—Advanced Vascular Sonography**

Advanced study of vascular anatomy and physiology are the foci of this course. Symptoms of venous and arterial diseases are discussed. Scanning techniques and protocols used to diagnose vascular pathology are also included.

**DMS 4364—Advanced Cardiac Sonography**

Hemodynamics, cardiovascular principles, cardiac doppler and the related physics, physiology and pathophysiology will be the focus of this course.

**DMS 4843—Clinical Practicum IV**

Supervised clinical experience at the advanced level emphasizing sonographic procedures of fetal and maternal anatomy. Prerequisite: DMS 3541.

**DMS 4854—Clinical Practicum V**

Advanced practice supervised clinical experience emphasizing vascular or cardiac sonographic procedures. Prerequisite: DMS 4843.

**Elective****DMS 3132—Applied Sonographic Procedures: Abdomen, Obstetrics & Gynecology, Physics and Instrumentation**

This is an elementary applications course emphasizing sonographic procedures in abdominal, obstetric and gynecologic imaging, including physics and instrumentation. A study of general sectional anatomy of the transverse, longitudinal, and coronal planes with an emphasis on the organs of sonographic interest. Selected pathology of these organs will be discussed. The control, operation and use of sonographic equipment to acquire images in these examinations will be explained.

**DMS 4300—Introduction to Health Care Management**

This course is an introduction to the functions of management in health care organizations. The concepts of management, supervision, and leadership are included.

**DMS 4301—Health Care Systems in America**

This course is an introduction to the health care services provided within the United States of America. The evolution, structure, financing, and regulation of the nation's health care institutions will be covered. In addition, ethics and legal issues in medicine will be discussed.

**DMS 4303—Neurosonography**

This course is a study of fetal/pediatric brain and spinal cord anatomy. Anomalies of the fetal/pediatric brain and spinal cord are discussed. Scanning techniques and protocols used to diagnose pathology in these structures are also included.

# DIETETIC INTERNSHIP PROGRAM\*

## Department of Dietetics and Nutrition

*The Dietetic Internship Program is accredited by the Commission on Accreditation for Dietetics Education of The American Dietetic Association*

**Amanda Dawson, M.S., R.D., L.D.,** *Dietetic Internship Interim Director*

*Department of Dietetics and Nutrition*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #627*

*4301 West Markham Street, Little Rock, Arkansas 72205*

*Telephone: (501) 686-6166*

*E-mail: amdawson@uams.edu*

*Web site: <http://www.uams.edu/chrp/dietnutrition>*

**Faculty:** *A. Bercher, M. Brodie, P. Bryant, M. Cagle, N. Campalans, P. Carroll, A. Dawson, K. Denison, S. Finch, C. Garner, S. Handford, M. Hankins, A. Hobbs, J. Irgens, P. Johnson, T. Johnson, A. May, D. McClendon, R. Milam, M. Morgan, T. Pipkin, F. Price, M. Pyland, L. Reed, S. Rephan, D. Rhoads, E. Robken, R. Schichtl, C. Sellers, P. Snow, K. Staten, J. Wall, A. Wallace, C. Woods*

**Reza Hakkak, Ph.D.;** *Chairman, Department of Dietetics and Nutrition*

*(See page 30 for information about the Clinical Nutrition Program (M.S.))*

### THE PROFESSION

The dietitian is the translator of nutrition science into the skill of furnishing optimal nourishment to people. Traditionally, dietitians function as members of the health care team in providing nutritional care through assessment of nutritional needs, planning and implementation of nutritional care and provision of dietary counseling. In administrative dietetics, dietitians are traditionally concerned with all aspects of management of nutritional services through planning, budgeting, supervision, and computerized evaluation of food service systems. Increasingly, dietitians are involved in private, independent nutrition consultation and practice as well as assuming more corporate management roles in food industry, health, and promotion businesses.

As the overall recognition of the importance of nutrition increases in both disease treatment and prevention, highly specialized and advanced level roles are emerging for dietitians. These advanced level roles require practice as an entry-level dietitian with professional development of additional knowledge and skills. Graduate programs are designed to develop both advanced level knowledge and skills in various specialty areas such as pediatrics, geriatrics, clinical management, wellness counseling, nutrition support, and many others.

Graduates of the Dietetic Internship Program have been able to find employment in a variety of work environments throughout the United States.

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\*Students pursuing the Post-Baccalaureate Certificate in Dietetics and Nutrition are considered to be full-time students in the College of Health Related Professions (CHRP). The CHRP Catalog is considered the primary catalog for all students in this program. All provisions (including grievance procedures) in the CHRP Catalog and the CHRP Student Handbook are the authority applicable to students pursuing the Post Baccalaureate Certificate in Dietetics and Nutrition.

### THE PROGRAM

The dietetic internship program is jointly sponsored by the University of Arkansas for Medical Sciences and the Central Arkansas Veterans Healthcare System. Affiliations with a number of hospitals, school food service, and clinics in the central Arkansas area provide experiences which supplement and complement those received at the primary training sites. Admission requirements include a baccalaureate degree, verification from a didactic program in dietetics approved by The American Dietetic Association, and participation in a national computer matching program for dietetic interns (see internship admission requirements).

Master of Science students seeking admission to the Dietetic Internship Program must use the Dietetic Internship application process. That is, acceptance to the Master of Science Program does not ensure admission to the Dietetic Internship Program.

This program is accredited with the Commission on Accreditation for Dietetics Education (CADE) of The American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606. Telephone: (800) 877-1600, ext. 5400 or (312) 899-0040.

### CERTIFICATION AND LICENSURE

Upon graduation from the University of Arkansas for Medical Sciences/Central Arkansas Veterans Healthcare System Dietetic Internship Program, the Post-Baccalaureate Certificate in Dietetics is awarded. The Certificate establishes academic eligibility to apply for the national registration examination through The Commission on Dietetic Registration. Upon successful completion of the examination, the graduates become Registered Dietitians (RD) and eligible for state licensure in Arkansas. Successful completion of the program does not itself ensure registration or licensure. Each student is responsible for familiarizing himself/herself with the applicable registration and licensure requirements.

## FINANCIAL ASSISTANCE

In addition to the general financial aid opportunities previously described in the UAMS Student Financial Services section of this catalog, the department can provide information on program-specific financial assistance. Contact the Internship Director for further information regarding the different sources of aid which may be available:

**Arkansas Dietetic Association Scholarship:** This scholarship provides \$500.00 to an Arkansas dietetic intern. For more information, go to: <http://www.arkansaseatright.org>

**The American Dietetic Association Scholarships:** The American Dietetic Association offers several scholarships of \$500–\$3000 to dietetic interns and dietetic graduate students each year. Applications for these scholarships are available between mid-September and mid-January. The annual deadline for applications is mid-February. Scholarships are awarded for the following academic or program year (e.g., applications for the 2011-2012 academic year must be completed by mid-February 2011). Application forms may be requested from **The Scholarship Committee, The American Dietetic Association, 120 South Riverside Plaza, Suite 2000., Chicago, IL 60606** or at: <http://www.eatright.org/Foundation/scholarships/>.

## PROFESSIONAL CURRICULUM

**Post-Baccalaureate Certificate in Dietetics:** Students accepted into the internship program enter in August. During the internship, development of competencies in general dietetics is emphasized including clinical dietetics, food service administration, and community nutrition. A concentration in Medical Nutrition Therapy and Management in Dietetic Practice will be offered beginning in fall, 2010. Supervised practice through establishment of a working relationship with registered dietitians is emphasized. Seminars, lectures, and classes complement the student's practical experiences. The accredited program consists of a 40-week, full-time, experience with a minimum of 40 hours scheduled per week. Interns are required to enroll in 12 hours of graduate course work as well as clinical education experiences.

## APPLICATION PROCEDURES AND DEADLINES

**Dietetic Internship:** A bachelor's degree from an accredited university, a verification statement from an approved didactic program in dietetics, and a cumulative GPA of 2.7 and science GPA of 2.0 or above are required for consideration. Selection factors include: cumulative GPA (includes all collegiate course work), Science GPA, Dietetics GPA, application letter, resume, reference letters, extracurricular activities, work experience and GRE scores.

Class size is limited and all applicants may not be selected for participation in the program. All items below must be postmarked by **February 14, 2011** to be considered for admission:

1. **Application for Admission:** Standard American Dietetic Association (ADA) Application Form which can be downloaded from the department Web site.
2. **National Computer Matching Program:** The Internship program participates in the national computer matching of dietetic interns. Applicants must complete the online registration through D & D Digital to participate in the computer matching process. Information may be obtained from the undergraduate dietetic advisor or directly from **D & D Digital Company, 304 Main Street, Suite 301, Ames, IA 50010-6140. Telephone: (515) 292-0490, Fax: (515) 663-9427, <http://www.dnddigital.com/>**
3. **Official Transcripts and GRE Scores:** Current and complete official transcript(s) of all college work and official GRE scores are required. The transcripts must be original and be mailed by the college to be official. GRE scores must be mailed to the CHRP Office of Student Affairs. Use institutional code number 6146 to have scores sent directly to the College of Health Related Professions.
4. **Official Verification Statement:** An official verification or intent to complete statement (the original must be signed by the didactic program director in non-black ink and dated).
5. **References:** Use the standardized reference forms provided by The American Dietetics Association. Send three (3) references, one (1) each, from: advisor or major professor in dietetics, employer, and a professional reference. References may be sent individually or with the application packet. If they are sent with the application packet, they must be in a sealed envelope with the reference's signature across the seal. Only three (3) references will be used in the selection process.
6. **One-Page Resume:** Include paid and volunteer work experience. Experience in hospital dietetics is desirable but not required. Include extracurricular activities, honors, and awards indicative of a well-rounded life-style.
7. **Application Letter:** An application letter addressed to the Selection Committee. The letter should be computer-generated (utilizing 12-point font, single or double-spacing, and no more than two (2) pages). The letter should be in business format, addressed to the Selection Committee, and should include the following:
  - a. Why you want to enter the dietetic profession

- b. The areas in your previous experiences that have helped prepare you for a career in dietetics
  - c. Your short and long-term career goals
  - d. Why you are applying to the UAMS/CAVHS Dietetic Internship
  - e. Other information you consider relevant to the selection committee's decision making.
7. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
8. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the Department Office by the institution issuing the transcripts.**

Applicants are considered without regard to race, color, creed, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

### **NUTR 5333—Advanced Clinical Dietetics**

Integration of scientific principles of nutrition and food science into the use of foods and nutrients in disease prevention and treatment in accordance with clinical competencies for the entry-level dietitian. Corequisite: admission to Dietetic Internship and consent of faculty.

## **PROFESSIONAL COURSE WORK**

### **NUTR 5073—Practicum in Clinical Dietetics**

Supervised learning experience in clinical dietetics designed to meet specific objectives and achieve identified clinical nutrition competencies. Experiences scheduled in a variety of health care and community settings. This course is an elective in the MSCN program and a required core course in the internship program.

### **NUTR 5083—Practicum in Administrative Dietetics**

Supervised learning experiences in administrative dietetics to meet specific objectives and achieve identified management competencies. Experiences scheduled in a variety of units within health care facilities. This course is an elective in the MSCN program and a required core course in the internship program.

### **NUTR 5112—Nutrition Counseling**

Provides an understanding of the methods, strategies, and evaluation of nutrition and diet counseling to modify eating habits for health promotion and increase compliance with therapeutic regimens. Consideration of learning styles, nutritional anthropology, and instructional technology effectively applied in the health care setting. Prerequisite: NUTR 5033 or NUTR 5333: Advanced Clinical Nutrition or equivalent; and consent of faculty.

### **NUTR 5161—Advanced Nutrition Seminar**

Graduate seminar of important current research in clinical nutrition to reflect content, application to clinical practice, and study parameters and design. Students will read original papers, write critiques, and make presentations for discussion.

# EMERGENCY MEDICAL SCIENCES PROGRAMS

## Emergency Medical Sciences Department

*The Emergency Medical Sciences Paramedic Program is Accredited by the Commission on Accreditation of Allied Health Educational Programs (CAAHEP).*

**Danny Bercher, Ph.D., N.R.E.M.T.-P.;** *Chairman and Associate Professor*

*Department of Emergency Medical Sciences*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #635*

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*Web site: <http://www.uams.edu/chrp/ems/>*

**Faculty:** *D. Bercher, D. Mitchell, T. Rinehart, H. Shray*

**Medical Director:** *G. Hall*

**Associate Medical Director:** *C. Evans*

### THE PROFESSION

The paramedic is the highest level emergency medical services health care professional in the prehospital setting. The paramedic must be able to work independently and as a team leader rendering care to people under stressful conditions. The paramedic must demonstrate proficiency in anatomy, physiology, pathophysiology, pharmacology, advanced airway management, intravenous therapy, and medication therapy. Paramedics must also rapidly apply problem-solving skills to formulate and implement care plans for a wide array of situations including cardiac, trauma management, pediatric, geriatric, and other medical and behavioral emergencies.

The Emergency Medical Technician (EMT) is the entry-level professional in the emergency medical services system. The EMT is concerned primarily with basic life support prehospital care of acutely ill and injured patients.

Paramedics and EMTs can find career opportunities with ambulance services, fire departments, and industrial companies. In addition, paramedics are employed by emergency helicopter services, offshore oil companies, and as military combat medics.

### THE PROGRAMS

The Department offers the Associate's Degree and certificate in Emergency Medical Sciences. Successful program completion satisfies the eligibility requirements to apply for the paramedic credentialing examinations offered by the National Registry of Emergency Medical Technicians (NREMT). Graduates who complete the certificate program are eligible to complete the Associate's degree at a later time as long as all requirements of the degree plan are met.

Students can also enroll in individual courses offered by the department, including the Introduction to Emergency Medical Technology (EMS 1602), Foundations of the Paramedic (EMS 2210), Pathophysiology (EMS 2220), Emergency Medical

Responder (EMS 1291), and Anatomy and Physiology (EMS 1311). Students who successfully complete EMS 1602 may be eligible to challenge the Emergency Medical Technician (EMT) credentialing examinations offered by the NREMT.

**Note:** Successful completion of the above programs does not itself ensure licensure or registration. Each student is responsible for becoming familiar with the applicable licensure and registration requirements.

### PREPROFESSIONAL REQUIREMENTS

**Paramedic:** All applicants must hold a current Arkansas EMT license and a current American Heart Association CPR Healthcare Provider card (contact the department for details). Based on the applicant's academic performance history, further eligibility requirements are listed below:

1. Applicants with a high school cumulative grade point average (CGPA) of 2.0 or above are eligible for consideration for admission. Those applicants with a high school grade point average less than 2.0 must successfully complete college course work for eligibility in the program (see # 3).
2. Those applicants with a General Education Diploma (GED) are eligible for consideration.
3. Applicants who did not earn a CGPA of at least 2.0 (on a 4-point scale) in high school must have completed at least 9 SC of course work chosen from the list of required general education courses for this program (see page 18) from a regionally accredited higher education institution. (Credit earned through completion of a college-level EMT course taken at a regionally accredited institution of higher education may be applied for up to 3 SC of the 9 SC requirement.) Applicants who have completed 9 SC must have earned a grade of "C" or better in each of the courses in order to transfer that credit and be eligible for consideration for admission. Students

who have completed 9 SC or more of college work must submit transcripts of all the courses taken, and earned a CGPA of at least 2.0 to be considered for admission.

College-level course work is encouraged before entry into the Paramedic program. Students accepted into the paramedic program can choose a fall or spring entry depending on their circumstances. Students entering in the spring must have completed an anatomy and physiology course covering all body systems before beginning the program. Prospective students are encouraged to contact the Department for advisement. Approximately 35% of the paramedic program course work is delivered via the Internet.

**Associate of Science in Emergency Medical Sciences:** All students are eligible to complete the A.S. degree requirements. See the General Education Course Requirement section of this catalog and contact the department for additional details.

**EMT:** Individuals who possess a high school diploma (or equivalent) and hold a current American Heart Association CPR Healthcare Provider card are eligible to apply for this six (6) SC course (EMS 1602). Classes begin each January and August. A summer course can be offered if sufficient need exists. To be eligible for admission, applicants must be at least 18 years of age by the last day of the semester in which they wish to enroll.

## PROGRAM REQUIREMENTS

All paramedic students are required to have a thorough medical examination by a physician upon acceptance for admission and prior to registration for classes. Students are required to begin and complete a hepatitis B vaccination series if one has not been completed, or sign a waiver.

In order to progress to the next semester, all professional course work must be successfully completed with grade of "C" or higher. In addition, students must maintain a cumulative average of "C" or higher in all courses in order to enter any clinical area. All professional courses must be successfully completed in order to be eligible for licensure and graduation.

Classes begin in late August of every year; however, there is a spring entry option for eligible applicants. Classes are typically held one day per week with a few exceptions. Prospective students should be aware that at least 35% of the curriculum is provided online. Students are allowed to schedule their clinical time within program guidelines including weekends and weekdays. Clinical practicum is scheduled primarily on Saturdays with some weekday rotations. The following is a schedule of the required semester credit courses.

## PROFESSIONAL CURRICULUM

### Fall Entry

Course #	Title	Semester Credit
<b>Fall (1)</b>		
EMS 1311	Anatomy and Physiology*	3
EMS 1122	EKG Interpretation	1
EMS 2210	Foundations of the Paramedic	2
EMS 2220	Pathophysiology	2
EMS 1210	Clinical Preparation	2
EMS 1211	Clinical Practicum I	<u>2</u>
		12

### Spring (2)

EMS 1201	Patient Assessment	2
EMS 1340	Trauma Management	3
EMS 1320	Pharmacology	3
EMS 2501	Cardiovascular Care	5
EMS 1222	Clinical Practicum II	<u>2</u>
		15

### Summer (3)

EMS 1410	Medical Emergencies I	4
EMS 1233	Clinical Practicum III	<u>2</u>
		6

### Fall (4)

EMS 2310	Medical Emergencies II	3
EMS 1334	Life Span Development	3
EMS 2159	Paramedic Competencies	1
EMS 2250	Assessment Based Management	2
EMS 2431	Paramedic Field Internship	<u>4</u>
		13

### TOTAL

**46**

A grade of "D", "F", or a mark of "U" or "NC" is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program. Successful completion of the American Heart Association Advanced Cardiac Life Support course is required for the student to progress to Paramedic Field Internship (EMS 2431). The didactic portion of ACLS is taught during Cardiovascular Care (EMS 2501).

\*EMS 1311 or Anatomy and Physiology course equivalent covering all body systems is required as a prerequisite or corequisite no later than the first semester.

### Spring Entry\*\*

Course #	Title	Semester Credit
<b>Spring (1)</b>		
EMS 1201	Patient Assessment	2
EMS 1122	EKG Interpretation	1
EMS 1320	Pharmacology	3
EMS 2501	Cardiovascular Care	5
EMS 1210	Clinical Preparation	2
EMS 1211	Clinical Practicum I	<u>2</u>
		15

### Summer (2)

EMS 1410	Medical Emergencies I	4
EMS 1222	Clinical Practicum II	<u>2</u>
		6

<b>Fall (3)</b>			
EMS	2310	Medical Emergencies II	3
EMS	1334	Life Span Development	3
EMS	2250	Assessment Based Management	2
EMS	2210	Foundations of the Paramedic	2
EMS	2220	Pathophysiology	2
EMS	1233	Clinical Practicum III	<u>2</u>
			14
<b>Spring (4)</b>			
EMS	1340	Trauma Management	3
EMS	2159	Paramedic Competencies	1
EMS	2431	Paramedic Field Internship	<u>4</u>
			<u>8</u>
<b>TOTAL</b>			<b>43</b>

A grade of "D", "F", or a mark of "U" or "NC" is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program. Successful completion of the American Heart Association Advanced Cardiac Life Support course is required for the student to progress to Paramedic Field Internship (EMS 2431). The didactic portion of ACLS is taught during Cardiovascular Care (EMS 2501).

\*\*To enter in the Spring, a course in Anatomy and Physiology covering all body systems or EMS 1311 is required before admission.

## APPLICATION PROCEDURES AND DEADLINES

**Paramedic:** Class size is limited and all applicants may not be selected for participation in the program. Early consideration will be given those who have submitted complete applications (see the required items below) by **March 31** for Fall Entry or **October 1** for Spring Entry. Applications must be received by **June 15** for Fall Entry or **December 1** for Spring Entry to be assured of consideration for admission. In the event the class is not filled from those applicants, the application deadline may be extended. Applicants must complete all application requirements (1-6) below in order to receive consideration. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work to the CHRP Office of Student Affairs, 4301 West Markham, Slot 619, Little Rock, Arkansas 72205. A college Cumulative Grade Point Average (CGPA) of 2.0 is required for admission to the program.

If no college/university course work has been completed, arrange for each high school attended to forward an official transcript of your course work to the CHRP Admissions Officer. A high school CGPA of 2.0 is required for admission to the program if no college work has

been completed. Applicants who are not high school graduates must provide documentation of satisfactory scores on the General Education Development Test (GED).

4. **Official Documentation:** A copy of current AHA Healthcare Provider CPR card must be submitted by applicants to the EMT-Paramedic program.
5. **Letter of Application:** A letter written by the applicant is required. It should state the applicant's interest in the program and the field, and objective(s) to be achieved through completion of the course.
6. **Interview and Testing:** Qualified applicants are contacted to arrange an interview and to sit for the Asset Examination. This test assesses basic reading, writing, and mathematical skills.
7. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.

**Special Courses:** Special courses, including Introduction to Emergency Medical Technology (EMS 1602); Anatomy and Physiology (EMS 1311); and Medical Emergency Responder (EMS 1291), can be taken individually without acceptance into the paramedic program. Application for any of the special courses must be made under the Nondegree/Noncertificate student guidelines published in the Admission to the College section of this catalog. Class size is limited and all applicants may not be selected for participation. **Early consideration** will be given those who have submitted complete applications (see the required items below) by the early consideration deadline. For applicants to the Fall semester courses, the early consideration deadline is **March 31** (see page 9); applications must be received by **June 15**, to be assured of consideration for admission. For applicants to the Spring semester courses, the early consideration deadline is **September 30**, applications must be received by **December 1** to be assured of consideration for admission.

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application for EMT.
3. **High School Transcripts:** Arrange for high school transcripts that show proof of high school graduation to be provided to: CHRP Office of Student Affairs, 4301 West Markham, Slot 619, Little Rock, Arkansas 72205. Applicants who are not high school graduates must provide documentation of satisfactory scores on the General Education Development Test (GED).

4. **Letter of Application:** A self-constructed letter stating the course in which you wish to enroll and the objective(s) to be achieved through completion of the course is required.
5. **Nondegree/Noncertificate Form:** A signed statement that indicates the applicant has read, understands, and agrees to the requirements governing nondegree/noncertificate applications must be submitted. A standard form is available from the Office of Student Affairs and from the department for this purpose.
6. **Documentation:** A copy of current AHA Healthcare Provider CPR card must be submitted (only for EMS 1602).

**Transcripts “issued to the student” will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## PROFESSIONAL COURSE WORK

### EMS 1122—EKG Interpretation

This course covers cardiac anatomy and physiology with particular attention to cardiac electrical activity and the interpretation of electrocardiograms.

### EMS 1201—Patient Assessment

History taking, physical examination techniques, patient assessment in the field, clinical decision making, communications, and documentation. Emphasis on detecting, defining, and describing normal and pathological conditions.

### EMS 1210—Clinical Preparation

Prepares the student to care for patients in the clinical area by teaching the principles of intravenous access, medication administration, and airway management.

### EMS 1211, 1222, 1233—Clinical Practicum I, II, and III

Supervised rotations through selected clinical and field areas. Emphasis on developing and improving skills which reinforce classroom instruction.

### EMS 1291—Emergency Medical Responder

Prepares individuals to function as Emergency Medical Responders. The Emergency Medical Responder is an integral part of the Emergency Medical Services System and is usually the first to arrive at the scene in emergency situations. The Emergency Medical Responder uses a limited amount of equipment to perform initial assessment and intervention and is trained to assist other EMS providers. This level of provider is not intended to be utilized as the minimum staffing for an ambulance.

### EMS 1311—Anatomy & Physiology

Human Anatomy and Physiology from cellular structure to systems applications. Emphasis on the normal human anatomy and physiology process. Computer-aided instruction with a workbook. Recommended as a prerequisite but can be taken as a co-requisite.

### EMS1320—Pharmacology

Addresses the basic principles of pharmacology, including the history of pharmacology; drug regulation, nomenclature, and classification; and pathophysiological principles of drug uptake, utilization, and elimination in the body. This course will also cover basic medical terminology.

### EMS 1334—Life Span Development

Recognition, pathophysiology, and management of emergencies among gynecologic, obstetric, neonatal, pediatric, and geriatric patients.

### EMS 1340—Trauma Management

Trauma systems, mechanism of injury, pathophysiology, management, and treatment of traumatic injuries including hemorrhage, burns, thoracic trauma, soft tissue injury, head injury, spinal injury, abdominal injury, and musculoskeletal injury.

### EMS 1410—Medical Emergencies I

Recognition, pathophysiology, and management of patients with respiratory, neurologic, endocrine, anaphylactic, non-traumatic abdominal, and urologic emergencies.

### EMS 1602—Introduction to Emergency Medical Technology

This course includes all of the skills necessary for the individual to provide emergency medical care at a basic life support level with an ambulance service or in another specialized area. Completing this course fulfills all of the requirements for the students to challenge the Arkansas and National Registry of Emergency Medical Technicians certification examination.

### EMS 2159—Paramedic Competencies

This capstone course combines preparation and evaluation of significant entry level paramedic competencies including psychomotor and cognitive skills. Emphasis is placed on all psychomotor skills and cognitive aspects of the national professional credentialing examination.

### EMS 2210—Foundations of the Paramedic

A study of the roles and responsibilities within an EMS system, the importance of personal wellness, implementation of injury prevention activities, understanding legal issues, ethics, and principles of therapeutic communications.

### EMS 2220—Pathophysiology

Application of the general concepts of pathophysiology for the assessment and management of emergency patients. Pharmacological interventions are emphasized.

### EMS 2250—Assessment Based Management

Integration of assessment findings in order to formulate a field impression and implement a treatment plan for those with common physical, mental, and social complaints, chronic care problems, and financial challenges; abuse victims; and assault victims.



**EMS 2310—Medical Emergencies II**

Recognition, pathophysiology, and management of patients with toxicologic, substance abuse, hematologic, environmental, infectious, psychiatric, and behavioral emergencies.

**EMS 2431—Paramedic Field Internship**

Supervised experience in prehospital care settings. Emphasis on the application of previous course work in the field environment.

**EMS 2501—Cardiovascular Care**

Utilization of the assessment findings to formulate a field impression, to implement and evaluate the management plan for the patient experiencing a cardiac emergency. Includes Advanced Cardiac Life Support (ACLS) didactic.

In addition to regular course work, the following seminars and special workshops are offered occasionally to professionals in the field as continuing education course work: EMT Refresher, EMT-I Refresher, Paramedic Refresher; CPR Provider; CPR Instructor; EMT Instructor.

# GENETIC COUNSELING PROGRAM\*

## Department of Genetic Counseling

*The Genetic Counseling Program received full accreditation from The American Board of Genetic Counseling in April 2009.*

**Bruce R. Haas, M.S., C.G.C., CLSp(CG)**, Chairman  
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University of Arkansas for Medical Sciences  
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Web site: <http://www.uams.edu/chrp/genetics>

**Faculty:** N. Agan, K. Baldwin, S. Barringer, B. Butler, B. Haas, S. Kahler, L. Levitch  
**Medical Director:** G. B. Schaefer

### THE PROFESSION

Genetic Counselors are health care professionals who are prepared to provide genetic services to families seeking information about the likelihood of occurrence or reoccurrence of particular genetic diseases or birth defects. Genetic Counselors must be able to adeptly communicate genetic, medical, scientific, and technical information to such families in a comprehensive, understandable, and non-directive manner. The genetic counselor does so with knowledge of and insight into the psychosocial and cultural experiences important to each family in a client- and/or family-oriented manner.

Graduates of this program will be able to 1) elicit and interpret individual and family medical, developmental, and reproductive histories; 2) determine the mode of inheritance and risk of recurrence of genetic diseases and birth defects; 3) explain the etiology, natural history, diagnosis, and management of these conditions; 4) interpret and explain the results of genetic tests and other diagnostic studies; 5) perform a psychosocial assessment to identify emotional, social, educational, and cultural issues; 6) evaluate the client/family responses to the conditions or risks of occurrence; 7) promote informed decision-making about testing, management, reproduction, and communication with family members; 8) identify and use community resources that provide medical, educational, financial, and psychosocial support and advocacy, and 9) provide written documentation of medical, genetic, and counseling information for the family and other health care professionals.

### THE PROGRAM

The Department of Genetic Counseling offers a Master of Science degree in Genetic Counseling, through the College of Health Related Professions at the University of Arkansas for Medical Sciences. The curriculum is designed to emphasize the principles of human genetics, the applicability of related sciences to human medical genetics, the principles and practice of medical genetics, the psychosocial, social, ethical, and legal aspects of delivering genetic services, and the teaching skills and research methods needed to promote the use of genetic services.

The "classroom" portion of several courses in the curriculum uses a variety of distance education methods. Interactive video and Web-based lectures will be given both asynchronously and synchronously, depending on the material being presented. Students will be able to access the asynchronous portions of the curriculum via the Internet from the various campuses as well as from home and work areas. Synchronous portions of the curriculum require attendance at the UAMS campus. The clinical portion of the curriculum will take place in a face-to-face ("live") format, and may require students to travel relatively short distances to complete clinical rotations.

Practicums are an integral portion of this program. Clinical experiences provide students with first-hand experiences with families affected by a broad range of genetic diseases and birth defects. There is a sufficient number and variety of clinical experiences to ensure that all students receive adequate, supervised, genetic counseling experience and help prepare them for individual certification by the American Board of Genetic Counseling.

### CERTIFICATION

Graduates of this Master of Science degree program will be academically and clinically eligible to apply for the Board Certification through the American Board of Genetic Counseling. Successful completion of the program does not itself ensure such certification. Students are responsible for familiarizing themselves with applicable certification requirements.

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\*Students pursuing the Master of Science degree in Genetic Counseling are considered to be students in the Graduate School who are taking courses offered by the faculty of the College of Health Related Professions. Accordingly, the Graduate School Catalog is considered the primary catalog for all students in these programs. All provisions (including grievance procedures) in the Graduate School Catalog and the Graduate School Handbook are the authority applicable to students pursuing the Master of Science degree in Genetic Counseling.

## FINANCIAL ASSISTANCE

In addition to the financial aid opportunities described in the UAMS Student Financial Services section of the UAMS Graduate catalog, the department may have program-specific financial assistance. Contact the financial aid office at (501) 686-5454 for more information.

## PREPROFESSIONAL REQUIREMENTS

Students applying for admission to this graduate program must have earned an appropriate undergraduate degree (e.g., BS, BA) from a regionally accredited college or university. Preferred degrees are in biology, genetics, chemistry, and/or psychology, nursing, or related fields. At least one semester each of statistics, biochemistry, and upper level genetics is required. To be considered for admission, applicants must have a minimum grade point average of at least 3.0 (on a 4.0 scale) for all undergraduate course work. Satisfactory scores on the Graduate Record Examination (GRE) verbal, analytical, and quantitative sections are required. For all international applicants, official test results (i.e., scores) of the TOEFL and the GRE examination must be sent directly to UAMS by the Educational Testing Service. In addition, it is recommended that counseling experience (i.e., paid or volunteer experience on a crisis hotline or social services agency) be obtained. Experience in a clinical genetic counseling setting is recommended. The essay requirement includes a personal statement with a discussion of career goals and interest in the field of medical genetics/genetic counseling. The applicant should submit three (3) letters of recommendation from previous instructors or practicing professionals in the field.

## PROFESSIONAL CURRICULUM

The program requires a minimum of 58 graduate hours. Students must pass comprehensive examinations offered at the end of the program of study. A degree is awarded upon successful completion of all academic and practicum requirements. More specific information about program requirements can be secured by contacting the UAMS graduate school.

Course #	Title	Semester	Credit
<b>Fall (1)</b>			
GENC 5002	Introduction to Molecular Genetics		2
GENC 5023	Topics in Genetic Counseling I		3
GENC 5042	Medical Genetics		2
GENC 5052	Writing and Critical Analysis/Journal Club		2
GENC 5062	Human Embryology		2
GENC 5011	Clinical Genetics Field Placement I		<u>1</u>
			12

### Spring (2)

GENC 5013	Psychosocial Genetic Counseling/ Family Theory		3
GENC 5141	Genetic Research Principles		1
GENC 5153	Counseling/Interviewing		3
GENC 5172	Teratology and Prenatal Diagnosis		2
GENC 5182	Systems Disorders for Genetic Counselors		2
GENC 5192	Genetic Syndromes/Dysmorphology		2
GENC 5021	Clinical Genetics Field Placement II		<u>1</u>
			14

### Summer (3)

GENC 5142	Advanced Human Cytogenetics		2
GENC 5411	Genetics Laboratory Practicum		1
GENC 5513	Genetics Clinical Practicum		<u>3</u>
			6

### Fall (4)

GENC 5242	Cancer Genetics		2
GENC 6152	Research Project or GENC 617V Thesis I	2-3	
GENC 5262	Metabolic Genetics		2
GENC 5613	Genetics Clinical Practicum II		3
GENC 5713	Genetics Clinical Practicum III		3
GENC 5162	Population Genetics		<u>2</u>
			14-15

### Spring (5)

GENC 5232	Topics in Genetic Counseling II		2
GENC 5251	Biomedical Ethics		1
GENC 5312	Public Health Genetics		2
GENC 5322	Emerging Topics in Genetics		2
GENC 6162	Research Project or GENC 617V Thesis II	2-3	
GENC 5813	Genetics Clinical Practicum IV		3
GENC 5282	Death and Dying (An elective offered once a year; next scheduled for the fall 2010 semester)		<u>2</u>
			12-13
<b>TOTAL</b>			<b>58-62</b>

## APPLICATION PROCEDURES AND DEADLINES

Application for graduate study is made through the **Graduate School Office, University of Arkansas for Medical Sciences, 4301 West Markham Street, # 601, Little Rock, Arkansas, 72205.**

Admission will normally be for the Fall semester only. Contact the department office for the latest information and admission application deadlines.

## PROFESSIONAL COURSE WORK

### GENC 5002—Introduction to Molecular Genetics

Background in the principles of medical and molecular genetics, such as Mendelian inheritance patterns, and familiarizing the student with the genetic techniques and services now being provided in clinical medicine. The course will also assist students in developing the problem-solving skills required to extract and utilize genetic information from patients and families. Acceptance into the Genetic Counseling Program is the prerequisite.

**GENC 5013—Psychosocial Genetic Counseling/Family Theory**

An overview of the psychological and sociological impact that genetic disease and birth defects have on affected individuals, families, and society at large. The theories of psychosocial counseling that represent the core of the profession will be explored. In addition, the students will examine their own beliefs and backgrounds, and learn how these may impact their ability to provide genetic counseling. Prerequisite for the course is acceptance into the Genetic Counseling Program.

**GENC 5023—Topics in Genetic Counseling I**

An introduction to the profession of genetic counseling. It will provide students with information necessary to function in that role in a variety of settings. Teaching will include lectures, demonstrations, and special independent and group assignments. Topics include: history of the profession, obtaining accurate family histories/recording accurate pedigrees, multicultural sensitivity, and constructing an overall genetic counseling session.

**GENC 5042—Medical Genetics**

Instruction in Mendelian Inheritance, atypical patterns of inheritance of human disease, the pathogenesis of genetic conditions and birth defects, the importance of the field of genetics in clinical medicine, including the basics of genetic screening, testing, and treatment. In addition, the role of chromosomes in heredity will be introduced and human hereditary disease mechanisms will be discussed in detail.

**GENC 5052—Writing and Critical Analysis/Journal Club**

A course in writing review and scholarly genetic journal manuscripts, as well as medical documentation, physician referral letters, and patient letters. Critical analyses of scientific and lay articles will be performed by the student. Introduction to grant-writing and grant-review processes. Course projects will include grant writing and writing for publication.

**GENC 5062—Human Embryology**

This course will cover in detail normal and abnormal human development, as well as placental anomalies, as required by the American Board of Genetic Counseling. The approach will explore why and when congenital malformations occur.

**GENC 5141—Genetic Research Principles**

An overview of the processes of developing research questions, methods, publications, and evaluations. The student will also learn to review current genetic research methodology critically as published in the genetic literature.

**GENC 5142—Advanced Human Cytogenetics**

Graduate instruction in all aspects of human cytogenetics including chromosomal anomalies, rearrangements, uniparental disomy, and epigenetics, with particular relevance to the genetic counseling profession. The course content will include human chromosome structure, behavior, and nomenclature, current cytogenetic laboratory methods-covering both their capabilities and their limitations and clinical chromosomal abnormalities.

**GENC 5153—Counseling/Interviewing**

Exploration of the basic concepts of group and family therapy as foundation for the facilitation of genetic counseling management of the client's healthcare needs in a holistic, efficacious, and timely manner. A major emphasis in this course provides students, through practice, with the knowledge and skills to intervene with families who may be experiencing the stress of a genetic diagnosis.

**GENC 5162—Population Genetics**

The basics of genetic epidemiology and population genetics, including interpretation of large-scale, population based genetic studies. The course will introduce and teach students to use probability theory, Hardy-Weinberg equilibrium, segregation and linkage analysis, and the Bayesian Theorem.

**GENC 5172—Teratology and Prenatal Diagnosis**

Presentation of basic information on known and potential human teratogens. Students will become familiar with the major teratogen references and databases. Participation in state teratogen information services will be required. Prenatal genetic counseling techniques and prenatal diagnosis procedures will be introduced, discussed, and demonstrated. Observation in a prenatal diagnosis clinic will be required.

**GENC 5182—Systems Disorders for Genetic Counselors**

An overview of human congenital malformations and inherited disorders of all organ systems, which will include diagnostic criteria as well as treatment. The course will be presented by a variety of lecturers in multiple clinical specialties.

**GENC 5192—Genetic Syndromes/Dysmorphology**

Information on the genetic, clinical, and diagnostic testing bases of a variety of genetic syndromes. Information on the normal and abnormal human development, and the study of Dysmorphology.

**GENC 5232—Topics in Genetic Counseling II**

Instruction specific to the profession of genetic counseling. Topics include: awareness of available genetic services for appropriate patients including clinical, education, and psychosocial support; computer literacy with regard to important genetic databases; methods of genetic outreach in rural areas including telemedicine; and other professional issues of genetic counseling.

**GENC 5242—Cancer Genetics**

The genetic basis of inherited cancer and cancer syndromes, with an overview of the development and treatment of these cancers. In addition, exploration of cancer genetics, patient education, and psychosocial adjustment to presymptomatic testing.

**GENC 5251—Biomedical Ethics**

Methods of ethical case analysis through lecture, demonstrations, and problem-based learning. Focus will be placed on cases and situations that genetic counselors will encounter in everyday employment and other professional areas.

**GENC 5262—Metabolic Genetics**

Discussion of the recognized clinical disorders that are caused by inherited errors in specific human metabolic pathways, including hemoglobinopathies, disorders of energy storage and transport, and mitochondrial disease. Students will be able to recognize the symptoms of such conditions, as well as be able to discuss treatments of the disorders.

**GENC 5282—Death and Dying**

An interdisciplinary elective course taught in support of these specific educational goals: The student will explore and understand her/his own issues, feelings, and beliefs regarding self, loved ones, and patients relative to death and dying. The student will be able to describe roles of patients, family, and health care team members (including genetic counselors, physicians, nurses, pharmacists, other allied health personnel, and clergy) relative to death and dying. The student will develop and demonstrate skills in communicating with patients and families about dying. The student will demonstrate an understanding of the ethical issues in limiting treatment at the end of life.

**GENC 5312—Public Health Genetics**

Introduction to the concept of genetic disease as a public health concern. Introduction to a variety of health care delivery systems, financial and reimbursement issues, and review of genetic screening issues. Students will have the ability to participate/observe in one of several large state/regional/national registries, such as the Komen Breast Cancer Foundation, and The Arkansas Center for Birth Defects Registry and in various genetic support groups.

**GENC 5322—Emerging Topics in Genetics**

An overview of epigenetics, the genetics of the immune system and genetic bases of autoimmune disorders, such as diabetes and lupus, will be explored. A portion of this course will also be devoted to a new field of research (pharmacogenetics) involving treatment of disease with specific combinations of drug therapies based on patient genotypes. In addition, the emerging field of psychiatric genetics will be explored.

**GENC 5411—Laboratory Practicum**

Provide the student with practical experience in institutional chemistry and genetic laboratories; the cytogenetics laboratory at UAMS/ACH, the maternal serum screening laboratory at UAMS, the newborn screening laboratory at the Arkansas Department of Health.

**GENC 5513—Genetics Clinical Practicum I**

Provide students with practical experience performing genetic counseling for patients/families referred to a prenatal diagnosis program for a variety of reasons. These include advanced maternal age, abnormal maternal serum screening, abnormal ultrasound findings, teratogen exposures, chronic maternal disease, and infertility issues. Students will observe and counsel patients under the supervision of trained genetic counselors and maternal-fetal medicine specialists.

**GENC 5613—Clinical Practicum II**

Provide the student with practical experience performing genetic counseling in both pediatric and adult genetics clinics for patients and families referred for a variety of reasons, including family history of inherited or genetic diseases and/or chromosomal abnormalities, abnormal newborn screening results, and evaluation for features of specific syndromes. Students will observe and provide counseling under trained genetic counselors, medical geneticists, and other appropriate medical specialists.

**GENC 5713—Clinical Practicum III**

Provide the student with practical experience in providing patients and families with genetic counseling for a variety of genetic diseases in multidisciplinary adult specialty clinics, such as sickle cell disease clinic, hemophilia clinic, cystic fibrosis clinic, and Huntington's disease clinic.

**GENC 5813—Clinical Practicum IV**

Provide the student with practical experience in providing patients/families with genetic counseling for a variety of cancer disorders and cancer syndromes. The student will observe and/or counsel these patients under the direct supervision of trained genetic counselors, oncologists, and medical geneticists.

**GENC 6152 and 6162—Research Project/GENC 617V—Thesis in Genetic Counseling**

Independent study for initiation, design, and completion of their thesis study under the approval/guidance of their faculty advisory committee. For students who choose the non-thesis track of this program, the special project course will enable them to complete an independent project/presentation that has been approved by their faculty advisory committee.

# HEALTH INFORMATION MANAGEMENT PROGRAM

## (MEDICAL RECORD TECHNOLOGY)

### Health Information Management Department

*The Health Information Management Program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education.*

**Kathy C. Trawick, Ed.D., R.H.I.A.,** *Chairman and Associate Professor*

*Department of Health Information Management*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #733*

*4301 West Markham Street, Little Rock, Arkansas 72205*

*Telephone: (501) 296-1059*

*E-mail: [trawickkathyc@uams.edu](mailto:trawickkathyc@uams.edu)*

*Web site: <http://www.uams.edu/chrp/him.htm>*

**Faculty:** *K. Smith, K. Trawick*

**Clinical Faculty:** *S. Butler, M. Riddle*

### THE PROFESSION

Health Information Management professionals are the experts who compile, code, analyze, and prepare health information needed by the patient, the health care facility, the public, agencies that pay the claims, physicians and other members of the health care team. The professional may also be responsible for supervision of employees and functions. In addition to hospitals, there are many opportunities in a variety of health related organizations, such as clinics, nursing facilities, rehabilitation sites, behavioral health institutes, insurance companies, consulting agencies, vendors, managed care facilities, private physicians' offices, and specialty hospitals.

In addition to the professional HIM courses, the program offers an elective component (tumor) of cancer registry courses. Cancer registrars are data experts who provide a valuable resource of cancer information that affects cancer control efforts and supports cancer research. Cancer registrars identify cancer patients at the time of their diagnoses, then track them for the rest of their lives. They collect demographical information; diagnostic tests and their results; specific cancer information, such as the type of cancer, the tumor site, and the extent of the disease; and treatments and their outcomes. Certified cancer (tumor) registrars can work in several different types of health care settings. The need for qualified registrars in both hospital and state tumor registries is increasing.

This is a growing and changing profession, offering careers that combine an interest in patient care with computers and management. Employment opportunities are available in Arkansas and nationwide.

### THE PROGRAM

The Department of Health Information Management offers the Associate of Science degree in Medical Record Technology. The classes are taught in the evenings for part-time and full-time students with the exception of Professional Practice rotations.

Professional Practice experiences are obtained in hospitals and other health care related agencies. Some travel is required. These rotations are scheduled according to the healthcare facilities' policies and may necessitate participation during regular working hours.

The cancer registry track is an additional track offered to students who wish to pursue this credential. Students can take the 10 semester credits in the cancer registry program at the same time or after they take the courses required for the associate's degree. In addition to three classroom courses, the cancer registry course work involves professional practice in cancer registries throughout the state. After successful completion of these 10 credits, they are eligible to take the certification examination of the National Cancer Registry Association (NCRA) to receive the credential of certified tumor registrar. The program will apply for accreditation within the year to join the other 13 NCRA-accredited cancer registry programs in the country.

### CERTIFICATION AND LICENSURE

Students who successfully complete the Associate of Science in Medical Record Technology degree will be eligible to take the National Certification Examination of the American Health Information Management Association. Upon successful completion of the examination the student will receive the Registered Health Information Technician (RHIT) credential. Completion of the degree program does not in itself ensure certification.

### PREPROFESSIONAL REQUIREMENTS

Graduating high school students may apply to the program. There are no prerequisites. It is desirable to be computer literate and know how to use word processing and spreadsheets.

## PROFESSIONAL CURRICULUM

The associate's degree requires 27 SC of general education requirements that may be taken prior to or as co-requisites to the professional program. The professional courses (68 SC) are required to complete the program. Individualized curriculum will be developed for each student.

Course #	Title	Semester	Credit
<b>Fall (1)</b>			
HIM 1308	Health Record Systems & Issues		3
HIM 1103	Professional Issues Seminar		1
ENGL XXXX	English Composition I*		3
CPSC XXXX	Computer Applications* +		3
BIOL XXXX	Anatomy & Physiology* (must cover all body systems)		4
PSYC XXXX	General Psychology*		3
			<u>17</u>
<b>Spring (2)</b>			
HIM 1307	Applied Systems		3
HIM 1301	Medical Terminology		3
HIM 1101	Clinical Laboratory I		1
ENGL XXXX	English Composition II*		3
MATH XXXX	College Algebra* (or higher mathematics)		3
			<u>13</u>
<b>Summer (3)</b>			
HIM 1102	Clinical Laboratory II		1
HIM 1304	Pathophysiology w/Pharmacology		3
HIM 2201	Legal & Ethical Issues		2
			<u>6</u>
<b>Fall (4)</b>			
HIM 2301	Quality in Health Care		3
HIM 1303	Classification Systems (ICD-9-CM)**		3
HIM 2303	Data Management & Statistics		3
HIM 2101	Clinical Practice		1
SPCH XXXX	Speech*		2
			<u>12</u>
<b>Spring (5)</b>			
HIM 2304	Supervisory Management		3
HIM 2302	Expanded Coding (CPT-4)**		3
HIM 2203	Preceptorship		2
HIM 2102	Problem Solving Seminar		1
HIST 2311	U.S. History to 1877* or		
HIST 2312	U.S. History from 1877* or		
POLS XXXX	American National Government*		3
SOC XXXX	Introduction to Sociology*		3
			<u>15</u>
<b>Summer (6)</b>			
HIM 2305	Intermediate Coding & Reimbursement		3
<b>TOTAL</b>			<b>66</b>

The part-time students will follow an individualized degree plan to complete the curriculum.

\*Courses to be taken at a regionally accredited educational institution. These courses may be taken in any sequence prior to or during enrollment in the program, but must be completed in order to be eligible to receive the associate of science degree.

+Computer applications or a comparable course must be completed within seven (7) years prior to admission or prior to graduation. Work experience may not be substituted for this requirement.

A grade of "D" or "F" or a mark of "U" or "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

\*\*Students may not proceed with the coding course sequence in this program until Anatomy and Physiology, Medical Terminology, and Pathophysiology have been successfully completed.

## CANCER REGISTRY TRACK

Course #	Title	Semester	Credit
<b>Fall (1)</b>			
HIM 1202	Registry Principles & Practice		2
HIM 1203	Epidemiology		2
HIM 2401	Staging & Classification		4
HIM 2202	Registry Professional Practice		2
<b>TOTAL</b>			<b>10</b>

## APPLICATION PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation. A selective admission process will be utilized. Information about the process will be provided with the application packet. For applicants to the fall semester, applications must be received by **July 1** to be assured of consideration. For applicants to the spring semester, applications must be received by **December 1** to be assured of consideration. Applicants must provide:

- Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
- Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
- Official Transcript:** Arrange for each college and university you have attended to mail an official transcript directly to the CHRP Office of Student Affairs. If you have completed no college/university level course work, arrange for each high school you have attended to forward an official transcript. GED scores may be submitted for high school transcripts, if appropriate. Minimum CGPA for admission is 2.25.
- ACT/SAT Scores:** (If the accepted applicant has successfully completed nine (9) or more university/college hours, an ACT/SAT score is not required.) Scores may be documented on an official high school transcript or sent directly to the CHRP Office of Student Affairs from ACT or SAT testing services.
- References:** Three reference forms from persons qualified to judge your promise of success in the program are required.

6. **Interview:** Applicants are contacted to arrange an interview after receipt of their application and transcript(s); based upon qualifications, not all applicants may be interviewed. The applicant's writing skills will be assessed during the interview.
7. TOEFL scores as applicable. See International Applicants on pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, # 619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## PROFESSIONAL COURSE WORK

### HIM 1101—Clinical Laboratory I

The student will be given the opportunity to correlate the didactic experience of previous courses with on-site and on-campus laboratory learning experience.

### HIM 1102—Clinical Laboratory II

The student will be given the opportunity to correlate the didactic experience of previous courses with on-site and on-campus laboratory learning experience.

### HIM 1103—Professional Issues Seminar

Introduction to the HIM profession, ethics, and professional organizations. Concepts of professionalism. Overview of basic skills required for the profession. Group and team building processes.

### HIM 1202—Registry Principles & Practice

Introduction to basic registry operations which include hospital registries and central registries, basics of staging and classification systems used in cancer registries, overview of the survey process, procedures, requirements and standards of a registry and accreditation. Topics are: statistics, reporting, data sets, data editing, quality control, case-finding principles, cancer committees, cancer conferences, agency reporting, legal issues, and confidentiality.

### HIM 1203—Epidemiology

Introduction to the basic principles and methods of epidemiologic research and practice - presents an overview of the history and theoretical basis of epidemiology; measures of morbidity and mortality; disease transmission and risk; major epidemiologic study designs; measures of association; sources of error including bias, confounding, and interaction; evaluation of screening tests, inference, and causality.

### HIM 1301—Medical Terminology

Introduction to the language of medicine. Emphasis is on terminology of all anatomical body systems, roots of words, suffixes, prefixes, and correlation with basic anatomy and physiology classes.

### HIM 1303—Classification Systems (ICD-9-CM)

Introduction to ICD-9-CM coding and classification system. Instruction in coding diagnoses and procedures, sequencing and analyzing actual medical records to identify data elements to be coded. Introduction to coding software, grouper software, and an emphasis on basic principles of Uniform Hospital Discharge Data Set (UHDDS), ambulatory coding and Diagnosis Related Group (DRG) assignment.

### HIM 1304—Pathophysiology with Pharmacology

Common pathological conditions of the organ systems and the drugs of choice used in their treatment.

### HIM 1307—Applied Systems

Application of methods for implementing and managing health information systems in acute and ambulatory health care environments.

### HIM 1308—Health Record Systems and Issues

Basic concepts and functions in health information management to include development, storage, and maintenance of the health record in the health care delivery systems environment.

### HIM 2101—Clinical Practice

The student will be given the opportunity to correlate the didactic experience of previous advanced courses with on-site and on-campus laboratory learning experience.

### HIM 2102—Problem Solving Seminar

Examination of the latest trends in health information management. Use of case studies for problem solving responses to management and supervisory issues.

### HIM 2201—Legal and Ethical Issues

The health record as a confidential legal document; legal principles, policies, regulations and standards for the control and use of health information. The basic structure of the federal and state court system. Definition and application of professional ethics and consideration of contemporary legal and ethical issues.

### HIM 2202—Registry Professional Practice

Directed practice provides hands-on experience in all aspects of registry operations. Supervised practiced in a hospital registry includes skill and understanding in registry management, data collection and abstracting, coding and staging, follow-up, data utilization and reporting, computer applications, and quality assessment. The clinical rotations include 11 hours of directed practice each week during the 15-week semester.



**HIM 2203—Preceptorship**

The student will be given the opportunity to correlate the didactic experiences of previous and concurrent courses with on-site and on-campus laboratory learning experiences. Application of operational management theory and orientation to all aspects of practice as a supervisor of a health information department component in a hospital, long term care or ambulatory setting. Includes student project(s).

**HIM 2301—Quality in Health Care**

Purpose, philosophy and processes of improving organizational performance through quality assessment, credentialing, utilization management, and risk management. Use of quality improvement tools for case review, data collection, data display, and data analysis.

**HIM 2302—Expanded Coding (CPT-4)**

Introduction to nomenclature and classification systems with instruction in coding procedures with the CPT/HCPCS system. Coding data quality issues and methodology are introduced and related to the reimbursement system.

**HIM 2303—Data Management and Statistics**

Computation and interpretation of health care statistics. Report generation, data display and data analysis.

**HIM 2304—Supervisory Management**

Supervisory principles of a health care information service. Review of specific human resource management functions including communication, motivation, and supervision. Review of budgets, staffing schedules, policies, procedures, and productivity. Analysis of case study examples from health information departments, in the inpatient, ambulatory, and physician office environments.

**HIM 2305—Intermediate Coding & Reimbursement**

Application of advanced guidelines of ICD-9-CM, CPT/HCPCS, and coding in the prospective payment and managed care environments for acute and ambulatory care reimbursement.

**HIM 2401—Staging & Classification**

Introduction to basic staging and classification systems to include hospital and central registries. Course covers the Facility Oncology Registry Data Standards (FORDS), International Classification of Diseases for Oncology, Third Edition (ICD-O-3), American Joint Committee on Cancer Staging Manual (TNM staging); Surveillance, Epidemiology, and End Results (SEER) Extent of Disease (EOD); and SEER Summary Staging Manual 2000. An overview of the principles and rules governing the classification system and each staging system to meet requirements and standards of a hospital and central registry are presented.

# MEDICAL DOSIMETRY PROGRAM

## Department of Imaging and Radiation Sciences

*This program is jointly sponsored by the UAMS Department of Radiation Oncology, Central Arkansas Radiation Therapy Institute (CARTI), and the UAMS College of Health Related Professions.*

**Yulong Yan, Ph.D., D.A.B.R.**, *Division Director and Associate Professor*

*Division of Medical Dosimetry*

*Department of Imaging and Radiation Sciences*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #771*

*4301 West Markham, Little Rock, Arkansas 72205*

*Telephone: (501) 526-7474*

*FAX: (501) 686-7285*

*E-mail: [yanyulong@uams.edu](mailto:yanyulong@uams.edu)*

*Web site: <http://www.uams.edu/chrp/dosimetry/>*

**Faculty and Clinical Faculty:** *M. Chao, P. Corry, E. Moros, J. Peñagaricano, V. Ratanatharathorn, Y. Yan, X. Zhang*

**Medical Director:** *J. Peñagaricano*

**Rebecca L. Ludwig, Ph.D., R.T.(R)(QM)(ARRT);** *Chairman, Department of Imaging and Radiation Sciences*

The mission of the medical dosimetry program is to provide an academic and clinical environment that will educate medical dosimetrists to the highest standards of the profession.

### THE PROFESSION

Medical dosimetry is a newly emerging health care profession designed to support radiation oncology physicians. Medical dosimetrists are part of the medical physics group and together with the medical physicists and the radiation oncologists design computer-based plans of treatment for cancer patients. Since all the calculations are derived from diagnostic scans (X-ray, CT, MRI, PET), the medical dosimetrist works primarily with computers to develop the treatment plans; once approved, the treatment is delivered to the patient over a period of several weeks. Medical dosimetrists work primarily in radiation treatment centers and comprehensive cancer centers. Opportunities for work in industry as application support specialists or in sales are also available. The clinical work week is typically a standard 40-hour week, though weekend and evening shifts may be required.

The increased use of computers in treatment planning, the sophistication and delivery capabilities of modern treatment machines, and the developments in cross-sectional and three dimensional imaging (CT, MRI, PET) have increased tremendously the need for qualified medical dosimetrists. Employment is available nationally and regionally.

### THE PROGRAMS

This one-year, full-time, program can be taken to complete a bachelor's degree or, for those already holding a bachelor's degree, to obtain an advanced certificate. The educational program consists of classroom instruction, laboratory experience, and clinical rotations for 12 consecutive months beginning each August. There are four tracks in this program

designed for those students who have a radiation therapy degree and those that have science degrees who seek either the bachelor's degree or an advanced certificate.

The pre-professional curriculum for those seeking the bachelor's degree consists of 78-93 semester credits (SC) of course work with eight SC of physics and 12 SC of mathematics, including calculus I and II. The professional sequence is dependent on the entry-level credentials of the student. If the student is a registered radiation therapist, an additional 32 SC of course work is required over the 12 months. If the individual is a science major without the radiation therapy credential, 45 SC are required to complete the program (21 SC of radiation therapy course work and 24 SC of specific courses in medical dosimetry).

The pre-professional curriculum required for the advanced certificate is 50 SC with the same science sequence (39 SC hours) required in the bachelor's degree program. Courses taken previously as part of a bachelor's degree program can be counted toward the prerequisite requirements. The professional sequence is identical to that of those seeking a bachelor's degree. Students who have no radiation therapy credential must complete 45 SC and students with that credential must complete 32 SC of professional course work.

### ACCREDITATION

The Medical Dosimetry Program was accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) in 2008.

### CERTIFICATION AND LICENSURE

Graduates of the program are eligible to apply for the certification examination given by the Medical Dosimetrist Certification Board (MDCB). Successful completion of the program does not in itself ensure certification. Each student is responsible for familiarizing himself/herself with the applicable certification requirements.

## PREPROFESSIONAL CURRICULUM

The bachelor's degree prerequisites include successful completion of 78-93 SC of general education course work from a regionally accredited college or university and must fulfill all CHRP requirements regarding acceptance of transfer credit:

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE AND MATHEMATICS</b>	
College Algebra	3
Calculus I & II	6
Additional Mathematics Course Work*	3
Chemistry with Laboratory	4
Biology with Laboratory	4
Anatomy and Physiology I & II**	8
Physics I & II (Algebra or Calculus based)	8
Medical Terminology	<u>3</u>
	39
<b>LIBERAL ARTS</b>	
English Composition I & II	6
American History or National Government	3
World/Western Civilization I & II	6
Humanities	<u>3</u>
	18
<b>SOCIAL SCIENCES</b>	
Sociology/Psychology***	6
<b>COMMUNICATIONS</b>	
Oral Communications/Speech	2
<b>COMPUTER SCIENCE</b>	
Computer Fundamentals/Applications	3
<b>FINE ARTS</b>	
Fine Arts (Art [including Architecture, Film, Photography], Music or Theatre Art)***	<u>3</u>
<b>ELECTIVES****</b>	<u>22/7</u>
<b>TOTAL</b>	<b>78/93</b>

The advanced certificate prerequisites include successful completion of 50 SC of general education course work from a regionally accredited college of university and must fulfill all CHRP requirements regarding acceptance of transfer credit:

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE AND MATH</b>	
College Algebra	3
Calculus I & II	6
Additional Mathematics Course Work*	3
Chemistry with Laboratory	4
Biology with Laboratory	4
Anatomy and Physiology I & II**	8
Physics I & II (Algebra or Calculus based)	8
Medical Terminology	<u>3</u>
	39
<b>LIBERAL ARTS</b>	
English Composition I & II	6

## COMMUNICATIONS

Oral Communications/Speech 2

## COMPUTER SCIENCE

Computer Fundamentals/Applications 3

**TOTAL** **50**

\*The additional mathematics course work can be one of these: Trigonometry, Linear Algebra, Calculus III, and Differential Equations. If the applicant has successfully completed Calculus III or Differential Equations as the additional mathematics course work, the requirement for College Algebra can be waived.

\*\*Anatomy and physiology courses must cover all body systems and include accompanying laboratory sections.

\*\*\*These courses can be taken as co-requisites and must be completed within five years of the date of admission into the program. Remaining preprofessional hours must be completed before acceptance into the program.

\*\*\*\*Students who have completed radiation therapy course work from a regionally accredited college or university may apply 22 SC of electives to their prerequisite requirements from that course work. Students who have no radiation therapy background are required to complete 7 SC of electives from a regionally accredited college or university.

Actual course titles may vary among institutions. Consult the division director for pre-professional counseling. Fulfillment of the radiation therapy pre-professional curriculum does not assure admittance into the professional program (please see Application Procedures and Deadlines). Not more than one course in the following group will be accepted in transfer to meet degree requirements: band, studio, physical education, military science, English as a second language (ESL), manual skills.

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## PROFESSIONAL CURRICULUM

For those holding the radiation therapy credential and seeking either the Bachelor's degree or the advanced certificate\*, the following 32 SC of course work are required:

Course # Title	Semester Credit
<b>Fall (1)</b>	
MED 4301 Cross-Sectional Anatomy for Medical Dosimetry	3
MED 4303 Medical Dosimetry Physics	3
MED 4203 Practicum I	2
MED 4102 Clinical Orientation for Medical Dosimetry	1
Elective	<u>3</u>
	12
<b>Spring (2)</b>	
MED 4306 Research/Special Topics	3
MED 4304 Treatment Planning	3
MED 4204 Practicum II	2
MED 4305 Special Programs in Dosimetry	3
Elective	<u>3</u>
	14

### Summer (3)

MED 4605 Practicum III

**TOTAL**

6  
**32**

\*Students who hold radiation therapy certification who did not receive their education at a regionally accredited institution of higher education must elect the bachelor's degree track

A minimum of 32 SC of professional course work must be completed in residence at the College.

A grade of "D" or "F" or a mark of "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

**For those with appropriate science preparation** who are seeking either the Bachelor's degree or the advanced certificate, the following 45 SC are required:

<b>Course #</b>	<b>Title</b>	<b>Semester</b>	<b>Credit</b>
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<b>Fall (1)</b>			
MED 4301	Cross-Sectional Anatomy for Medical Dosimetry	3	3
MED 4303	Medical Dosimetry Physics		3
RTH 4202	Patient Care		2
RTH 4211	Principles and Practice I		2
RTH 4304	Radiation Oncology I		3
RTH 4413	Radiation Therapy Physics I		4
MED 4203	Practicum I		2
MED 4102	Clinical Orientation for Medical Dosimetry		<u>1</u>
			<b>20</b>

### Spring (2)

MED 4304	Treatment Planning		3
MED 4204	Practicum II		2
MED 4305	Special Programs in Dosimetry		3
RTH 4404	Radiation Oncology II		4
RTH 4423	Radiation Therapy Physics II		4
RTH 4231	Radiation Biology		<u>2</u>
			<b>18</b>

### Summer (3)

MED 4605	Practicum III		6
RTH 4222	Radiation Therapy Physics III		<u>2</u>
			<u>8</u>
<b>TOTAL</b>			<b>46</b>

A minimum of 32 SC of professional course work must be completed in residence at the College (CHRP).

A grade of "D" or "F" or a mark of "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

## PROGRAM TRACKS/OPTIONS

**Bachelor of Science in Medical Dosimetry and Advanced Certificate:** Students who successfully complete all prerequisites and the professional curriculum are eligible upon graduation to receive either a Bachelor of Science degree in Medical Dosimetry or an advanced certificate.

## APPLICATION PROCEDURES AND DEADLINES

Class size is limited, and all applicants may not be selected for participation in the program. Applications must be received by **April 1** (see page 9) to be assured of consideration for admission. See page 8 for further information on deadlines and procedures for admission. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the UAMS application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work. A prerequisite GPA of at least 2.8 is required to be considered for admission.
4. **References:** Two letters of recommendation are required for consideration for admission. References should be mentors/professors that you have worked with and who are familiar with your ability and academic performance. Reference letters must be sent to the CHRP Admissions Office. Forms, fees, and transcripts must be received by the first working day of April to ensure consideration for the fall term.
5. **Testing and Personal Interview:** Qualified applicants are encouraged to present themselves in person for interviews at UAMS scheduled by the department. A telephone interview can also be scheduled.
6. **Professional Observation:** Applicants are required to demonstrate an understanding of the responsibilities and duties of the profession through observation and discussion with a practicing professional in the field. Contact department for details.
7. TOEFL scores as applicable. See International Applicants on pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Qualified handicapped persons, capable of meeting academic standards essential to participation in the program, receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## **PROFESSIONAL COURSE WORK**

### **MED 4101—Medical Ethics and Orientation**

Introductory course to the ethics and practice of medicine and medical dosimetry in a clinical environment and overview of the medical dosimetry profession.

### **MED 4102—Clinical Orientation for Medical Dosimetry**

This course introduces all clinical aspects of radiation therapy including patient admission, consultation, case review, CT simulation, treatment planning, patient immobilization, setup ventilation, quality assurance, weekly charting, and case follow up. Principles of radiation health and safety and professional responsibilities of the medical dosimetrist will be discussed and practiced.

### **MED 4203—Practicum I**

Both lectures and “hands-on” exercises will be included to help students develop sufficient skills in using and administering radiation therapy planning systems. Basic planning techniques will also be taught.

### **MED 4204—Practicum II**

Assigned exercises organized by treatment site and procedure type will be carried out under the direct supervision of an assigned advisor. These will be both simulated and real case assignments. The student will rotate to different facilities for the completion of the tasks.

### **MED 4301—Cross-Sectional Anatomy for Medical Dosimetry**

Fundamentals of acquisition and interpretation of cross-sectional anatomy from CT and MRI for all anatomical systems.

### **MED 4303—Medical Dosimetry Physics**

The course will review and expand upon the physics that govern the use of radiation in medicine as were discussed in the courses, RTH-Radiation Therapy Physics I,II.

### **MED 4304—Treatment Planning**

Application of physics and anatomical principles in developing and understanding a manual and computer-based treatment plan for patients with lesions at different anatomical treatment sites.

### **MED 4305—Special Programs in Dosimetry**

Discussion of special procedures in radiation therapy, such as intensity modulated radiation therapy, total skin irradiation, and tomotherapy as it pertains to treatment planning.

### **MED 4306—Research/Special Topics**

Directed research and bibliography search on a current investigational topic in medical dosimetry.

### **MED 4605—Practicum III**

Assigned exercises organized by treatment site and procedure type will be carried out under the direct supervision of an assigned advisor. These will be both simulated and real case assignments. The student will rotate to different facilities for the completion of the tasks.

For admission information call the Dean's Office at (501) 686-5730. Admission materials should be sent to the Office of Student Affairs, CHRP, 4301 West Markham, #619, Little Rock, AR 72205. For program information, contact School Administrative Office at 501-526-7474.

# MEDICAL TECHNOLOGY PROGRAM

## Department of Laboratory Sciences

*The Medical Technology Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences*

**Karen K. Hunter, M.S., M.T.(ASCP);** Program Director and Assistant Professor

*Department of Laboratory Sciences*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #597*

*4301 West Markham Street, Little Rock, Arkansas 72205*

*Telephone: (501) 686-5776*

*E-mail: kkhunter@uams.edu*

*Web site: <http://www.uams.edu/chrp/medtech/>*

**Faculty:** S. Ackerman, S. Aycock, C. Childs, K. Hunter, S. Juretschko, S. Tank, K. Wagner, M. Welch, L. Woods

**Clinical Faculty:** D. Sadler

**Donald D. Simpson, Ph.D., M.P.H., C.T. (A.S.C.P.)<sup>CM</sup>;** Chairman, Department of Laboratory Sciences

(See page 35 for information about the Cytotechnology Program)

### THE PROFESSION

Medical Technology involves definitive analyses on blood, spinal, and other body fluids to provide data essential to diagnosis and treatment.

The medical technologist, a health professional in laboratory medicine, is a vital link between the physician and patient. Some specific responsibilities are to identify pathogenic bacteria and to determine their drug sensitivities, to recognize bleeding disorders, to identify normal and abnormal blood cells, to prepare blood for transfusion, and to analyze serum for the presence of chemical elements and other components.

Career opportunities are excellent, particularly in hospital laboratories and in diagnostic clinics. Other settings which provide career opportunities include research facilities, industry, government agencies, public health offices, crime laboratories, food and cosmetic quality assurance programs, and insurance offices. Technologists may advance through laboratory service, education, research, or sales to the ranks of administration.

After graduation medical technologists may specialize in any major section of the laboratory or in laboratory management. Those who have specialist certifications or advanced degrees find opportunities in supervision, education, and administration in a number of different settings including health care institutions, universities, public service agencies, and private industry. Medical technology education provides excellent preparation for those who wish to become physicians and a sound background for those interested in medical sales work. There has been a demand for graduates from the program.

### PROGRAM TRACK/OPTIONS

Students accepted into the professional program begin their course of study in August. The traditional program has full-time and part-time tracks. The full-time track requires four (4) semesters to complete. The part-time track allows

students a maximum of six (6) semesters to complete the program. The MLT-to MT advanced placement track is designed for employed MLTs who desire to continue their education within the framework of their home environment. Upon completion of the full-time, part-time, or MLT-to-MT advanced placement tracks the Bachelor of Science degree in Medical Technology is awarded.

**The Traditional Program:** The preprofessional curriculum consists of 67 SC, including 27 SC specified in the sciences. The professional curriculum consists of 57 SC and requires (4) four semesters (two academic years) for completion.

The program receives significant support from the Department of Veterans Affairs, Central Arkansas Veterans Healthcare System (CAVHS), St. Vincent Infirmary Medical Center, Pine Bluff AHEC (Jefferson Regional Medical Center), Washington Regional Medical Center, AHEC Southwest (Christus St. Michael Health Care System), St. Edwards Mercy Medical Center, University Hospital of Arkansas, Arkansas Children's Hospital, Conway Regional Medical Center, St. Joseph's Mercy Health Center, Siloam Springs Memorial Hospital, and the Arkansas Department of Health. Each facility provides clinical internship experiences for students.

Medical Technology students are strongly encouraged to complete the hepatitis B vaccine series. Contact the department for further information.

The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences, 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631, (773) 714-8880.

**MLT-to-MT Distance Learning Program:** The MLT-to-MT Distance Learning Program allows medical laboratory technicians with an associate degree who are registered by the American Society for Clinical Pathologists (ASCP) or certified by the National Certification Agency for Medical Laboratory Personnel, Inc. (NCA) to complete the B.S. degree in Medical Technology in three years through a combination of distance education and concentrated

laboratory and advanced clinical laboratory experiences. To be eligible for the program, students must submit proof of certification or registration from one of the above agencies.

The MLT-to-MT program is divided into the pre-professional curriculum and the professional curriculum and takes 124 SC to complete. The pre-professional program includes a minimum of 75 SC. Prior to enrollment in the professional program, students must complete 69 SC including all of the following courses: 8 SC of college and/or clinical chemistry; 8 SC biology electives or suitable MLT courses; 4 SC anatomy & physiology, or suitable MLT course; 4 SC microbiology or clinical microbiology; and 3 SC college algebra. An additional 6 SC of general education courses may be completed after enrolling in the program and prior to graduation. The general education courses must include: 6 SC English composition, 6 SC history of civilization or world history, 3 SC American history, 6 SC social science, 2 SC speech communication, 3 SC fine arts and 3 SC humanities. Students may complete the preprofessional curriculum at any regionally accredited college or university.

The professional MLT-to-MT curriculum at UAMS requires 49 SC of upper level MT courses to complete. In addition, all students are required to attend concentrated advanced-skills laboratory courses on the UAMS campus in Little Rock. The laboratory sessions are conducted in one or two week sessions each spring and/or summer.

All MLT-to-MT students will need a computer with CD-ROM drive and Internet access in order to view and submit course material. Students will also be required to have an e-mail address where the Department can routinely contact them.

After completing the courses listed above, the students will progress to advanced clinical laboratory experiences and the senior curriculum. MLTs are allowed to demonstrate MT level clinical skill competencies in approved clinical laboratories. Additional selected experiences in clinical laboratories located in Little Rock may be required to provide advanced procedures and techniques.

For further information on the MLT-to-MT Advanced Track Program, call Cherry Childs at (800) 981-4427.

**Distant Education Track:** The department offers a medical technology distance education curriculum. Pre-professional course work can be taken at any approved regionally accredited college or university. Students who are admitted will complete a four-semester (two-year) professional curriculum. The first year of the program includes course work (lectures and laboratory exercises) using distance education technology. The first-year student is required to complete on-campus laboratory sessions mid-semester and during the final two weeks of the fall and spring semesters. The second year of the program is a clinical internship at a program-approved clinical affiliation site.

This program is designed for students who want to become a clinical laboratory professional, but who cannot, for various reasons, leave the area to attend the

first year of the traditional program in Little Rock. Clinical laboratory professionals are needed in nearly all areas of Arkansas as well as in nearly all areas of the country.

For additional information, contact Cindy Osburn at [osburncindyl@uams.edu](mailto:osburncindyl@uams.edu) (800-981-4427) to discuss distant learning opportunities in the Medical Technology Program at the University of Arkansas for Medical Sciences.

## BACCALAUREATE SECOND DEGREE PROGRAM

The Medical Technology program offers an accelerated 12-month track. The program is designed for students with a bachelor's degree in biology, chemistry, microbiology, or a related science from a regionally accredited college or university. This intensive program includes two semesters of professional curriculum and approximately 16 weeks of clinical experience in central Arkansas. Graduates receive a bachelor of science degree in medical technology and are eligible to apply to sit for national certification examinations. For more information, contact Karen Hunter at (501) 686-5776 or (800) 981-4427 and/or view the Web site at <http://www.uams.edu/CHRP/medtech/default.asp>.

## CERTIFICATION AND LICENSURE

Successful completion of professional course work in the Medical Technology program satisfies academic eligibility to apply for certification examinations given by national agencies in the field of medical technology and for licensure examinations given by some states. Successful completion of the program does not itself ensure certification or licensure. The granting of the B.S. degree is not contingent upon the student's performance on any type of external certification or licensure examination. Each student is responsible for becoming familiar with the applicable certification and licensure requirements.

## FINANCIAL ASSISTANCE

In addition to the general financial aid opportunities previously described in the UAMS Student Financial Services section of this catalog, the department can provide information on program-specific financial assistance. Contact the department chairman for further information regarding the following sources of aid which may be available to qualified medical technology students.

1. **Sharon Edwards Gibbert Memorial Scholarship:** This award is based primarily on academic merit, but other factors may be considered.
2. **M. Gene Hall Medical Technology Scholarship:** This award, based on scholarship, citizenship, and professionalism, is given each Fall and Spring semester.

3. **Paula Peacock Medical Technology Scholarship:**  
This award, based on faculty recommendations, Medical Technology Program GPA, and submission of a one-page essay, is given to one senior student in the Spring semester of each year.
4. **Bobby Morgan Medical Technology Scholarship:**  
This award, based on submission of a one-page essay, faculty recommendations, and program GPA, is given to one senior student prior to start of the fall semester.
5. **Jerry Brummett Medical Technology Scholarship:**  
This scholarship, based on demonstrated financial need, academic excellence, and faculty recommendations, is given annually to a senior student.

## PREPROFESSIONAL CURRICULUM

A minimum of 67 SC are required from a regionally accredited college or university and must fulfill all College requirements regarding the acceptance of transfer credit. Students must complete 61 SC, including all of the science and mathematics requirements, prior to enrollment in the professional program. Only courses with a grade of "C" or better are accepted to meet prerequisite course requirements. Upon acceptance into the program, an additional 6 SC of general education requirements must be reflected on the student's degree plan.

Area/Typical Course Title	Minimum Semester Credit
<b>GENERAL EDUCATION REQUIREMENTS</b>	
English Composition	6
History of Civilization/World History	6
American History or National Government	3
Social Science [Psychology, Sociology, Anthropology, Geography, or Economics]	6
Speech Communication	2
Fine Arts [Art (including Architecture and Film) Music, or Theatre Art] <sup>1</sup>	3
Humanities [Philosophy, Political Science, Literature, or Humanities] <sup>2</sup>	3
Electives <sup>3</sup>	<u>11</u>
	40
<b>SCIENCE AND MATHEMATICS REQUIREMENTS</b>	
Biological/Health Science: <sup>4</sup>	
Biology Electives	8
Anatomy & Physiology (or Physiology)	4
Microbiology	4
General Chemistry	8
College Algebra (or higher level mathematics)	<u>3</u>
	<u>27</u>
<b>TOTAL</b>	<b>67</b>

<sup>1</sup>The Fine Arts requirement cannot be fulfilled with a studio course.

<sup>2</sup>Humanities requirements may be selected from the courses in the subject areas of philosophy, political science, literature and the humanities. The course in National Government, if selected to meet the US History/National Government requirement, cannot also be used to meet the Humanities requirement in Political Science. Acceptable courses in literature must be broad survey courses; world literature is especially recommended.

<sup>3</sup>Recommended electives include introductory courses in Computer Science, Statistics, Management, Genetics, Organic Chemistry, Biochemistry, and Quantitative Analysis.

<sup>4</sup>To include not more than 4 SC of botany.

Chemistry and Biology/Health Science courses must be suitable for majors in those disciplines and must include laboratory credit in required courses. Other courses may fulfill the program's requirements. Contact the department for course approval. CLEP credits are not acceptable to fulfill chemistry and biological science requirements.

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

Fulfillment of the preprofessional curriculum does not assure admittance into the professional program (please see Application Procedures and Deadlines).

## PROFESSIONAL CURRICULUM

The following 57 SC are required in the traditional program professional curriculum:

Course #	Title	Semester Credit
<b>Fall (1)</b>		
MET 3213	Intro to Medical Technology	2
MET 3110	Body Fluids Laboratory	1
MET 4223	Body Fluids	2
MET 4311	Immunology	3
MET 4312	Hematology	3
MET 4212	Hematology Laboratory	2
MET 4114	Parasitology and Virology	1
MET 3212	Clinical Biochemistry	<u>2</u>
		16
<b>Spring (2)</b>		
MET 4315	Clinical Microbiology	3
MET 4215	Clinical Microbiology Laboratory	2
MET 4217	Molecular Diagnostics	2
MET 4117	Molecular Diagnostics Laboratory	1
MET 4316	Immunohematology	3
MET 4116	Immunohematology Laboratory	1
MET 4514	Clinical Chemistry	<u>5</u>
		17
<b>Fall (3)</b>		
MET 4531	Hematology/Coagulation Internship*	5
MET 4540	Chemistry/Urinalysis/Phlebotomy Internship*	5
MET 4134	Laboratory Medicine Seminar	1
MET 4138	Laboratory Management I	<u>1</u>
		12



<b>Spring (4)</b>		
MET 4535	Microbiology Internship*	5
MET 4541	Blood Bank/Immunology Internship*	5
MET 4135	Laboratory Medicine Case Studies Seminar	1
MET 4139	Laboratory Management II	<u>1</u>
		<u>12</u>
<b>TOTAL</b>		<b>57</b>

\*The sequencing of the six internship courses varies for each student. The student may be assigned any of the internship courses in any given clinical semester.

A grade of "F" or a mark of "U" or "NC" is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program. A grade of "D" in the following professional courses is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program: Laboratory Procedures (MET 3110), Hematology Laboratory (MET 4212), Clinical Microbiology Laboratory (MET 4215), Molecular Diagnostics Laboratory (MET 4117), Immunohematology Laboratory (MET 4116), Hematology/Coagulation Internship (MET 4531), Blood Bank/Immunology Internship (MET 4541), Chemistry/Urinalysis/Phlebotomy Internship (MET 4540), Microbiology Internship (MET 4535), Urinalysis/Immunology/Phlebotomy Internship (MET 4224), Blood Bank Internship (MET 4226), Chemistry/Microbiology/Hematology Internship (MET 4600), and Laboratory Medicine Case Studies Seminar (MET 4135). The complement lecture course must be repeated with any failed Laboratory course. A first semester student who passes all courses but achieves a CGPA of less than 2.0 will be allowed to progress on probation to the second semester if he/she has achieved a CGPA of at least 1.8 in the professional courses. A student in subsequent semesters must maintain a GPA of not less than 2.0 for all courses taken since entering the program.

## MEDICAL TECHNOLOGY ESSENTIAL FUNCTIONS

These essential functions represent the non-academic demands of the program. All applicants are expected to meet these requirements in order to participate in the medical technology program.

- Essential Observational Requirements:** The medical technology student must be able to: use a microscope and differentiate microscopic components of cells, tissues, etc.; observe laboratory demonstrations of techniques and procedures; discriminate color reactions; and read text, numbers, and graphs displayed in print or on a video monitor.
- Essential Movement Requirements:** The medical technology student must be able to: move freely and safely about a laboratory and in patient rooms; reach laboratory benchtops and shelves, free-standing laboratory instruments, patients lying in hospital beds or patients seated in specimen collection furniture; control laboratory equipment (*i.e.*, pipettes, inoculating loops, test tubes) and adjust instruments to perform laboratory procedures; perform delicate manipulations which require good eye-hand coordination; travel to clinical laboratory sites for practical experience;

and perform moderately taxing continuous physical work, often requiring prolonged standing and/or sitting, over several hours.

- Essential Communication Requirements:** The medical technology student must be able to: read and comprehend technical and professional materials (*i.e.*, textbooks, journal articles, handbooks, and instruction manuals); effectively communicate with faculty, classmates, patients, physicians and other health care personnel in a professional, positive, and tactful manner; follow verbal and written instructions in English in order to correctly and independently perform laboratory test procedures; legibly record laboratory data; and independently prepare papers, prepare laboratory reports, and take paper, computer and laboratory practical examinations.
- Essential Intellectual and Conceptual Abilities:** The medical technology student must be able to: measure, calculate, reason, analyze, evaluate and synthesize; recognize emergency situations and take appropriate actions in a timely manner; exercise critical thinking skills to solve problems; and exercise sufficient judgment to recognize and correct performance deviations.
- Essential Behavioral and Social Attributes:** The medical technology student must be able to: maintain patient confidentiality and to exercise ethical judgment, integrity, honesty, dependability and accountability in the performance of their laboratory responsibilities; perform laboratory tests carefully while maintaining efficiency and organization; maintain personal hygiene and wear garments appropriate to the work setting; tolerate taxing workloads, function effectively under stress and adapt to changing technology and environments; recognize potentially hazardous materials, equipment and situations and proceed safely in order to minimize risk of injury to patients, self and nearby individuals; and function as a supportive member of the health care team, maintaining highest laboratory standards in delivery of patient care.

## APPLICATION PROCEDURES AND DEADLINES

Each year, the Department of Medical Technology selects a limited number of students from the applications received for admission to the program. The deadline for submitting completed applications is **May 15** for Fall 2011 (see page 9). A minimum grade point average of 2.50 is required in the science/math courses. A minimum grade point average of 2.50 is also required in the general education courses to be considered for admission to the program. See page 8 for further information on deadlines and procedures for admission. In the

event the class is not filled by those applicants, the application deadline may be extended to as late as **August 1**. Complete applications include:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and **must** accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work.
4. **Interview:** Qualified applicants are contacted to arrange an interview after receipt of application and all official transcripts.
5. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.

## EARLY ACCEPTANCE

Early consideration will be given to those who have submitted complete applications (see required items below) by the early consideration deadline. For applicants to the fall semester, the early consideration deadline is March 1 (see page 9); applications must be received by May 15 to be assured of consideration for admission. In the event the class is not filled from those applicants, the application deadline may be extended to as late as August 1.

**Transcripts “issued to the student” will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, # 619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## PROFESSIONAL COURSE WORK IN MEDICAL TECHNOLOGY

### Traditional Program:

#### **MET 3110—Body Fluids Laboratory**

Laboratory sessions are designed to introduce basic laboratory techniques including but not limited to safety, phlebotomy, pipetting and the use of basic instruments as well as techniques for the analysis of urine, cerebrospinal and other body fluids.

#### **MET 3212—Clinical Biochemistry**

Introduction to clinical biochemistry. Emphasis on material relevant for clinical laboratory sciences. Topics include metabolism, carbohydrates, lipids, amino acids, proteins, and nucleic acids.

#### **MET 3213—Introduction to Medical Technology**

Introduction to principles and techniques used in clinical and research laboratories. Emphasis on general laboratory topics including but not limited to laboratory mathematics, safe practices, basic instrumentation, quality assurance and quality control. Prerequisite: Admission to the professional program in medical technology.

#### **MET 4114—Parasitology and Virology**

Pathogenic parasites and viruses are covered. Emphasis is on the identification of parasites and the clinical significance of viruses. Epidemiology is included as appropriate.

#### **MET 4116—Immunoematology Laboratory**

Laboratory for Immunoematology 4316. Emphasis is on testing methods to assure the safe and effective transfusion of blood components. Includes techniques to manage maternal and neonatal blood incompatibilities.

#### **MET 4117—Molecular Diagnostics Laboratory**

Laboratory for Molecular Diagnostics 4217. Emphasis on basic molecular techniques such as DNA extraction and quantitation, restriction enzyme digestion, polymerase chain reaction and agarose gel electrophoresis.

#### **MET 4134—Laboratory Medicine Seminar**

Presentation of laboratory medicine topics by each student and attendance at laboratory seminars presented by others. Requires guided individual investigations.

#### **MET 4135—Laboratory Medicine Case Studies Seminar**

Presentation of laboratory medicine case studies to correlate the student’s didactic knowledge with the clinical experience.

#### **MET 4138—Laboratory Management I**

Focuses on knowledge and techniques needed to identify and resolve management problems in the laboratory. Students learn basic management concepts, how to manage diversity issues, development of educational objectives, and how to select a laboratory information system.

#### **MET 4139—Laboratory Management II**

This continuation of Laboratory Management I includes preparing and reviewing technical procedure manuals, conducting interviews, writing and reviewing résumés and cover letters, and becoming familiar with laboratory compliance, regulations, and codes of conduct.

#### **MET 4212—Hematology Laboratory**

Laboratory for Hematology 4312. Emphasis on quantitative and qualitative techniques to evaluate the number, function and morphology of blood cells in bone marrow and peripheral blood. Includes testing methods to diagnose and monitor treatment for hematologic and hemostatic disorders.

#### **MET 4215—Clinical Microbiology Laboratory**

Laboratory for the Clinical Microbiology course. Emphasis is on the laboratory procedures for isolating, culturing, and identifying microorganisms.

**MET 4217—Molecular Diagnostics**

Explores the use of molecular techniques for the diagnosis of disease. Includes tests for genetic disorders (both inherited and acquired); infectious diseases, such as HIV and hepatitis C; tissue histocompatibility for organ transplants; and human identity testing.

**MET 4223—Body Fluids**

Theory and techniques of analyzing urine, cerebrospinal, synovial, amniotic, and other body fluids. Correlates chemical, cellular, and micro-biological findings in normal and disease states.

**MET 4311—Immunology**

Introduction to the mechanisms of normal and abnormal immune response. Emphasis on laboratory diagnosis by agglutination, precipitation, immunofluorescence and enzyme immunoassay.

**MET 4312—Hematology**

Normal and abnormal hematopoiesis and hemostasis. Emphasis on recognizing alterations correlating with diagnosis and treatment. Includes quantitation techniques and morphologic evaluation and function of blood cells in bone marrow and peripheral blood.

**MET 4315—Clinical Microbiology**

Pathogenic microorganisms are covered. Emphasis is on isolation, cultivation, and identification. Fundamental microbiology, epidemiology and pathogenesis are also included as appropriate.

**MET 4316—Immunochemistry**

Study of the immunochemical reactivity of blood antigens and antibodies, blood grouping, and compatibility testing. Includes basic problems relating to hemolytic disease of the newborn and component therapy.

**MET 4514—Clinical Chemistry**

Detection and quantitation of metabolic compounds of major clinical significance in the diagnosis and treatment of disease. Emphasis on principles of analysis and diagnostic significance on biological constituents.

**MET 4531—Hematology/Coagulation Internship**

Supervised clinical internship in the area of hematology/coagulation. Emphasis on manual and automated techniques and development of professional behavior. Includes diagnostic correlations, quality assurance, and management practices.

**MET 4535—Microbiology Internship**

Supervised practical experience in the microbiology laboratory. Emphasis on principles, procedures, and quality assurance. Includes management practices and development of professional behavior.

**MET 4540—Chemistry/Urinalysis/Phlebotomy Internship**

Supervised clinical internship in the areas of chemistry, urinalysis, and phlebotomy. Emphasis on automated techniques, quality control, diagnostic correlations, management practices, and development of professional behavior. Practical application of course work in the area of urinalysis. Emphasis on principles, procedures, and quality assurance.

**MET 4541—Blood Bank/Immunology Internship**

Supervised practical experience in the blood bank laboratory and immunology/serology. Emphasis on principles, procedures, and quality assurance. Includes management practices and development of professional behavior.

**Baccalaureate Second Degree Program:****MET 4222—Chemistry Internship**

Supervised practical application of course work and experience in the areas of chemistry. Emphasis on principles, procedures, automated techniques, quality control, diagnostic correlations, and quality assurance. Includes management practices and development of professional behavior.

**MET 4224—Urinalysis/Immunology/Phlebotomy Internship**

Supervised clinical internship in the areas of urinalysis, immunology, and phlebotomy. Emphasis on manual and automated techniques and development of professional behavior. Includes diagnostic correlations, quality assurance, and management practices.

**MET 4226—Blood Bank Internship**

Supervised practical application of course work and experience in the area of blood banking. Emphasis on principles, procedures, and quality assurance. Includes management practices and development of professional behavior.

**MET 4227—Microbiology Internship**

Supervised practical application of course work and experience in the areas of microbiology. Emphasis on principles, procedures, automated techniques, quality control, diagnostic correlations, and quality assurance. Includes management practices and development of professional behavior.

**MET 4228—Hematology/Coagulation Internship**

Supervised practical application of course work and experience in the areas of hematology and coagulation. Emphasis on principles, procedures, automated techniques, quality control, diagnostic correlations, and quality assurance. Includes management practices and development of professional behavior.

# NUCLEAR MEDICINE ADVANCED ASSOCIATE PROGRAM

## Department of Imaging and Radiation Sciences

The Nuclear Medicine Advanced Associate Program is offered through the Division of Nuclear Medicine Imaging Sciences in the Department of Imaging and Radiation Sciences.

**James Bellamy, M.P.H., C.N.M.T.,** Program Director  
Division of Nuclear Medicine Imaging Sciences  
Department of Imaging and Radiation Sciences  
University of Arkansas for Medical Sciences  
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Web site: <http://www.uams.edu/chrp/nuclearadvanced/>

**Faculty:** J. Bellamy, C. Botkin, S. Brown, C. Coley, G. Heggie, W. Hubble, A. Maune, D. Phegley  
**Medical Director:** L. DeBlanche

**Rebecca L. Ludwig, Ph.D., R.T.(R)(QM)(ARRT);** Chairman, Department of Imaging and Radiation Sciences

### THE PROFESSION

The Nuclear Medicine Advanced Associate (NMAA), working in conjunction with physicians, will help meet the growing demand for advanced imaging practitioners as new procedures are developed and as the range and utilization of imaging procedures expand. NMAAs are required to demonstrate clinical leadership skills, including the ability to function with a high level of autonomy, technical sophistication, advanced levels of clinical knowledge, and strong critical thinking and decision-making skills. They are highly capable, competent, and motivated professionals, grounded in the sciences, practicing with increased clinical responsibilities, and educated at the master's degree level.

### THE PROGRAM

The Nuclear Medicine Advanced Associate (NMAA) program is offered through an educational consortium formed by the University of Arkansas for Medical Sciences (UAMS) in cooperation with the University of Missouri at Columbia (UMC) and Saint Louis University (SLU) in St. Louis, Missouri. UAMS is the degree-granting institution and administers this two-state, three-institution collaborative. The three institutions, each of which currently offers a bachelor's degree in nuclear medicine technology, cooperatively participate in curriculum development, course instruction, and the supervision and assessment of NMAA interns.

The NMAA program is designed for distance students and is delivered using a combination of online instruction and clinical instruction at facilities affiliated with UAMS and the consortium partners. The professional curriculum is based on competencies approved by the SNM (formerly the Society of Nuclear Medicine).

### CERTIFICATION

Graduates of accredited programs will be eligible for the national NMAA credentialing examination currently under development by the Nuclear Medicine Technology Certification Board (NMTCB).

Students must have successfully completed all NMAA degree requirements to be eligible for the certification examination.

NMAA graduates are advised that credentialing requirements for NMAAs may vary by location. Some states, for example, may require that NMAAs be registered by the NMTCB, licensed in accordance with state regulations, and/or granted practice privileges in writing at each facility for specific procedures to be performed. Accordingly, successful completion of the UAMS NMAA program does not in itself assure compliance with specific state practice requirements.

### PROFESSIONAL CURRICULUM

NMAA students are required to complete a minimum of 41 semester credits (SC) for the program. The NMAA program is designed to be completed in five semesters and may be taken at sites distant from the main UAMS, SLU, or UMC campuses. A flexible degree plan starting in any semester and extending the program up to a maximum of five years may be arranged, although students are strongly encouraged to complete the program in nine or fewer semesters. The clinical internship courses must be completed in consecutive semesters with at least one didactic course per semester. Applicants will develop individualized degree plans with the program director when they accept admission. The courses include:\*

Course #	Title	Semester Credit
MIS 5311	Patient Assessment	3
MIS 5315	Statistics & Research Methods	3
MIS 5321	Clinical Pharmacology	3
MIS 6341-N	Pathophysiology & Clinical Correlation	3

MIS 6351	Healthcare Systems in America	3
MIS 6V31	Research Project I	3
MIS 6V42	Research Project II (optional)	1-3
MIS 5413-N	Clinical Internship I	4
MIS 5423-N	Clinical Internship II	4
MIS 6433-N	Clinical Internship III	4
MIS 6443-N	Clinical Internship IV	4
MIS 6453-N	Clinical Internship V	4
	Elective Approval of NMAA program director required	<u>3</u>
<b>TOTAL</b>		<b>41-44</b>

\*Course requirements are subject to change.

## TRANSFER CREDIT

Up to six hours of graduate credit from another accredited graduate program in the United States will be accepted, provided the grades are "B" or better and the subjects are acceptable to the program director and department chairman as part of the student's program.

## APPLICATION PROCEDURES

The Nuclear Medicine Advanced Associate (NMAA) program may begin in any semester. Applications postmarked by June 1 will be considered for fall semester; by November 1, for spring semester; and by March 1, for summer semester. Class size is limited, and all applicants may not be selected for participation in the NMAA program. The forms specific to the program may be found at the program's Web site: [http://www.uams.edu/chrp/nuclearadvanced/application\\_procedure.asp](http://www.uams.edu/chrp/nuclearadvanced/application_procedure.asp). The process for admission consideration includes the following:

- 1. Application for Admission:** A completed College of Health Related Professions Graduate Program Application for Admission is required. Please contact the CHRP Office of Student Affairs at (501) 686-5730 or visit <http://www.uams.edu/chrp/apply/> to obtain the form.
- 2. Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
- 3. Official Transcripts:** Arrange for each college or university attended to forward an official transcript to the CHRP Admissions Office. An earned bachelor's degree, or higher degree, from a regionally accredited college or university is required. Applicants who have graduated from a certificate program in nuclear medicine technology must submit a transcript from the program when they submit their transcripts of college course work.
- 4. Graduate Record Examination (GRE):** Applicants are required to submit their GRE scores (from an examination taken within five years of the date of application to the NMAA program) to the CHRP Office of Student Affairs, University of Arkansas

for Medical Sciences, 4301 West Markham Street, #619, Little Rock, Arkansas 72205. Use GRE code number 6146 to have scores sent directly to the College of Health Related Professions.

- 5. Preceptor and Affiliate Agreement Forms:** Each applicant must submit at least one Preceptor Agreement Form completed by a nuclear medicine physician or radiologist who is willing to serve as the applicant's clinical preceptor. An Affiliate Agreement form to be completed by the clinical facility will be provided upon receipt of the preceptor form. Information about the role of the physician preceptors and the Preceptor Agreement Form is available from the department or may be found on the NMAA Web site under Application Procedures.
- 6. Reference Forms:** Applicants must submit two completed (2) reference forms, one of which must come from their current supervisor.
- 7. Professional Certification:** Applicants must submit evidence of current certification in nuclear medicine technology by either the Nuclear Medicine Certification Board (NMTCB) or the American Registry of Radiologic Technologists (ARRT) or the Canadian Association of Medical Radiation Technologists (CAMRT).
- 8. Advanced Cardiac Life Support (ACLS):** Applicants must submit evidence of current ACLS certification and maintain certification while a student, if accepted.
- 9. Post-Certification Clinical Experience:** Applicants must submit evidence of completion of a minimum of two years of full-time equivalent clinical experience in nuclear medicine following certification. This experience must have been completed within the past five years and is to be documented on the Professional Resume. Teaching experience in an accredited nuclear medicine program may be submitted for consideration in meeting this requirement.
- 10. Letter of Interest:** Applicants are requested to provide a personal statement or letter of interest, including their professional goals. The statement is intended to allow applicants an opportunity to provide in narrative form any information that they believe would be useful to the admissions committee but may not have been included in any other documentation. The statement should be approximately 500-700 words in length.
- 11. TOEFL scores if applicable.** See International Applicants, pp. 12-13.
- 12. Interview:** Qualified applicants must present themselves for an interview, if invited. The interview may be in person at UAMS, UMC, or

SLC, or may take place by telephone or audio conference. Interviews will be scheduled by the NMAA program director.

**Transcripts “issued to the student” will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Qualified handicapped persons, capable of meeting academic standards essential to participation in the program, receive equal consideration.

GRE results should be submitted to the CHRP Office of Student Affairs (see item (4) above). All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## **PROFESSIONAL COURSE WORK**

### **MIS 5311—Patient Assessment**

Assessment of health status emphasizing cultural, ethnic, and age differences. Focuses on taking patient histories, inspection, palpation, percussion, and auscultation. Body systems and functional health patterns are used to organize data and to develop clinical pathways in medical imaging.

### **MIS 5315—Statistics & Research Methods**

Introduction to research designs, epidemiology, probability, test statistics, sample size, power, correlations, non-parametric tests, regression, and analysis of variance.

### **MIS 5321—Clinical Pharmacology**

Study of pharmacodynamics, medication administration, drug categories, and implications in patient care. Emphasizes pharmaceuticals frequently used in medical imaging.

### **MIS 5413-N—Clinical Internship I**

NMAA track emphasizes general nuclear medicine imaging procedures of the pulmonary, endocrine, and skeletal systems.

### **MIS 5423-N—Clinical Internship II**

NMAA track emphasizes therapeutic and PET imaging procedures.

### **MIS 6341-N—Pathophysiology and Clinical Correlation**

Application of the concepts of pathophysiology for the assessment and management of medical imaging patients. Emphasizes the characteristic manifestations, pattern recognition, and image assessment of pathologies observed in medical images specific to the program track selected.

### **MIS 6351—Health Care Systems in America**

Analysis of the health care services provided within the United States. The evolution, structure, financing, and regulation of the nation’s health care institutions will be covered. In addition, ethics and legal issues related to the health professions will be studied.

### **MIS 6433-N—Clinical Internship III**

NMAA track emphasizes general nuclear medicine imaging procedures of the gastrointestinal, genitourinary, and neurological systems.

### **MIS 6443-N—Clinical Internship IV**

NMAA track emphasizes cardiac imaging procedures and stress testing.

### **MIS 6453-N—Clinical Internship V**

NMAA track emphasizes administrative procedures and specialized modalities.

### **MIS 6V31—Research Project I**

Practical experience in conducting research. A written plan describing the project’s objectives and goals must be approved by the student’s research mentor and program director prior to implementation. The student will submit the completed project for consideration to be published in a peer reviewed journal or to be presented at a professional meeting as a poster or lecture. A minimum of 3 SC in MIS 6V31 or in MIS 6V42 is required for program completion.

### **MIS 6V42—Research Project II (optional)**

A minimum of 3 SC in this research project course is required for program completion. The research project courses may be taken for up to 6 SC.

# NUCLEAR MEDICINE IMAGING SCIENCES PROGRAM

## Department of Imaging and Radiation Sciences

*The Nuclear Medicine Imaging Sciences Program is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology.*

**Paul D. Thaxton, M.A.T., A.R.R.T.(N), C.N.M.T.,** *Division Director*

*Division of Nuclear Medicine Imaging Sciences*

*Department of Imaging and Radiation Sciences*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #714*

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**Faculty:** *J. Bellamy, C. Coley, A. Maune, P. Thaxton, M. Wallenmeyer*

**Clinical Faculty:** *C. Alford, S. Caraway, C. Chlanda, A. Couch, B. Doney, R. East, I. Filat, J. Gladson, K. Goad, J. Guffey, S. Krupicki, C. Lugo-Zamudio, J. Lukacs, J. Pate, J. Reinert, E. Rogers, S. Romilly, B. Russell, L. Russo, M. Salam, M. Simoneaux, M. Warner*

**Medical Director:** *L. DeBlanche*

**Rebecca L. Ludwig, Ph.D., R.T.(R)(QM)(ARRT);** *Chairman, Department of Imaging and Radiation Sciences*

### THE PROFESSION

Nuclear medicine involves the use of radioactive tracers in studying a wide variety of normal and abnormal body functions and in treating certain diseases. A radiotracer, or radiopharmaceutical, is simply an element that emits radiation which, when administered to a patient, can be detected outside the body. Under the direction of a qualified physician, a nuclear medicine technologist prepares and administers radiopharmaceuticals, operates radiation detection equipment that measures the quantity or distribution of the radiopharmaceutical in the patient, and performs any calculations or computer analyses needed to complete the patient's examination.

The most common procedures include cardiac imaging in which the technologist analyzes the blood flow through the heart and creates computerized images of the beating heart to map damaged heart tissue. Bone scans are usually performed to evaluate the spread of cancer in the body, but might also be used to test for bone infections or stress fractures. The thyroid can be scanned to determine its size or for the presence of nodules. In addition, special techniques can be used to determine the amount of thyroid hormones in the patient's blood. These are just a few of the many types of procedures technologists will perform. Certified nuclear medicine technologists work primarily in the hospital setting or outpatient clinics.

In general, professionals in the nuclear medicine imaging sciences are "people persons." That is, they work well with others, including their co-workers, physicians, hospital employees, and especially with patients. Good technologists are concerned about patient welfare and demonstrate empathy toward others. Above all, they demonstrate the highest ethical behavior in dealings with others in the practice of their profession.

Technologists must demonstrate a high degree of motivation and be able to work independently. Because the practice of nuclear medicine requires patient cooperation, the technologist must be able to communicate effectively, speak clearly and be easily understood. Writing skills are also important, especially as the technologist gains more responsibility in the workplace.

Nuclear medicine technologists work closely with nuclear medicine physicians and other professionals in the field of medical imaging. Technologists with additional skills in radiography, magnetic resonance imaging, sonography, laboratory and cardiac procedures are excellent candidates for employment.

### THE PROGRAM

The College of Health Related Professions offers the Bachelor of Science degree in Nuclear Medicine Imaging Sciences. The nuclear medicine imaging sciences major will learn how to use radioactive tracers to diagnose and treat a wide variety of abnormal conditions. Nuclear medicine technologists receive their education in two parts: the preprofessional component which lasts three years and the professional component which lasts one year and is taken through UAMS beginning in the Fall semester.

The "classroom courses" are conducted via distance education, primarily through the Internet, by faculty at UAMS. Clinical education is conducted at a variety of clinical affiliates in Fayetteville, Jonesboro, Little Rock, Rogers, Springdale, and Texarkana, Arkansas; Baton Rouge, Louisiana; Dallas and Tyler, Texas; Springfield, Missouri; and Tulsa, Oklahoma. The number and location of clinical affiliates may change. Students from these areas

are encouraged to apply for admission and if accepted will be able to complete the program from any of these locations that house active affiliates.

The clinical education locations in Arkansas include Arkansas Children’s Hospital, Cardinal Health Nuclear Pharmacy Services (Jonesboro, Little Rock, and Springdale), Central Arkansas Veterans Healthcare System (CAVHS), Christus St. Michael Health System, Heart Clinic Arkansas, Highland Oncology Group, Northwest Medical Center of Washington County, St. Bernards Medical Center, St. Mary’s Hospital, St. Vincent Infirmary Medical Center, University Hospital of Arkansas, Wadley Regional Medical Center, and Washington Regional Medical Center.

The clinical education locations for Dallas include Cardiology Consultants of Texas, Children’s Medical Center, Mallinckrodt Radiopharmaceuticals, Medical Center of Lewisville, P.E.T.-Net Pharmaceutical Services, Presbyterian Hospital, St. Paul Medical Center, VA North Texas Healthcare System, and Zale Lipshy University Hospital.

The clinical education locations for Tyler include East Texas Medical Center, NuTech, Inc., Tyler Cardiovascular Consultants in Tyler, Trinity Mother Frances Regional Healthcare System, and the University of Texas Health Center at Tyler.

The clinical education locations for Springfield include Cardinal Health Nuclear Pharmacy Services (Springfield), Wheeler Center, Martin Center, Cox Medical Center South, Freeman Hospital (Joplin), Phelps County Medical Center (Rolla), Smith-Glynn-Calloway Clinic, and St. John’s Regional Health Center.

The clinical education sites for Baton Rouge are the Baton Rouge General Medical Center, Cardinal Health Nuclear Pharmacy Services (Baton Rouge), North Oaks Medical Center (Hammond), Our Lady of the Lake Regional Medical Center, and Southeastern Cardiology Consultants.

The clinical education locations for Tulsa include Cardinal Health Nuclear Pharmacy Services (Tulsa), Saint Francis Hospital, and St. John Health System.

## CERTIFICATION AND LICENSURE

Graduation from the program in Nuclear Medicine Imaging Sciences satisfies academic eligibility to apply for certification examinations given by the Nuclear Medicine Technologists Certification Board (NMTCB) or the American Registry of Radiologic Technologists (ARRT). Successful completion of the program does not itself ensure certification or registration. Each student is responsible for familiarizing himself/herself with the applicable certification and registration requirements.

## PREPROFESSIONAL CURRICULUM

Persons admitted into the professional portion of the program must have maintained a minimum GPA of 2.5, both cumulatively and in science and mathematics courses, and completed a minimum of 84 SC, at least six (6) SC of which are upper level (junior/senior). These credits may be

completed at any regionally accredited college or university, but must fulfill all College requirements regarding acceptance of transfer credit (see additional transfer requirements on page 13, item 3). The 66 SC listed below plus 18 SC of electives must be included<sup>1</sup>. In addition, advanced course work in the sciences, such as anatomy, physiology, chemistry, physics, mathematics, and computer science as well as social sciences, such as psychology, sociology, and health education are recommended. Radiologic technologists (radiographers), medical technologists, and nurses will have met most or all of the preprofessional requirements in their professional programs and are encouraged to apply.

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE</b>	
Human Anatomy and Physiology <sup>2</sup>	8
General Chemistry I and II <sup>3</sup>	8
General Physics I and II <sup>4</sup>	8
College Algebra	3
Biological Sciences or Microbiology <sup>5</sup>	4
Statistics	<u>3</u>
	34
<b>COMMUNICATIONS</b>	
Speech or Oral Communications <sup>1</sup>	2
<b>LIBERAL ARTS</b>	
English Composition I	3
English Composition II	3
American History or National Government <sup>1</sup>	3
History of Civilization or World History <sup>1</sup>	<u>6</u>
	15
<b>FINE ARTS</b>	
Art, Music or Theatre Art <sup>1</sup>	3
<b>HUMANITIES</b>	
Philosophy, Political Science, Literature, or Humanities <sup>1</sup>	3
<b>SOCIAL SCIENCES</b>	
Psychology, Sociology, Anthropology, Geography, or Economics <sup>1</sup>	6
<b>COMPUTER SCIENCE</b>	
Computer fundamentals/Applications	<u>3</u>
	66
<b>ELECTIVES<sup>1</sup></b>	<u>18</u>
<b>TOTAL</b>	<b>84</b>

<sup>1</sup>Up to 9 SC of course work indicated may be taken as co-requisites. Those applicants who have completed 84 SC or more of the preprofessional curriculum prior to enrollment will have priority in admission decisions.

<sup>2</sup>Course work must cover all body systems and include laboratory credit.

<sup>3</sup>Course work should be suitable for majors in chemistry and include laboratory credit.

<sup>4</sup>Course work must require a minimum of college algebra and include laboratory credit.



<sup>5</sup>Biology courses taken as prerequisites to the human anatomy and physiology courses will satisfy this requirement.

## PROFESSIONAL CURRICULUM

The following 40 SC are required in the professional program.

Course #	Title	Semester	Credit
<b>Fall (1)</b>			
NMIS 4211	Introduction to Nuclear Medicine		2
NMIS 4312	Clinical Procedures and Diagnosis I		3
NMIS 4213	Nuclear Physics		2
NMIS 4214	Instrumentation I		2
NMIS 4115	Radiopharmacy I		1
NMIS 4517	Clinical Internship I		5
CHRP 3101	Legal and Ethical Issues for Allied Health Professionals		1
NMIS 4116	Journal Review and Research Methods		1
			<u>17</u>
<b>Spring (2)</b>			
NMIS 4221	Health Physics		2
NMIS 4322	Clinical Procedures and Diagnosis II		3
NMIS 4223	Instrumentation II		2
NMIS 4224	Radiation Biology		2
CHRP 3102	Health Care Management Issues for Allied Health Professionals		1
NMIS 4524	Clinical Internship II		5
NMIS 4225	Radiopharmacy II		2
			<u>2</u>
			17
<b>Summer (3)</b>			
NMIS 4631	Clinical Internship III		6
<b>TOTAL</b>			<b>40</b>

A grade of "D" or "F" or a mark of "U" or "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

## PROGRAM TRACK/OPTION

**Career Ladder and Advanced Placement for Degree Completion:** The Division offers a career ladder opportunity for certified technologists in medical imaging who have graduated from a hospital-based imaging program and who want to pursue the Bachelor of Science in Nuclear Medicine Imaging Sciences. The Division also offers an advanced placement opportunity for certified imaging technologists who have earned an Associate of Science degree and who want to pursue the Bachelor of Science in Nuclear Medicine Imaging Sciences degree. Contact the division director for more information.

## APPLICATION PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation in the program. The professional component of the major is demanding and rigorous, and applicants are encouraged to visit a nuclear medicine department and talk with technologists and the division director to learn what would be expected of them as students. **First consideration** will be given those who have submitted complete applications (see the required items below) by the deadline that is **March 1**. Applications after that date will

be considered only if the class has not been filled. See page 8 for further information on deadlines and procedures for admission. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work.
4. **References:** Three reference forms are required. The forms will be mailed to individuals upon receipt of the application for admission.
5. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.
6. **Interview:** Qualified applicants will be contacted to arrange an interview after receipt of application and transcripts.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission for the Arkansas-based program.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, # 619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

Upon acceptance into the professional program, students must complete the following admission requirements:

1. **CPR Certification:** Students must be certified in Basic Cardiac Life Support (BCLS, Health Care Providers) according to American Heart Association (AHA) standards prior to the first clinical course. The course must be administered or approved by the Department. The AHA "Heartsaver" and the Red Cross CPR course do not fulfill this requirement. All current CPR certifications which expire prior to the program graduation date must be renewed as a prerequisite to the clinical courses.
2. **Hepatitis B:** Students are required to complete a hepatitis B vaccination series if one has not been completed, or sign a waiver.

## PROFESSIONAL COURSE WORK

### NMIS 4115—Radiopharmacy I

Radiopharmaceutical preparation for diagnostic use to include quality control. Chemical, physical, and biological properties of radiopharmaceuticals will be examined.

### NMIS 4116—Journal Review and Research Methods

Critical evaluation of medical scientific literature to include statistical evaluation methods and presentation techniques.

### NMIS 4211—Introduction to Nuclear Medicine

Survey course for all phases of nuclear medicine technology.

### NMIS 4213—Nuclear Physics

Presents concepts and physical properties governing the atom to include systems and units of measurement, atomic and nuclear structure, particulate and electromagnetic radiation.

### NMIS 4214—Instrumentation I

Operational principles of radiation detection equipment to include statistical applications and quality control.

### NMIS 4221—Health Physics

Legal, biological, and administrative aspects of radiation protection in nuclear medicine. Emphasis on practical means of minimizing radiation exposure to the patient, nuclear medicine staff, and the general public. Prerequisite: NMIS 4213.

### NMIS 4223—Instrumentation II

Advanced application of radiation detection theory and instrumentation. Prerequisite: NMIS 4214.

### NMIS 4224—Radiation Biology

A study of the interactions of ionizing radiation with human tissues and the potential biological effects resulting from such interactions.

### NMIS 4225—Radiopharmacy II

Radiopharmaceutical preparation for diagnostic use, to include quality control. Chemical, physical, and biological properties of radiopharmaceuticals will be examined. Prerequisite: NMIS 4115.

### NMIS 4312—Clinical Procedures and Diagnosis I

Current uses of radiopharmaceuticals for organ visualization and function with evaluation of results for diagnostic value. Emphasis placed on in vivo procedures.

### NMIS 4322—Clinical Procedures and Diagnosis II

Continued study of application of radiopharmaceuticals for diagnostic use. In vitro and therapeutic procedures are introduced. Prerequisite: NMIS 4312.

### NMIS 4517—Clinical Internship I\*

Practical application of course work presented in the classroom. Students are assigned educational experiences in clinical imaging, radioimmunoassay, and radiopharmaceutical preparation.

### NMIS 4524—Clinical Internship II\*

Continuation of clinical course work at the intermediate level. Prerequisite: NMIS 4517.

### NMIS 4631—Clinical Internship III\*

Continuation of clinical course work at the advanced level. Prerequisite: NMIS 4524.

## ELECTIVE COURSE WORK

### NMIS 4302—Interdisciplinary Diagnostic Cardiac Imaging

This course provides the student with an understanding of the major modalities for the diagnostic imaging of the human heart. Included are overviews of the methods, effectiveness, advantages and disadvantages of echocardiography, nuclear medicine, magnetic resonance, computerized tomography, and cardiac catheterization for the diagnosis of heart disease.

### NMIS 4303—Clinical Pharmacology

A study of pharmacodynamics, medication administration, drug categories, and implications in patient care. Emphasizes pharmaceuticals frequently used in medical imaging.

### NMIS 4V41—Clinical Internship IV\*

Based on individual needs and prior clinical experiences, the student may elect to continue clinical course work at the advanced level. (1-4 SC) Prerequisite: consent of the faculty.

\*This course is offered on a satisfactory/unsatisfactory marking basis.

# OPHTHALMIC MEDICAL TECHNOLOGY PROGRAM

## Ophthalmic Technologies Department

*The Ophthalmic Medical Technology Program is accredited by the Commission on Accreditation for Ophthalmic Medical Programs (CoA-OMP).*

**Suzanne Hansen, M.Ed., COMT;** *Chairman and Instructor*

*Department of Ophthalmic Technologies*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #619*

*4301 West Markham Street, Little Rock, Arkansas 72205*

*Telephone: (501) 526-5880*

*E-mail: OMT@uams.edu*

*Web site: <http://www.uams.edu/chrp/omt>*

**Faculty:** *J. Banks, S. Brown, S. Brummett, J. Chacko, R. Davis, I. Dersu, K. Fray, K. Glaze, S. Grimes, S. Hansen, S. Staples, C. Westfall*

**Medical Director:** *M. Wiggins*

### THE PROFESSION

Ophthalmic medical technologists are highly skilled professionals who perform a wide range of delegable tasks and patient care activities in ophthalmology. Modern ophthalmic practice relies upon an array of specialized diagnostic procedures to assess visual function, and ophthalmic medical technologists are proficient at maximizing the quality of data these procedures produce.

Ophthalmic medical technologists have a thorough understanding of the anatomy and physiology of the human visual system. They can take visual and medical histories, measure the eye's optical system and calculate basic corrections for deficiencies of near- or far-sightedness, use ultrasound for measurements and diagnosis, create ophthalmic photographs to document lesions of the retina and cornea, assist in ophthalmic surgery, assess abnormalities of color vision and measure function of the eye muscles.

Because many ophthalmic patients suffer great stress at the prospect of catastrophic eye disease and possible blindness, ophthalmic medical technologists must have a caring demeanor along with strong communication skills.

There are many opportunities available for ophthalmic medical technologists in private offices, group practices and in academic departments of ophthalmology. Because technologists are the most highly skilled technical personnel in the field, many assume supervisory roles and teach other members of the allied health team.

### THE PROGRAM

**Ophthalmic Medical Technology:** The program is divided into the preprofessional curriculum and the professional curriculum and requires 124 SC to complete. The pre-professional portion includes a minimum of 55 SC, which students must complete prior to enrollment in the professional component. These credits must include the following science courses: 6 SC of college anatomy and physiology covering all the body systems; 4 SC microbiology; 6 SC biology electives; 4 SC physics; 3 SC chemistry; 3 SC college algebra (or higher

level mathematics). These general education courses must also be included: 6 SC English composition, 6 SC history of civilization or world history, 3 SC American history, 6 SC social science, 2 SC speech communication, 3 SC fine arts and 3 SC humanities. Students may complete the preprofessional curriculum at any regionally accredited college or university.

Students accepted into the professional component begin their course of study in August. A full-time track is offered which requires four (4) semesters and two (2) summers (two years) to complete.

The professional curriculum at UAMS requires 69 SC of upper level courses. Upon completion of these requirements, students will be awarded a Bachelor of Science in Ophthalmic Medical Technology. For further information call the Office of Student Affairs at (501) 686-5730.

The program receives significant support from the Harvey and Bernice Jones Eye Institute, the Department of Veterans Affairs, and Arkansas Children's Hospital (ACH). Each facility provides clinical internship experiences for students.

### CERTIFICATION AND LICENSURE

Successful completion of professional course work in the Ophthalmic Medical Technology program satisfies academic eligibility to apply for certification examinations given by national agencies in the field of ophthalmic medical technology. Successful completion of the program does not itself ensure certification. The granting of the B.S. degree is not contingent upon the student's performance on any external certification examination. Each student is responsible for becoming familiar with the applicable certification requirements. The Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) grants permission for ophthalmic medical technologist students to apply for and begin the certification process prior to graduation. Students enrolled in the UAMS program are required to take the Certified Ophthalmic Medical Technologist (COMT) certification examination in their final semester.

## PREPROFESSIONAL CURRICULUM

A minimum of 55 SC is required from a regionally accredited college or university and must fulfill all College requirements regarding the acceptance of transfer credit. Students are strongly encouraged to complete all 55 SC of preprofessional courses (general education and science and mathematics requirements) prior to enrollment. Students lacking up to 8 SC of the 55 SC of preprofessional courses may be considered for admission to the program with the understanding that all preprofessional courses will be completed within one year of entry into the ophthalmic medial technology program.

Area/Typical Course Title	Minimum Semester Credit
<b>GENERAL EDUCATION REQUIREMENTS</b>	
English Composition	6
History of Civilization/World History	6
American History or National Government	3
Social Science <sup>1</sup>	6
Speech Communication	2
Fine Arts	3
Humanities	<u>3</u>
	29
<b>SCIENCE AND MATHEMATICS REQUIREMENTS</b>	
Biological/Health Science: <sup>2</sup>	
Biology Electives	6
Anatomy & Physiology (or Physiology)	6
Microbiology	4
Chemistry	3
Physics	4
College Algebra (or higher level mathematics)	<u>3</u>
	<u>26</u>
<b>TOTAL</b>	<b>55</b>

<sup>1</sup>To include 3 SC of general psychology.

<sup>2</sup>To include at least one upper-level biological sciences course and not more than 4 SC of botany.

Biology/Health Science courses must be suitable for majors in those disciplines and must include laboratory credit in required courses. Other courses may fulfill the program's requirements. Contact the department for course approval. If completed seven or more years prior to application, knowledge should be updated by taking appropriate current courses in Microbiology. CLEP credits are not acceptable to fulfill biological science requirements.

Arkansas residency will be considered during selection for admission.

Marks of Pass/Credit will be considered grades of C and marks of Fail/No Credit will be considered grades of F for admission purposes.

Fulfillment of the preprofessional curriculum does not assure admittance into the professional program (please see Application Procedures and Deadlines).

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## PROFESSIONAL CURRICULUM

The following 69 SC are required in the professional program:

Course #	Title	Semester Credit
<b>Fall (1)</b>		
OPH 3201	General Medical Knowledge & Terminology	2
OPH 3202	Introduction to Ophthalmic Technology, Medical Law, & Ethics	2
OPH 3203	Ocular Anatomy & Physiology	2
OPH 3204	Optics I	2
OPH 3101	Clinical Skills Laboratory I	1
OPH 3510	Clinical Practicum I	<u>5</u>
		14
<b>Spring (2)</b>		
OPH 3105	Clinical Skills Laboratory II	1
OPH 3206	Optics II	2
OPH 3207	Contact Lenses/Opticianry	2
OPH 3208	Ophthalmic Pharmacology	2
OPH 3209	Ocular Motility I	2
OPH 3611	Clinical Practicum II	<u>6</u>
		15
<b>Summer (3)</b>		
OPH 3106	Clinical Skills Laboratory III	1
OPH 3412	Clinical Practicum III	<u>4</u>
		5
<b>Fall (4)</b>		
OPH 4201	Ocular Motility II: Abnormalities of Binocular Vision	2
OPH 4202	Survey of Eye Diseases	2
OPH 4303	Special Testing	3
OPH 4204	Ophthalmic Photography & Angiography	2
OPH 4207	Advanced Concepts in Ophthalmology	2
OPH 4101	Clinical Skills Laboratory IV	1
OPH 4510	Clinical Practicum IV	<u>5</u>
		17
<b>Spring (5)</b>		
OPH 4306	Special Topics	3
OPH 4205	Ocular Emergencies & Oculoplastics	2
OPH 4108	CPR	1
OPH 4309	Ophthalmic Surgical Assisting	3
OPH 4511	Clinical Practicum V	<u>5</u>
		14
<b>Summer (6)</b>		
OPH 4412	Clinical Practicum VI	<u>4</u>
		4
<b>TOTAL</b>		<b>69</b>

A grade of "F" or a mark of "U" or "NC" is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program. A grade of "D" in the following professional courses is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program: Clinical Practicum II (OPH 3611), Clinical Practicum III (OPH 3412), Clinical Practicum IV (OPH 4510), Clinical Practicum V (OPH 4511), and Clinical Practicum VI (OPH 4412). A first semester student who passes all courses but achieves a CGPA of less than 2.0 will be allowed to progress on probation to the second semester if he/she has achieved a CGPA of at least 1.8 in the professional courses. A student in subsequent semesters must maintain a GPA of not less than 2.0 for all courses taken since entering the program.

## APPLICATION PROCEDURES AND DEADLINES

Each year, the Department of Ophthalmic Technologies selects a limited number of students from the applications received for admission to the program. The deadline for submitting completed applications is **May 15**. A minimum grade point average of at least 2.25 is required in the prerequisite science and mathematics courses and the general education courses to be considered for admission to the program. See page 8 for further information on deadlines and procedures for admission.

Early consideration will be given to those who have submitted complete applications (see required items below) by the early consideration deadline. For applicants to the Fall semester, the early consideration deadline is April 15 (see page 9); applications must be received by May 15 to be assured of consideration for admission. In the event the class is not filled from those applicants, the application deadline may be extended to as late as August 1.

Complete applications include:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work.
4. **Professional Observation:** Applicants are required to demonstrate an understanding of the responsibilities and duties of the profession through observation and discussion with a practicing professional in the field. Contact the department for details.
5. **Interview:** Qualified applicants are contacted to arrange an interview after receipt of application and all official transcripts.
6. **TOEFL scores as applicable.** See International Applicants at pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## PROFESSIONAL COURSE WORK

### OPH 3101—Clinical Skills Lab I

Focus on ophthalmic exam protocol; subsequent clinical skills lab courses are aimed at developing ophthalmic clinical skills in a logical progression with increasing levels of complexity.

### OPH 3105—Clinical Skills Lab II

This course will familiarize students with various ophthalmic equipment and testing protocols emphasizing concepts underlying construction of equipment; proper usage of the equipment, focus on lensmeter, tonometry, retinoscopy, and refractometry concepts and skills.

### OPH 3106—Clinical Skills Laboratory III

Continuation of previous clinical laboratory course in order to develop and enhance clinical skills focusing on the areas of advanced refractometry techniques, advanced retinoscopy techniques, and basic Goldmann perimetry.

### OPH 3201—General Medical Knowledge & Terminology

Provides the student instruction in basic medical terminology, a general overview of human anatomy and physiology, and systemic illnesses.

### OPH 3202—Introduction to Ophthalmic Technology, Medical Law, and Ethics

Introduces the student to ophthalmic technology, including the role of the ophthalmic technologist, duties and responsibilities of the technologist, basic ocular examination techniques, measurement of visual acuities, basic lensometry, identification and usage of ophthalmic equipment, maintenance of ophthalmic examination lanes and special testing areas, and ethics: medical-legal aspects of ophthalmology.

### OPH 3203—Ocular Anatomy & Physiology

Provides the student a detailed knowledge of the normal anatomy and physiology of the eye and orbit.

### OPH 3204—Optics I

Introduces the human eye as an optical system by discussing physiology of image formation, optical relationships of eye structures, accommodation and effects of aging, refractive errors, astigmatism, prisms and Prentice's Rule, magnification, and basics of refractometry.

### OPH 3206—Optics II

Introduces principles of physical optics in which light is treated as a form of energy and part of the electromagnetic spectrum. Examines wave and particle theory, polarization, interference, fluorescence, and lasers. Students use ray tracing to examine refraction, reflection, diffraction, dispersion, vergence lenses and mirrors. The object-image relationships, magnification, and graphical analysis of simple and thick lens systems will also be discussed.

### OPH 3207—Contact Lenses/Opticianry

Familiarizes the student with contact lenses including types, fitting procedures, care and storage procedures, indications for use, complications and patient instruction, spectacle dispensing, ordering, and verification.

**OPH 3208—Ophthalmic Pharmacology**

Detailed exploration of the various ophthalmic pharmaceuticals, indications for their use, sites of action, side effects, proper instillation of agents, and various abbreviations used for medications and their schedules.

**OPH 3209—Ocular Motility I**

Acquaints the student with normal and abnormal binocular vision, including evaluation of motor and sensory status.

**OPH 3412—Clinical Practicum III**

Continues to develop clinical skills and build on previous clinical courses. The student will begin to gain more specialized skills. New skills will be demonstrated and supervised by one or more members of the faculty. Clinical applications and classroom portions of the course will coincide where possible. Return demonstrations will be required at various times during this course.

**OPH 3510—Clinical Practicum I**

Introduction to procedures for care of ophthalmology patients. Students observe techniques in various specialty clinics performed by a faculty member. Many procedures will be observed, but emphasis will be on basic skills needed to begin patient examination. When possible, clinical applications will coincide with the classroom portions of the course. Students will be introduced to appropriate equipment and instruments for patient examination, assigned examination rooms to maintain, taught basic procedures for information gathering in an examination, and become contributing members of the health care team.

**OPH 3611—Clinical Practicum II**

Continuation of Clinical Rotation I, with further instruction in patient care and examination techniques. The course will build on the newly acquired basic skills as well as introduce new skills to be learned. More specific examination techniques will be observed, discussed, and return demonstrations given for these more advanced tasks. Students will begin to greet patients and start examinations. Clinical applications will reflect, where possible, the classroom portions of the course.

**OPH 4101—Clinical Skills Laboratory IV**

Continue to develop clinical skills including familiarizing the student with advanced protocols required for performing the following ophthalmic tests and procedures: advanced tonometry, ophthalmic photography and angiography, advanced Goldmann perimetry.

**OPH 4108—CPR**

Teaches student cardiopulmonary resuscitation for certification by the American Red Cross.

**OPH 4201—Ocular Motility II: Abnormalities of Binocular Vision**

Continuation of Motility I, and acquaints the student with advanced motility problems. The diagnosis and treatment of amblyopia are also studied.

**OPH 4202—Survey of Eye Diseases**

Familiarizes the student with pathophysiological conditions of the globe and orbital region, encompassing both the more common conditions as well as some of the more unusual diseases.

**OPH 4204—Ophthalmic Photography & Angiography**

Familiarizes the student with the more common forms of ophthalmic photography, and includes lectures and hands-on training in fluorescein angiography, fundus and external photography, and slit-lamp biomicrography.

**OPH 4205—Ocular Emergencies & Oculoplastics**

Familiarizes students with varying degrees of ocular emergencies, triage of patients, immediate interventions, long-term complications, and preventative measures. Familiarizes the student with various aspects of oculoplastics including surgical interventions.

**OPH 4207—Advanced Concepts in Ophthalmology**

This course will use journals and ophthalmic literature to introduce students to on-going research in clinical and surgical ophthalmology, and re-introduce important ophthalmic concepts to enable the student to become more effective in assisting ophthalmologists deliver eye care to patients.

**OPH 4303—Special Testing**

Familiarizes the student with special testing procedures not normally accomplished during routine ophthalmic examinations.

**OPH 4306—Special Topics**

Introduces student to concepts of billing and coding, and management and supervision of allied health personnel. Additional topics may be added as new techniques, protocols, and treatments emerge.

**OPH 4309—Ophthalmic Surgical Assisting**

Prepares the student to serve as a sterile scrub assistant, sterile first assistant, and circulator for the more common ophthalmic surgical procedures. Students will also learn about various ophthalmic surgical procedures.

**OPH 4412—Clinical Practicum VI**

The final course in patient care experiences. Students are expected to act as full members of the health care team in all clinical areas. Students will use this semester to advance their skills across the discipline.

**OPH 4510—Clinical Practicum IV**

Continuation of previous clinical experiences completed in the junior year. Students will begin to develop autonomy in patient care, and basic skills will become more advanced. New tasks will be demonstrated first by a member of the faculty, followed by student performance. When possible, classroom portions will coincide with clinical experiences in this course.

**OPH 4511—Clinical Practicum V**

Continuation of previous clinical experiences in patient care. The student will be required to perform at a high level of competence in all phases of ophthalmic technology. Classroom instruction will decrease, as most of this material will already have been presented. Emphasis will be placed on advanced supervision techniques, specialized testing techniques, and autonomy.

# RADIATION THERAPY PROGRAM

## Department of Imaging and Radiation Sciences

The Radiation Therapy Program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). This program is jointly sponsored by Central Arkansas Radiation Therapy Institute (CARTI) and The College of Health Related Professions at the University of Arkansas for Medical Sciences (UAMS-CHRP)

**Debra G. Tomlinson, M.A., R.T.(R)(T)(ARRT);** Division Director and Assistant Professor

Division of Radiation Therapy

Department of Imaging and Radiation Sciences

University of Arkansas for Medical Sciences

College of Health Related Professions, and CARTI

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Web site: <http://www.uams.edu/chrp/radiationtherapy/>

**Faculty:** L. Berkley, P. Bruce, D. Campbell, R. Garner, J. Grant, A. Ivy, S. Randolph, T. Smith, D. Tanner, D. Tomlinson, S. Yakoubian

**Clinical Faculty:** D. Hutslar, S. Kimball, D. Martin, G. Randolph, G. Spencer

**Medical Director:** C. Pope

**Rebecca L. Ludwig, Ph.D., R.T.(R)(QM)(ARRT);** Chairman, Department of Imaging and Radiation Sciences

The mission of the Radiation Therapy Program is to provide an educational atmosphere of distinction for the development of exceptional radiation therapists who are competent, compassionate, and professional.

### THE PROFESSION

The profession combines technical knowledge and expertise in cancer treatment with direct patient contact. The radiation therapist performs or assists in all aspects of radiation therapy treatment delivery and documentation. Following the prescription of a radiation oncologist, the therapist uses sophisticated equipment to deliver high-energy ionizing radiation to a localized target volume within the patient. Using the latest technology and treatment procedures, the therapist manipulates the linear accelerator while utilizing centering lasers to localize the treatment volume. Once the treatment area is defined and aligned appropriately on the machine, the therapist selects the proper settings on the control panel to deliver a specified amount of radiation (in monitor units) to each treatment field. The therapist is responsible for accurate calculation and documentation of all treatment parameters. Working closely with cancer patients and their families, the therapist provides technical support to the physician and physicist to ensure high quality, compassionate care for oncology patients. Employment opportunities are available statewide, regionally, and nationally in radiation therapy departments and freestanding outpatient clinics.

### THE PROGRAMS

The Department of Imaging and Radiation Sciences offers a Bachelor of Science degree in Radiation Therapy through a program of study jointly sponsored by Central Arkansas Radiation Therapy Institute (CARTI) and the University of Arkansas for Medical Sciences (UAMS), College of Health Related Professions.

Aspects of the program include study in oncology, pathology, patient care, psychology, radiobiology, radiation physics, radiation protection and safety, treatment planning, and technical radiation therapy. In addition, the program is supported by clinical education involving rotations on tumor localization and simulation equipment, multiple high energy therapy machines (linear accelerators), and dosimetry treatment planning devices.

Prerequisites include successful completion of 42 SC of specified general education course work **and** successful completion of a radiologic technology program accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) with a minimum accumulative GPA of 3.0.

The CARTI/UAMS program provides 46 SC of professional hours in radiation therapy taken mostly at a CARTI facility located in the central Arkansas area. The curriculum consists of classes and clinical rotations held Monday through Friday each week for 12 consecutive months beginning each August. Students are expected to be full-time while enrolled in the program. The CARTI/UAMS program is fully accredited by the JRCERT as a radiation therapy educational provider.

### CERTIFICATION AND LICENSURE

Graduation from the program in radiation therapy satisfies academic eligibility to take the national certifying examination in radiation therapy given by the American Registry of Radiologic Technologists (ARRT). Candidates who pass this examination become Registered Radiation Therapists [R.T.(T.)(A.R.R.T.)]. Successful completion of the program does not itself ensure registration. Each student is responsible for familiarizing himself/herself with the applicable registration requirements.

## FINANCIAL ASSISTANCE

In addition to the general financial aid opportunities previously described in the UAMS Student Financial Services section of this catalog, the department can provide information on program-specific financial assistance. Contact the division director for further information regarding the following source of aid, which may be available to qualified radiation therapy students.

**H.O. McKenzie Scholarship:** This fund was established in 1987 with a contribution to CARTI by Mr. McKenzie for the education of radiation therapy students. Program officials determined that the funds should be used as a tuition assistance scholarship. This scholarship is awarded after completion of six months of course work in the program. A Committee, comprised of the Medical Director, Division Director, and Student Clinical Coordinator will evaluate the scholarship applicants using a numerical system based on both program clinical and classroom course grades, absenteeism, financial need, personal leadership, and willingness to be employed by CARTI if offered a position. The categories will be weighed according to areas of importance. Application and evaluation forms for the scholarship can be obtained from the Division Director/Student Clinical Coordinator.

## PREPROFESSIONAL CURRICULUM

The following 42 SC are required from a regionally accredited college or university and must fulfill all College requirements regarding acceptance of transfer credit:

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE AND MATH</b>	
PreCalculus (or College Algebra and Trigonometry)*	3
Anatomy and Physiology**	4-8
General Physics	<u>3</u>
	10
<b>LIBERAL ARTS</b>	
English Composition I	3
English Composition II	3
American History or National Government***	<u>3</u>
	9
<b>SOCIAL SCIENCES</b>	
Psychology	3
Sociology***	<u>3</u>
	6
<b>COMMUNICATIONS</b>	
Speech or Oral Communication	2
<b>COMPUTER SCIENCE</b>	
Computer Fundamentals/Applications	3
<b>ADDITIONAL HOURS</b>	
Fine Arts***	3
History of Civilization or World History***	6
Humanities***	<u>3</u>
	12
<b>TOTAL</b>	<b>42-46</b>

To be considered for acceptance into the program, the applicant must have earned a CGPA of 2.0 or higher at the time of application. In addition, only grades of "C" or higher are accepted in prerequisite course work.

\*Mathematics courses must be completed within seven years prior to admission into the program.

\*\*Anatomy and physiology courses must cover all body systems and include accompanying laboratory sections. At some colleges this requirement can be met with one course, at others two courses will be required.

\*\*\*These courses do not have to be completed before acceptance into the program but can be taken with the professional courses or following completion of the professional curriculum. They must be completed within five years of the date of admission into the program. The other prerequisite hours listed must be completed before acceptance into the program.

Actual course titles may vary among institutions. Consult the department chairman for preprofessional counseling.

Fulfillment of the radiation therapy preprofessional curriculum does not assure admittance into the professional program (please see Application Procedures and Deadlines).

Not more than one course in the following group will be accepted in transfer to meet degree requirements: band, studio, physical education, military science, English as a second language (ESL), manual skills.

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## RADIOLOGIC TECHNOLOGY CURRICULUM

Prospective students must be graduates (or eligible to graduate) from a JRCERT accredited Radiologic Technology (Radiography) program and must have a CGPA of 3.0 or better. The following 39 SC will be transferred from this professional program and must be successfully completed prior to admission into the radiation therapy program.

Course Title	Semester Credit
Radiologic Anatomy	2
Basic Patient Care	3
Radiographic Procedures and Laboratory	8
Radiographic Exposure and Laboratory	4
Radiation Protection and Radiobiology	3
Radiation Physics	3
Radiologic Imaging	2
Clinical Practicum	10
Imaging Electives	<u>4</u>
<b>TOTAL</b>	<b>39</b>



## PROFESSIONAL CURRICULUM

The following 46 SCs are offered in the CARTI/UAMS radiation therapy program.

Course #	Title	Semester	Credit
<b>Fall (1)</b>			
RTH 4101	Orientation of Radiation Therapy		1
RTH 4202	Patient Care		2
RTH 4211	Principles & Practices I		2
RTH 4304	Radiation Oncology I		3
RTH 4413	Radiation Therapy Physics I		4
RTH 4601	Clinical Practicum I and Laboratory		6
			<u>18</u>
<b>Spring (2)</b>			
RTH 4404	Radiation Oncology II		4
RTH 4221	Principle & Practices II		2
RTH 4423	Radiation Therapy Physics II		4
RTH 4231	Radiation Biology		2
RTH 4602	Clinical Practicum II and Laboratory		6
			<u>18</u>
<b>Summer (3)</b>			
RTH 4222	Radiation Physics III		2
RTH 4102	Principle & Practices III		1
RTH 4203	Radiation Therapy Review		2
RTH 4503	Clinical Practicum III and Laboratory		5
			<u>10</u>
<b>TOTAL</b>			<b>46</b>

A minimum of 32 SC of professional course work must be completed in residence at the College.

A grade of "D" or "F" or a mark of "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

## PROGRAM TRACKS/OPTIONS

**Bachelor of Science in Radiation Therapy:** Students who successfully complete all 42 SC prerequisites, all radiography requirements, and the 46 radiation therapy requirements for a total of 124 SC are eligible upon graduation to receive the Bachelor of Science degree in Radiation Therapy.

**Transfer Student Requirements:** Students who complete 42 hours of preprofessional general education requirements with a CGPA of at least 2.0 and graduates from a JRCERT accredited radiologic technology program with a CGPA of at least 3.0 may transfer credits to UAMS and be considered for acceptance into the UAMS/CARTI Bachelor of Science in Radiation Therapy program.

**Career Ladder and Advanced Placement for Degree Completion:** The Division offers a career ladder opportunity for ARRT-certified radiologic technologists who have graduated from a hospital-based radiography program and who want to pursue the Bachelor of Science in Radiation Therapy. The Division also offers an advanced placement opportunity for ARRT-certified radiologic technologists who have earned an Associate of Science degree and who want to pursue the Bachelor of Science in Radiation Therapy degree. Contact the division director for more information.

## GENERAL TECHNICAL REQUIREMENTS

In order to graduate from the radiation therapy program, students must be able to perform certain technical skills (requirements) to ensure the safe performance of radiologic procedures.

Due to the nature of typical employment assignments, a graduate of this program must be able to:

1. Work in a clinical setting for eight (8) hours per day performing physical tasks requiring physical energy without jeopardizing patient safety.

Examples of these tasks include, but are not limited to: pushing wheelchairs and stretchers; lifting and carrying radiographic film holders weighing up to fifteen (15) pounds; reaching, manipulating, and operating radiographic and therapeutic tables, stands, tubes, and other equipment; cleaning and preparing tables, stands, and other accessory equipment; moving and assisting patients on and off treatment tables and stretchers or in and out of wheelchairs.

2. Interact with patients and other medical personnel in providing appropriate patient care and in performing radiation therapy procedures.

Examples of these interactions include, but are not limited to: effectively communicating with patients and medical staff; providing patients with a clear and complete explanation of the procedure or treatment; providing oral and written information, reading written information, and receiving oral and written information from patients and medical staff relevant to patient care; responding appropriately to unusual patient situations; making appropriate judgments in critical and noncritical patient care situations.

## APPLICATION PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation in the program. The application and transcripts must be received by **March 1** to be assured of consideration for the fall term. See page 8 for further information on deadlines and procedures for admission. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. The application may be downloaded from the CHRP Web site or applicants may contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the UAMS application.

3. **Official Transcripts:** Applicants must arrange for each college or university attended to forward an official transcript directly to the CHRP Office. Transcripts issued to the applicant will not be accepted.
4. TOEFL scores as applicable. See International Applicants on pp. 12-13.

Upon receipt of the application and official transcripts, student information will be reviewed to ensure that minimal qualifications for interview have been met. Interview qualifications include completion of, or current enrollment in, an accredited Radiologic Technology program with a CGPA of 3.0 or better and completion of the Prerequisite Preprofessional Curriculum courses (see Preprofessional Curriculum) with a 2.0 GPA or better. Once these qualifications have been met, the applicant is sent an interview packet. This packet includes additional information needed for the interview. The interview process includes the following:

1. **Datasheet and Essay:** Applicants must complete the CARTI Datasheet and write a short essay describing their interests, goals, and potential contributions to the field.
2. **References:** Applicants must submit one reference from each of the following: a radiography program director, clinical supervisor or coordinator, and other radiology professional. Reference forms are provided in the interview packet.
3. **Testing and Personal Interview:** Qualified applicants must present themselves in person for an interview at CARTI scheduled by the department during the Spring semester. Applicants will complete an examination administered during the interview.

**Transcripts “issued to the student” will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Qualified handicapped persons, capable of meeting academic standards essential to participation in the program, receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## PROFESSIONAL COURSE WORK

### RTH 4101—Orientation to Radiation Therapy

An overview of the foundations in radiation therapy and the practitioner’s role in the health care delivery system. Principles, practices, and policies of the educational program, health care organizations, principles of radiation and health safety, and professional responsibilities of the radiation therapist will be discussed and examined.

### RTH 4102—Principles and Practice III

Content is designed to focus on the evolution of quality management (QM) programs and continuing quality improvements in radiation oncology. Topics include the need for quality assurance (QA) checks; QA of the clinical aspects and chart checks; film checks; the various types of evaluations and tests performed on simulators, megavoltage therapy equipment and therapy planning units; the role of radiation therapists in quality management programs; legal and regulatory implications for maintaining appropriate QM guidelines as well as the role computers and information systems serve within the radiation oncology department. In addition, a focus on various radiation therapy operational issues including CQI project development, evaluation and assessment techniques will be emphasized. Human resource issues and regulations impacting the radiation therapist will be examined. Accreditation agencies and the radiation therapist's role in the accreditation process will be emphasized. Billing and reimbursement issues pertinent to the radiation therapy department will be presented.

### RTH 4202—Patient Care

Concepts and competencies in assessment and evaluation of the patient for health service delivery with emphasis placed on radiation therapy include: Psychological and physical needs and factors affecting treatment outcome; routine and emergency care procedures; the use of medical oncology.

### RTH 4211—Principles and Practice I

Knowledge base for assessing, comparing and contrasting types of radiation therapy equipment, procedures and techniques for appropriate tumor localization and treatment delivery. Roles and responsibilities of the radiation therapist including treatment documentation and delivery, emergency procedures and patient needs; ethical behaviors as providers within a defined scope of practice within the context of the health care delivery system; law and regulations affecting the radiation therapy in employment, employment contracts and liability; the relationship between the standards of care, law, ethics, and competence.

### RTH 4221—Principles and Practice II

A continuation of the study of radiation therapy equipment, procedures, and techniques. Therapeutic imaging and computer tomography including a review of cross-sectional anatomy for tumor localization and a study of normal sectional anatomy via diagrams and images is included. The treatment prescription and the documentation of treatment perimeters and delivery will be discussed. Basic principles of radiation protection and safety are presented. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. Specific responsibilities of the radiation therapist are discussed and examined.

### RTH 4222—Radiation Physics III

Further development of physics concepts as they relate to treatment techniques used in brachytherapy and electron beam therapy. Class demonstrations/labs are incorporated to complement specific content areas and are focused on clinical application of theory.

**RTH 4231—Radiation Biology**

Content is designed to present basic concepts and principles of radiation biology. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events will be presented. Discussion of the theories and principles of tolerance dose, time-dose relationships, fractionation schemes and the relationship of the clinical practice of radiation therapy will be discussed, examined and evaluated.

**RTH 4304—Radiation Oncology I**

Pathology and physiology of malignant disease processes; epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease in relationship to histology, anatomical site and patterns of spread; the radiation therapists' responsibility in the management of neoplastic disease.

**RTH 4404—Radiation Oncology II**

The management of specific neoplastic disease including epidemiology, etiology, detection, diagnosis, patient condition, treatment, and prognosis of neoplastic disease in relationship to histology, anatomical site, and patterns of spread; the radiation therapists' responsibility in the management of neoplastic disease. This is a continuation of Radiation Oncology I

**RTH 4413—Radiation Therapy Physics I**

The course will establish knowledge of physics pertinent to developing an understanding of radiation used in the radiation therapy clinical setting. Detailed analysis of the structure of matter, properties of radiation, nuclear transformations and x-ray production are emphasized.

**RTH 4423—Radiation Therapy Physics II**

Expansion of concepts and theories presented in Radiation Therapy Physics I. Factors that influence and govern clinical planning of patient treatment; encompassed are isodose descriptions, patient contouring, radiobiological considerations, dosimetric calculations, compensation, and clinical application of treatment beams. Optimal treatment planning is emphasized along with particle beams, calibration, and related equipment. Class demonstrations/laboratories and projects are incorporated to complement specific content areas and are focused on clinical applications.

**RTH 4503—Clinical Practicum III and Laboratory**

A continuation of Clinical Practicum II. The course will have content and clinical practice experiences designed for sequential development in radiation therapy.

**RTH 4601—Clinical Practicum I and Laboratory**

Knowledge of appropriate care to the patient in the therapeutic setting through structured sequential assignments in simulation, treatment planning, and administration of radiation therapy, concepts of team practice, patient-centered care, and professional development.

**RTH 4602—Clinical Practicum II and Laboratory**

A continuation of Clinical Practicum I with an emphasis on clinical dosimetry. Course content focused on clinical practice experiences designed for sequential development in radiation therapy.

For admission information call the Dean's Office at (501) 686-5730. Admission materials should be sent to the Office of Student Affairs, CHRP, 4301 West Markham, #619, Little Rock, AR 72205. For program information, contact School Administrative Office at 501-660-7623, mailing address: CARTI, P.O. Box 55050, Little Rock, AR 72215, or e-mail address [carti.com.cv](mailto:carti.com.cv)

# RADIOLOGIC IMAGING SCIENCES PROGRAMS

## Department of Imaging and Radiation Sciences

The Medical Radiography and Radiologic Imaging Sciences Programs are accredited by the Joint Review Committee on Education in Radiologic Technology.

**Cynthia P. Saylor, M.Ed., R.T.(R)(CT)(ARRT);** Division Director and Instructor

Division of Radiologic Imaging Sciences

Department of Imaging and Radiation Sciences

University of Arkansas for Medical Sciences

College of Health Related Professions, UAMS #563

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**Faculty:** C. Buckner, J. Callaway, M. Harris, A. Jean, R. Ludwig, W. Nagle, J. Nolen, W. Pedigo, S. Pike, L. Rhoden, C. Saylor, L. Spurlock, S. Thurow, Q. Young

**Rebecca L. Ludwig, Ph.D., R.T.(R)(QM)(ARRT);** Chairman, Department of Imaging and Radiation Sciences

The mission of the Radiologic Imaging Sciences Programs is to provide a progressive academic and clinical educational environment for qualified students and prepare them as competent and compassionate health care providers.

### THE PROFESSION

Radiologic Imaging Sciences (radiologic technology) is a dynamic health care profession and an integral part of the health care team concept. The registered radiographer performs a variety of radiographic (x-ray) procedures while maintaining good patient care and observing radiation safety guidelines. The products of these procedures are used in the diagnosis and treatment of disease.

Employment opportunities are available throughout the state and nation in hospitals, clinics, doctor's offices, public health institutions, and industrial medical clinics. With additional education and/or experience, graduates may specialize in fields within or closely related to radiography, such as radiation therapy, nuclear medicine, special procedures, medical sonography, computed tomography, cardiac catheterization, magnetic resonance imaging, administration, and education.

### THE PROGRAMS

**Radiologic Imaging Sciences/Little Rock:** The Associate of Science in Medical Radiography professional portion of the curriculum consists of four (4) semesters and one (1) summer over 22 continuous months of full-time course work, with classes beginning each August. Classroom course work accompanies clinical experience in most semesters. The Bachelor of Science in Radiologic Imaging Sciences (RIS) professional portion of the curriculum consists of 12 additional prerequisite SC and an additional 25 RIS SC. The student must declare by the time they enter the program either the Associate of Science degree (60 SC of professional

course work) or the Bachelor of Science degree (85 SC of professional course work).

**Radiologic Imaging Sciences/Texarkana:** The Associate of Science in Medical Radiography and Bachelor of Science in Radiologic Imaging Sciences degree programs are offered in Texarkana in conjunction with the Area Health Education Center (AHEC) Southwest. The prerequisite and professional components of that program are the same as those of the Little Rock program as described above and on the following pages. For information contact: William Pedigo, R.T. (R)(ARRT); Program Director; AHEC Southwest; 300 East 6th Street; Texarkana, Arkansas 75504. Telephone: (870) 779-6054. Availability of this program at this location is dependent upon receiving continuing funding.

**Radiologic Imaging Sciences/Fayetteville:** The Associate of Science in Medical Radiography and Bachelor of Science in Radiologic Imaging Sciences degree programs are offered in Fayetteville in conjunction with the Area Health Education Center (AHEC) Northwest. The prerequisite and professional components of that program are the same as those of the Little Rock program as described above and on the following pages. For information contact: Shawn Thurow, M.S.R.T.(R)(ARRT); AHEC Northwest; 1125 N. College; Fayetteville, Arkansas 72703. Telephone: (479) 521-8269. Availability of this program at this location is dependent upon receiving continuing funding.

For a listing of other locations where courses may be offered, contact the Division Director in Little Rock at (501) 686-6510.

### CERTIFICATION AND LICENSURE

Graduation from the program in Medical Radiography (A.S. degree program) or Radiologic Imaging Sciences (B.S. degree program) satisfies academic eligibility to apply to take the national certifying examination given by the American Registry of Radiologic Technologists. Candidates who pass this examination become Registered Technologists in

Radiography [R.T.(R)(ARRT)]. Successful completion of the program does not itself ensure registration. Each student is responsible for familiarizing himself/herself with the applicable registration requirements.

## FINANCIAL ASSISTANCE

In addition to the general financial aid opportunities previously described in the UAMS Student Financial Services section of this catalog, the department can provide information on program-specific financial assistance. Contact the division director for further information regarding the following source of aid that may be available to qualified radiologic imaging sciences students.

**Kenneth C. Pedersen Scholarship:** This scholarship provides an amount not to exceed one-half of a semester's tuition fee to a junior radiologic imaging sciences student of merit. Selection criteria and applications are available in the division office.

**Brooksher Scholarship:** This scholarship provides a portion of a semester's tuition and fees to a junior or senior radiologic imaging sciences student on the basis of merit, need, and references. Selection criteria and applications are available in the division office.

## PREPROFESSIONAL CURRICULUM

The following 27 SC for the associate's degree are required from a regionally accredited college or university and must fulfill all College requirements regarding acceptance of transfer credit:

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE</b>	
College Algebra*	3
Anatomy and Physiology*, **	<u>4</u>
	7
<b>LIBERAL ARTS</b>	
English Composition I	3
English Composition II	3
American History or National Government	<u>3</u>
	9
<b>SOCIAL SCIENCES</b>	
Psychology	3
Sociology	<u>3</u>
	6
<b>COMMUNICATIONS</b>	
Speech or Oral Communication	2
<b>COMPUTER SCIENCE</b>	
Computer Fundamentals/Applications	<u>3</u>
<b>TOTAL</b>	<b><u>27</u></b>

\*Human anatomy and physiology and college algebra must be completed within seven years prior to admission into the program.

\*\*Anatomy and physiology courses must cover all body systems and include accompanying laboratory sections.

Additional preprofessional requirements for the Bachelor of Science degree that may be obtained either prior to or concurrent with the professional program are:

Bachelor of Science Degree	Minimum Semester Credit
Fine Arts	3
History of Civilization or World History I and II	6
Humanities	<u>3</u>
<b>TOTAL</b>	<b><u>12</u></b>

To be considered for acceptance into the program, the applicant must have earned a CGPA of 2.5 or higher at the time of application. In addition, only grades of "C" or higher are accepted in prerequisite course work.

Actual course titles may vary among institutions. Consult the division director for preprofessional counseling.

Fulfillment of the radiologic technology preprofessional curriculum does not assure admittance into the professional program (please see Application Procedures and Deadlines).

Not more than one course in the following group will be accepted in transfer to meet degree requirements: band, studio, physical education, military science, English as a second language (ESL), manual skills.

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## PROFESSIONAL CURRICULUM

**Associate of Science in Medical Radiography Degree:** The following 60 SC are offered in the Associate of Science in Medical Radiography professional program. All courses as listed below must be successfully completed to obtain the Associate of Science degree.

Course # Title	Semester Credit
<b>Fall (1)</b>	
RAD 2212 Radiologic Anatomy	2
RAD 2321 Basic Patient Care	3
RAD 2322 Radiographic Procedures I	3
RAD 2125 Radiographic Exposure Laboratory	1
RAD 2226 Clinic Practicum I	2
RAD 2331 Radiation Physics	<u>3</u>
	14
<b>Spring (2)</b>	
RAD 2332 Radiographic Procedures II	3
RAD 2133 Radiographic Procedures II Laboratory	1
RAD 2234 Radiologic Imaging	2
RAD 2335 Clinic Practicum II	3
RAD 2123 Radiographic Procedures I Laboratory	1
RAD 2324 Radiographic Exposure	<u>3</u>
	13
<b>Summer (3)</b>	
RAD 3541 Clinic Practicum III	<u>5</u>
	5

<b>Fall (4)</b>	
RAD 3351 Special Imaging Procedures	3
RAD 3352 Radiation Protection and Radiobiology	3
RAD 3253 Radiographic Procedures III	2
RAD 3554 Clinic Practicum IV	<u>5</u>
	13

<b>Spring (5)</b>	
RAD 3461 Radiologic Pathology	4
RAD 3362 Quality Management	3
RAD 3663 Clinic Practicum V	6
RAD 3213 Radiographic Sectional Anatomy	<u>2</u>
	15
<b>TOTAL</b>	<b>60</b>

**Bachelor of Science in Radiologic Imaging Sciences Degree:** In addition to the 60 SC professional courses listed above for the Associate of Science degree, the student must successfully complete a minimum of an additional 25 SC of professional courses outlined below to earn the Bachelor of Science degree.\*

Course #	Title	Semester Credits
<b>Core Imaging Curriculum</b>		
RIS 4281	Geriatric Imaging	2
RIS 4382	Advanced Patient Care	3
RIS 4291	Current Issues in Health Care	2
RIS 4XXX	Imaging Electives	<u>18</u>
<b>TOTAL</b>		<b>25</b>

**\*RAD 4XXX IMAGING ELECTIVES**

Course #	Title	Semester Credits
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**Mammography Electives**

RIS 4383	Advanced Mammography	3
RIS 4585	Mammography Practicum**	5

**CT Electives**

RIS 4386	Physics of Computed Tomography	3
RIS 4387	Computed Tomographic Procedures	3
RIS 4588	CT Practicum**	5

**MRI Electives**

RIS 4392	Physics of Magnetic Resonance Imaging	3
RIS 4393	Magnetic Resonance Imaging Procedures	3
RIS 4594	MRI Practicum**	5

**Vascular Electives**

RIS 4395	Advanced Angiography I	3
RIS 4396	Advanced Angiography II	3
RIS 4597	Vascular Practicum**	5

**General Electives**

RIS 4389	Community Health and Education	3
RIS 4391	Advanced Quality Management	3
RIS 4398	Managerial Leadership	3
RIS 4399	Research in the Radiologic Sciences	<u>3</u>
<b>TOTAL RAD 4XXX IMAGING ELECTIVES</b>		<b>18</b>

\*If an applicant has not completed 45 hours of upper division course work prior to admission to the B.S. program, there will be additional course work required beyond the 39 hours of general studies and the 25 hours of upper division professional course work.

\*\*Courses in the specialty area must be successfully completed prior to enrollment in the practicum course.

A minimum of 32 SC of professional course work must be completed in residence at the College.

A grade of "D" or "F" or a mark of "U" or "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

## PROGRAM TRACKS/OPTIONS

**Associate of Science in Medical Radiography:** By successfully completing the associate's degree preprofessional and professional curriculum the degree requirements have been met. Upon graduation the Associate of Science degree in Medical Radiography is awarded.

**Bachelor of Science in Radiologic Imaging Sciences:** Students who successfully complete all 27 SC preprofessional, 60 SC Associate of Science professional, 25 SC Bachelor of Science professional, and 12 SC of additional preprofessional requirements for a total of 124 SC are eligible upon graduation to receive the Bachelor of Science degree in Radiologic Imaging Sciences.

Students may select one or two areas of concentration in mammography, computed tomography (CT), magnetic resonance imaging (MRI), cardiac studies, or vascular studies.

**Advanced Placement:** The Division offers an advanced placement opportunity for certified radiologic technologists who have earned a Associate of Science degree and who want to pursue the Bachelor of Science in Radiologic Imaging Sciences degree. Contact the division director for more information.

**Career Ladder and Advanced Placement for Degree Completion:** The Division offers a career ladder opportunity for ARRT-certified radiologic technologists who have graduated from a hospital-based radiography program and who want to pursue the Bachelor of Science in Radiologic Imaging Sciences. The Division also offers an advanced placement opportunity for ARRT-certified radiologic technologists who have earned an Associate of Science degree and who want to pursue the Bachelor of Science in Radiologic Imaging Sciences degree. Contact the division director for more information.

**Short Track Examination Preparation (STEP):** The Division offers short tracks in areas such as CT, MRI, Angiography, and Mammography for ARRT-registered technologists who wish to prepare for a specialty examination and who do not wish to pursue the Bachelor of Science degree in Radiologic Imaging Sciences. Contact the division director for more information.

## GENERAL TECHNICAL REQUIREMENTS

**CPR Certification:** Students must present documentation of current certification in BLS for Healthcare Providers according to the American Heart Association (AHA) standards prior to enrollment in each clinical education course. The AHA "Heartsaver" and the Red Cross CPR course do not fulfill this requirement.

In order to graduate from the Medical Radiography program, students must be able to perform certain technical requirements prior to graduation. Graduates of this program must be able to meet certain physical and mental requirements to ensure the safe performance of radiologic procedures.

Due to the nature of typical employment assignments, a graduate of this program must be able to:

1. Work in a clinical setting for eight (8) to ten (10) hours performing physical tasks requiring physical energy without jeopardizing patient safety.

Examples of these tasks include but are not limited to: Pushing wheelchairs, stretchers, and mobile radiographic equipments; lifting and carrying radiographic film holders weighing up to fifteen (15) pounds; wearing a five (5) pound lead apron when needed; reaching, manipulating, and operating radiographic tables, stands, tubes, and other radiographic equipment to obtain the requested radiographic image; cleaning and preparing radiographic tables, stands, and other accessory equipment; moving and assisting patients on and off radiographic tables and stretchers, or in and out of wheelchairs.

2. Interact with patients and other medical personnel in providing appropriate patient care and in performing radiographic procedures.

Examples of these interactions include but are not limited to: Effectively communicating with patients and medical staff; providing patients with a clear and complete explanation of the procedure; providing oral and written information, reading written information, and receiving oral and written information from patients and medical staff relevant to patient care; responding appropriately to unusual patient situations; making appropriate judgments in critical and noncritical patient care situations.

## PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation in the radiologic imaging sciences program. Early consideration will be given to those who have submitted complete applications (see the required items below) by the last working day in January. Applications must be received by **March 1** to be assured of consideration for admission. See page 8 for further information on deadlines and procedures for admission. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the division office or the CHRP Office of Student Affairs for information or download a copy of the application from the UAMS/CHRP Web site at <http://www.uams.edu/chrp/apply/>.

2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work. All official transcripts must be received no later than April 1.
4. **Professional Observation:** Applicants are required to demonstrate an understanding of the responsibilities and duties of the radiologic technologist through observation in a hospital radiology department and discussion with a current radiologic technologist in the field. Details and a verification form are available at the division Web site. The professional observation must be received by March 1. (This requirement is waived for registered radiologic technologists seeking admission to the bachelor of science degree completion program.)
5. **Advisory Session:** Qualified applicants must present themselves in person for an advisory session in the division. This session will be scheduled by the division during the Spring semester.
6. **ACT Scores:** A minimum ACT Reading Score of 18 is required for application to the program. The ACT scores must be documented on an official high school transcript, college transcript, or sent directly from ACT to the CHRP Office of Student Affairs. (This requirement is waived for registered radiologic technologists seeking admission to the bachelor of science degree completion program.)
7. **TOEFL scores as applicable.** See International Applicants on pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Qualified handicapped persons, capable of meeting academic standards essential to participation in the program, receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## PROFESSIONAL COURSE WORK

### **RAD 2123—Radiographic Procedures I Laboratory**

Laboratory session to accompany Radiographic Procedures I. Guided practice in principles of radiographic positioning.

### **RAD 2125—Radiographic Exposure Laboratory**

Laboratory session to accompany Radiographic Exposure. Guided practice in radiographic equipment manipulation.

**RAD 2133—Radiographic Procedures II Laboratory**

Laboratory session to accompany Radiographic Procedures II. Guided practice in principles of radiographic positioning.

**RAD 2212—Radiologic Anatomy**

An investigation of human anatomy of the skeletal, gastrointestinal, genitourinary, cardiovascular, and central nervous systems as demonstrated on radiologic images.

**RAD 2226—Clinical Practicum I**

Supervised clinical experience emphasizing radiographic procedures of the chest, abdomen, and extremities.

**RAD 2234—Radiologic Imaging**

A study of the physical aspects of advanced imaging systems such as automatic exposure devices, fluoroscopic systems, tomography, computed tomography, and magnetic resonance imaging. The use of computers in radiology is emphasized.

**RAD 2321—Basic Patient Care**

A discussion of common patient care theories, procedures, and techniques emphasizing the physical and psychological wellness of the patient during diagnostic imaging procedures. Ethical and legal principles and a laboratory session are included.

**RAD 2322—Radiographic Procedures I**

A study of radiographic positioning of the chest, abdomen, extremities, and vertebral column.

**RAD 2324—Radiographic Exposure**

A study of radiographic density, contrast, detail, and distortion; radiographic film, screens, and accessory imaging equipment; factors affecting technique selection; and automatic processing.

**RAD 2331—Radiation Physics**

A study of the instrumentation of radiographic equipment, x-ray tubes, the production of x-rays, properties of electromagnetic radiation, and x-ray interactions.

**RAD 2332—Radiographic Procedures II**

A study of radiographic positioning of the cranium, gastrointestinal structures, and genitourinary structures.

**RAD 2335—Clinical Practicum II**

Supervised clinical experience emphasizing radiographic procedures of the extremities and vertebral column.

**RAD 3213—Radiographic Sectional Anatomy**

A study of human sectional anatomy in transverse, longitudinal, and coronal planes with an emphasis on the organs of interest in Computed Tomography and Magnetic Resonance Imaging.

**RAD 3253—Radiographic Procedures III**

A study of alternate radiographic projections, pediatric radiography, geriatric radiography, and trauma radiographic procedures.

**RAD 3351—Special Imaging Procedures**

A study of advanced radiologic procedures of the skeletal, cardiovascular, genitourinary, and gastrointestinal systems emphasizing pharmacology, the use of radiologic contrast media, and the equipment used during these procedures.

**RAD 3352—Radiation Protection and Radiobiology**

A study of the principles and practices of the safe application of radiation and of the responses of biological systems to irradiation.

**RAD 3362—Quality Management**

A study of the principles and practices of radiologic quality control with an emphasis on image assessment.

**RAD 3461—Radiologic Pathology**

A study of disease processes emphasizing major organ-related and multiple system disease from a clinical and radiologic standpoint.

**RAD 3541—Clinical Practicum III**

Supervised clinical experience emphasizing radiographic procedures of the cranium, gastrointestinal system, and genitourinary system.

**RAD 3554—Clinical Practicum IV**

Supervised clinical experience emphasizing pediatric and trauma radiographic procedures and the refinement of radiographic skills in orthopedic, gastrointestinal, and genitourinary procedures.

**RAD 3663—Clinical Practicum V**

Supervised clinical experience emphasizing geriatric and advanced skeletal, cardiovascular, genitourinary, and gastrointestinal radiographic procedures; an introduction to various imaging modalities; and the demonstration of competency on all required clinical skills.

**RIS 4281— Geriatric Imaging**

Investigation of the phenomena of aging, including selected biological, medical, and psychosocial issues. Methods of radiography are emphasized.

**RIS 4291—Current Issues in Health Care**

An emphasis on the critical evaluation of ethical, legal, and economic problems associated with health care delivery.

**RIS 4382—Advanced Patient Care**

A study of advanced patient care skills emphasizing the cardiovascular and respiratory systems.

**RIS 4383—Advanced Mammography**

A study of patient care, mammographic positioning, and technical aspects involved in producing quality radiographs. The principles of mammography, anatomy and physiology of the breast, psychological aspects, image evaluation, pathological conditions, protection, and quality control are included.

**RIS 4386—Physics of Computed Tomography**

A study of the instrumentation of computed tomography, computed tomographic image formation, and radiation dose and safety concerns.

**RIS 4387—Computed Tomographic Procedures**

A study of computed tomographic procedures of the head, neck, vertebral column, chest, extremities, abdomen, and pelvis. Anatomy, positioning, scanning procedures, post-processing procedures, and patient care are emphasized.



**RIS 4389—Community Health and Education**

A discussion of community health, preventive health care, and holistic care for various populations. Effective communication and instructional theory and techniques are also discussed.

**RIS 4391—Advanced Quality Management**

The focus of this course is on comprehensive quality management for the radiation sciences including radiography, mammography, digital imaging, ultrasound, nuclear medicine, CT, and MRI. Advanced concepts, current quality management theory, accreditation, and audit documentation are covered.

**RIS 4392—Physics of Magnetic Resonance Imaging**

A study of the instrumentation of magnetic resonance imaging, magnetic resonance image formation, and magnetic field safety concerns.

**RIS 4393—Magnetic Resonance Imaging Procedures**

A study of magnetic resonance imaging procedures of the head, neck, vertebral column, chest, extremities, abdomen, and pelvis. Anatomy, positioning, scanning procedures, post-processing procedures, and patient care are emphasized.

**RIS 4395—Advanced Angiography I**

Advanced vascular angiographic procedures performed using angiographic equipment. This course includes an in-depth study of vascular imaging equipment, cerebral angiography, abdominal visceral angiography, and upper and lower extremity angiography.

**RIS 4396—Advanced Angiography II**

Advanced vascular angiographic procedures performed using angiographic equipment. This course includes an in-depth study of pulmonary and thoracic angiography, cardiac catheterization, the venous system, and non-vascular special procedures.

**RIS 4398—Managerial Leadership**

Basic principles and practices necessary for effective supervision and leadership in a health care environment. Includes principles and practices in human resource management in health care settings.

**RIS 4585—Mammography Practicum**

Supervised clinical experience in mammography.

**RIS 4588—CT Practicum**

Supervised clinical experience in computed tomography.

**RIS 4594—MRI Practicum**

Supervised clinical experience in magnetic resonance imaging.

**RIS 4597—Vascular Practicum**

Supervised clinical experience in vascular imaging.

**RIS 4399—Research in the Radiologic Sciences**

Under supervision of a faculty member, the student will design and conduct a research project in the radiologic sciences and write a paper including a review of the literature, identification of the problem, methodology, results and discussion, and summary.

# RADIOLOGIST ASSISTANT PROGRAM

## Department of Imaging and Radiation Sciences

*The Radiologist Assistant Program is offered through the Division of Radiologic Imaging Sciences in the Department of Imaging and Radiation Sciences.*

**Rebecca Ludwig, Ph.D., R.T.(R)(QM)(ARRT);** *Chairman and Associate Professor*

*Department of Imaging and Radiation Sciences*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #563A*

*4301 West Markham Street, Little Rock, Arkansas 72205*

*Telephone: (501) 686-7438*

*FAX: (501) 526-7975*

*E-mail: ludwigrebecca@uams.edu*

*Web site: <http://www.uams.edu/chrp/imaging/>*

**Faculty:** *J. Bellamy, S. Brown, C. Coley, D. Collins, G. Heggie, R. Ludwig, Q. Young, M. Yousaf*

### THE PROFESSION

Rapid technological innovations place imaging sciences at the forefront of diagnostic medicine. The Radiologist Assistant (RA) program is designed to meet the growing demand for advanced imaging practitioners as new procedures are developed and as imaging procedures are utilized more extensively. Graduates of the program will provide enhanced patient care and diagnostic services in a variety of urban and rural health care delivery settings by assuming a lead role in patient assessment and by providing a wider range of specific procedures than do current imaging technologists.

### THE PROGRAM

The Radiologist Assistant Program, graduates of which earn the Master of Imaging Sciences (MIS) degree, is designed to prepare highly qualified and exceptionally motivated diagnostic imaging technologists for careers as competent and compassionate advanced practice radiologic health care providers. The MIS degree is designed to accommodate multiple educational tracks as the demand for advanced practitioners in specific modalities emerge, beginning with the Radiologist Assistant (RA). Core courses will address educational needs for advanced practice across the imaging disciplines, and specific program tracks will focus on specialized areas of imaging expertise.

### RADIOLOGIST ASSISTANT

Program applicants must be certified Radiologic Technologists (RTs) experienced in assisting radiologists with fluoroscopic examinations and interventional procedures. As a specialized radiologist extender, the RA will utilize advanced expertise in imaging technology and radiation protection strategies to demonstrate the appropriate anatomical features, injuries, and diseases that may be present in a patient while applying the lowest possible radiation exposure. The RA will be academically prepared to provide patient services in fluoroscopic and interventional imaging, including preparation of pertinent patient histories, and anatomical, physiological, and pathological data, and the images necessary for the radiologist to diagnose an increasing

variety of conditions and diseases. The curriculum integrates classroom, laboratory, and clinical instruction with physician interaction and supervision.

### CERTIFICATION

The American Society of Radiologic Technologists (ASRT) provides practice standards and a curriculum model for the academic preparation of RAs. Graduates of the program will be eligible for the national RA credentialing examination administered by the American Registry of Radiologic Technologists (ARRT), as the program is officially recognized by the ARRT. The program is offered through the Division of Radiologic Imaging Sciences in the Department of Imaging and Radiation Sciences.

### PROFESSIONAL CURRICULUM

Course requirements listed in this catalog are subject to change.

RA students are required to complete a minimum of 40 SC for the program. Geriatric Imaging (RIS 4281) or its equivalent is a prerequisite course from the undergraduate professional curriculum. Students who have not completed RIS 4281 or its equivalent prior to being accepted into the RA program must complete the graduate level Geriatric Imaging course (MIS 5281) as part of the R.A. degree plan. Other recommended, but not required, undergraduate courses are Advanced Patient Care (RIS 4382), Current Issues in Health Care (RIS 4291), Community Health & Education (RIS 4389), and Research in Radiologic Sciences (RIS 4399).

The program is designed to be completed in five consecutive semesters on a full time basis. A flexible degree plan starting in any semester and extending the program up to a maximum of nine semesters may be arranged, resources permitting; however, the five required clinical internship courses must be completed consecutively. The courses include:\*

Course #	Title	Semester	Credit
MIS 5311	Patient Assessment		3
MIS 5315	Statistics & Research Methods		3
MIS 5413-R	Clinical Internship I		4
MIS 5321	Clinical Pharmacology		3
MIS 5423-R	Clinical Internship II		4
MIS 6V31	Research Project I		1-3
MIS 6433-R	Clinical Internship III		4
MIS 6341-R	Pathophysiology & Clinical Correlation		3
MIS 6V42	Research Project II (optional)		1-3
MIS 6443-R	Clinical Internship IV		4
MIS 6351	Healthcare Systems		3
MIS 6453-R	Clinical Internship V		4
	Elective(s) (optional)		3
<b>TOTAL</b>			<b>40-44</b>

\*Course requirements are subject to change.

## TRANSFER CREDIT

Up to six hours of graduate credit from another accredited graduate program in the United States will be accepted, provided the grades are "B" or better and the subjects are acceptable to the program director and department chairman, as part of the student's program.

## APPLICATION PROCEDURES

The Radiologist Assistant program may begin in any semester. Applications postmarked by June 1 will be considered for fall semester, by November 1 will be considered for spring semester, and by March 1 will be considered for summer semester. The forms specific to this program may be found at the program's Web site: <http://www.uams.edu/chrp/imaging/application.asp>. The process for admission consideration includes the following:

- 1. Certification as a Radiologic Technologist by the American Registry of Radiologic Technologists (ARRT):** Applicants must submit evidence of current certification in radiography as a radiologic technologist.
- 2. Application for Admission:** A completed College of Health Related Professions Graduate Program Application for Admission is required. Please contact the CHRP Office of Student Affairs at (501) 686-5730 to obtain the form.
- 3. Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
- 4. Official Transcripts:** Arrange for each college or university attended to forward an official transcript to the CHRP Office of Student Affairs. An earned bachelor's degree, or higher degree, from a regionally accredited college or university is required.

- 5. Graduate Record Examination (GRE):** Applicants are required to submit their GRE scores (from an examination taken within five years of the date of application to the RA program) to the CHRP Office of Student Affairs, University of Arkansas for Medical Sciences, 4301 West Markham Street, #619, Little Rock, Arkansas 72205. Use GRE code number 6146 to have scores sent directly to the College of Health Related Professions.
- 6. Course Completion for Advanced Cardiac Life Support (ACLS):** Applicants must submit evidence of satisfactory completion of ACLS requirements within the last 3 years.
- 7. Post-Certification Clinical Experience:** Applicants must submit evidence of completion of a minimum of two years of full-time equivalent clinical experience in imaging sciences following certification. This experience must have been completed within the past three years. Teaching experience in an accredited radiologic technology program may be submitted for consideration in meeting this requirement.
- 8. Radiology Supervisor References:** Applicants must submit two (2) reference forms completed by their radiology supervisors, including their current supervisor.
- 9. Preceptor and Affiliate Agreement Forms:** Each applicant must submit at least one Preceptor Agreement Form completed by a radiologist who is willing to serve as the applicant's clinical preceptor. An Affiliate Agreement form to be completed by the clinical facility will be provided upon receipt of the radiologist preceptor form. Information for radiologists about their role as preceptors is available from the department.
- 10. Interview:** Qualified applicants must present themselves in person at UAMS for an interview, if requested by the department.
- 11. TOEFL scores as applicable.** See International Applicants, pp. 12-13.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Qualified handicapped persons, capable of meeting academic standards essential to participation in the program, receive equal consideration.

GRE results should be submitted to the CHRP Office of Student Affairs (see item (5) above). All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

## **PROFESSIONAL COURSE WORK**

### **MIS 5281—Geriatric Imaging**

Investigation of the phenomena of aging, including selected biological, medical, and psychosocial issues. Methods of radiography are emphasized.

### **MIS 5311—Patient Assessment**

Assessment of health status emphasizing cultural, ethnic, and age differences. Focuses on taking patient histories, inspection, palpation, percussion, and auscultation. Body systems and functional health patterns are used to organize data and to develop clinical pathways in medical imaging.

### **MIS 5315—Statistics & Research Methods**

Introduction to research designs, epidemiology, probability, test statistics, sample size, power, correlations, non-parametric tests, regression, and analysis of variance.

### **MIS 5321—Clinical Pharmacology**

Study of pharmacodynamics, medication administration, drug categories, and implications in patient care. Emphasizes pharmaceuticals frequently used in medical imaging.

### **MIS 5413-R—Clinical Internship I**

The focus of this clinical internship course is on thoracic and abdominal imaging procedures. Radiologist Assistant (RA) interns are required to document a minimum of 260 clock hours, excluding breaks, in the clinical setting for the clinical internship course. Sixty-five of these 260 hours must be devoted to observing the radiologists' interpretations of images.

### **MIS 5423-R—Clinical Internship II**

The focus of this clinical internship course is on musculoskeletal imaging procedures. Radiologist Assistant (RA) interns are required to document a minimum of 260 clock hours, excluding breaks, in the clinical setting for the clinical internship course. Sixty-five of these 260 hours must be devoted to observing the radiologists' interpretations of images.

### **MIS 6341-R—Pathophysiology and Clinical Correlation**

Application of the concepts of pathophysiology for the assessment and management of medical imaging patients. Emphasizes the characteristic manifestations, pattern recognition, and image assessment of pathologies observed in medical images specific to the program track selected.

### **MIS 6351—Health Care Systems in America**

Analysis of the health care services provided within the United States of America. The evolution, structure, financing, and regulation of the nation's health care institutions will be covered. In addition, ethics and legal issues related to the health professions will be studied.

### **MIS 6433-R—Clinical Internship III**

The focus of this clinical internship course is on gastrointestinal and genitourinary imaging procedures. Radiologist Assistant (RA) interns are required to document a minimum of 260 clock hours, excluding breaks, in the clinical setting for the clinical internship course. Sixty-five of these 260 hours must be devoted to observing the radiologists' interpretations of images.

### **MIS 6443-R—Clinical Internship IV**

RA track emphasizes invasive imaging procedures.

### **MIS 6453-R—Clinical Internship V**

RA track emphasizes specialized modalities.

### **MIS 6V31—Research Project I**

Practical experience in conducting research. A written plan describing the project's objectives and goals must be approved by the student's research mentor and program director prior to implementation. The student will submit the completed project for consideration to be published in a peer reviewed journal or to be presented at a professional meeting as a poster or lecture. A minimum of 3 SC is required for program completion.

### **MIS 6V42—Research Project II (optional)**

A minimum of 3 SC in this research project course is required for program completion. This course may be taken for up to 6 SC.

# RESPIRATORY CARE PROGRAM

## Department of Respiratory and Surgical Technologies

*The Respiratory Care Program is accredited by the Commission on Accreditation for Respiratory Care Education.*

**Erna L. Boone, M.Ed., R.R.T.,** *Chairman and Associate Professor*

*Department of Respiratory and Surgical Technologies*

*University of Arkansas for Medical Sciences*

*College of Health Related Professions, UAMS #737*

*4301 West Markham Street, Little Rock, Arkansas 72205*

*Telephone: (501) 526-4490*

*E-mail: booneernal@uams.edu*

*Web site: <http://www.uams.edu/chrp/respiratorycare/>*

**Faculty:** *M. Anders, E. Boone, T. Cook, K. Diles, P. Evans, T. Gramlich (VA), T. Jones (UACC-B), H. Neal-Rice, T. Robertson, K. Rye*

**Clinical/Adjunct Faculty:** *J. Bates, J. Standridge*

**Medical Directors:** *M. Erbland, M. Smith*

*(See page 108 for information about Surgical Technology)*

### THE PROFESSION

Respiratory care is concerned with the assessment, diagnosis and management of patients with cardiopulmonary deficiencies or abnormalities. The Respiratory Therapist works in hospitals, clinics, home care agencies and other health care settings under the direction of a physician. Respiratory Therapists use sophisticated equipment in the assessment and treatment of patients with such lung disorders as asthma, emphysema, pneumonia and bronchitis. The Respiratory Therapist also provides patient and community education and develops patient care plans.

Respiratory Therapists are important members of the critical care team in hospital Intensive Care Units where patients are seriously ill. They use highly technical mechanical ventilators and monitoring equipment to support breathing in patients who have sustained a life-threatening illness or injury.

In the Pulmonary Function, Cardiopulmonary Stress Testing and Arterial Blood Gas Laboratories, the Respiratory Therapist assists the physician in the determination of the type and extent of cardiopulmonary disease and monitors the responsiveness to a particular treatment regimen.

As an important member of a rapidly changing health care environment, the Respiratory Therapist possesses skills which allow flexibility in a variety of practice settings. Some practitioners choose to specialize in areas such as newborn and pediatric care, rehabilitation, patient and staff education, home care, research, cardiopulmonary diagnostics or critical care.

There are two credential levels for respiratory care practitioners: the Certified Respiratory Therapist (CRT) and the Registered Respiratory Therapist (RRT). Those designated as CRT administer general respiratory care and may assume clinical responsibilities for specified respiratory care modalities involving the application of well-defined therapeutic techniques under the supervision of a respiratory therapist and/or physician. RRTs apply scientific knowledge and theory to practical clinical problems of respiratory care and are qualified to assume primary

responsibility for all respiratory care modalities, including the supervision of certified respiratory therapists (CRTs). Under the supervision of a physician, the RRT is often required to exercise considerable independent clinical judgment in the respiratory care of patients.

### THE PROGRAMS

UAMS respiratory care educational programs offer a variety of options for prospective students. All of the programs are fully accredited by the Commission on Accreditation for Respiratory Care Education (CoARC).

#### Traditional Programs

The UAMS offers traditional programs for students who do not hold a CRT and/or RRT credential.

The UAMS offers a B.S. Degree program, which leads to the RRT credential. This program is available on the Little Rock, Texarkana, and Batesville campuses.

The Little Rock program receives significant support from the Central Arkansas Veteran's Healthcare System. Contact the Little Rock program at (501) 526-4490.

The Texarkana program is sponsored by the UAMS and the AHEC-Southwest. It is located in the AHEC-Southwest facility. Contact the Texarkana program at (870) 770-6054.

The Batesville program is offered through a special partnership between UAMS and the University of Arkansas Community College at Batesville. Contact the Batesville program at (870) 612-2064.

#### Non-Traditional Programs

A three-year program option is available to prospective students who must still complete some program prerequisites, or who wish to take a reduced course load due to work or family obligations. In order to be eligible for the three-year track, students must have completed a minimum

of 34 SC of the required 62 SC of program prerequisites prior to enrolling in the Respiratory Care Program. Students admitted to this program track must successfully complete the Human Anatomy and Physiology requirement prior to the first semester. The student may then complete up to 29 SC of program prerequisite course work during Years 1 and 2 of the three-year track. Year 3 of this program option is a full time course load. All other program admission requirements must be met in order to be admitted to the three-year program option. Prospective students who are interested in this track should contact the program for additional information.

The UAMS also offers a non-traditional program for practicing professionals who hold the RRT credential. This RRT to B.S. Degree program is offered substantially via the Internet and Independent Study. Contact the department for information about the pre-professional curricula, the professional curricula, and the application requirements.

## CERTIFICATION AND LICENSURE

**R.R.T:** Successful completion of professional course work in the Bachelor of Science degree program offered in both Little Rock and Texarkana satisfies academic and clinical eligibility requirements to apply for the Entry-Level Practitioner Examination and the Advanced Practitioner Examination offered by the National Board for Respiratory Care (NBRC). Successful candidates earn the Certified Respiratory Therapist (CRT) and Registered Respiratory Therapist (RRT) credentials. Successful completion of this program does not itself ensure certification or registration. Each student is responsible for familiarizing himself/herself with the applicable requirements, including the examination schedules.

**L.R.C.P.:** Successful completion of professional course work in the Bachelor Degree program satisfies the academic requirements to apply for a license in the State of Arkansas.

## PREPROFESSIONAL CURRICULUM

**B.S. Degree in Cardio-Respiratory Care:** The following 62 SC are required from a regionally accredited college or university and must fulfill all College of Health Related Professions requirements regarding acceptance of transfer credit.

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE* **</b>	
Human Anatomy & Physiology ***	4-8
Microbiology	4
Chemistry	4
Physics	4
Computer Fundamentals	3
	<u>19-23</u>
<b>MATHEMATICS</b>	
College Algebra or Higher Level Mathematics	3
<b>COMMUNICATIONS</b>	
Speech	2

## LIBERAL ARTS

English Composition	6
American History or U.S. Government	3
Western Civilization or World History	6
	<u>15</u>

## FINE ARTS

Fine Arts	3
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## HUMANITIES

Humanities	3
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## SOCIAL SCIENCES

Introduction to Psychology	3
Introduction to Sociology	3
	<u>6</u>

## ELECTIVES (Variable, but minimum total SC must equal 62)

7-11

## TOTAL

**62-66**

\*Science courses must be suitable for science or health professions majors and include a laboratory.

\*\*Students admitted to the part-time track must complete the Human Anatomy and Physiology course requirements as described above by the date of registration at UAMS. In addition, completion of at least one of the three other science courses is strongly recommended.

\*\*\*Anatomy and physiology courses must cover all body systems and include accompanying laboratory sections. At some colleges this requirement can be met with one course, at others two courses are required.

A final grade of "C" or better is required in each of the above courses. Documentation of successful completion is required by the date of registration for the first semester.

Actual course titles may vary among institutions. Consult the department for preprofessional counseling.

Fulfillment of the preprofessional curriculum does not in itself ensure admittance into the professional program (please see Application Procedures and Deadlines).

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP bachelor's degree: (a) 32 SC in residence; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government, a 3 SC course in college algebra or higher level mathematics, and a 3 SC course in humanities.

## PROFESSIONAL CURRICULUM

**Bachelor of Science Degree (Little Rock, Texarkana, and Batesville):** The following 62 SC will be required in the professional program:

Course #	Title	Semester Credit
<b>Fall (1)</b>		
RES 3211	Cardiopulmonary Anatomy and Physiology I	2
RES 3412	Equipment and Techniques I	4
RES 3113	Equipment and Techniques I Laboratory	1
RES 3414	Basic Assessment and Diagnosis	4
RES 3115	Basic Assessment and Diagnosis Laboratory	1
RES 3116	Pharmacology I	1
RES 3117	Clinical Practicum I	1
		<u>14</u>

**Spring (2)**

RES 3221	Cardio-Respiratory Disorders I	2
RES 3322	Equipment and Techniques II	3
RES 3223	Equipment and Techniques II Laboratory	2
RES 3227	Neonatal Cardiopulmonary Care	2
RES 3225	Cardiopulmonary Anatomy and Physiology II	2
RES 3128	Pulmonary Function Testing	1
RES 3226	Clinical Practicum II	<u>2</u>
		14

**Summer (3)**

RES 4330	Introduction to Research	3
RES 3132	Pharmacology II	1
RES 3231	Clinical Internship	<u>2</u>
		6

**Fall (4)**

RES 4240	Cardio-Respiratory Disorders II	2
RES 4241	Advanced Assessment and Diagnosis	2
RES 4342	Critical Care Practices	3
RES 4243	Pediatric Cardiopulmonary Care	2
RES 4144	Scholarship Project	1
RES 4445	Clinical Practicum III	<u>4</u>
		14

**Spring (5)**

RES 4251	Cardio-Respiratory Care in Alternate Sites	2
RES 4354	Disease Management	3
RES 4250	Integration Project	2
RES 4254	Leadership and Supervision	2
RES 4255	Respiratory Care Seminar	2
RES 4356	Clinical Practicum IV	<u>3</u>
		14

**TOTAL**

**62**

A grade of "D" or "F" or a mark of "U" or "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

**RESPIRATORY CARE ESSENTIAL FUNCTIONS**

These essential functions represent the non-academic requirements of the program. All applicants must meet these requirements in order to participate in the respiratory care program. Graduates of the program must be able to meet certain physical and mental requirements to ensure the safe performance of respiratory care procedures.

Due to the nature of typical clinical assignments, applicants must be able to meet the criteria listed below related to hearing, mobility, motor skills (fine & gross), tactile, visual, physical endurance, and mental/attitudinal standards.

1. Auditory ability sufficient to hear and understand patients and staff, assess and monitor patient sounds.

Examples: Communicate and interact with patients and families from a variety of backgrounds. Follow oral instructions. Hear heart and breath sounds. Detect and discriminate between sounds of normal respiration. Identify and localize alarm sounds emitted from patient care equipment.

2. Mobility and strength sufficient to support and move patients.

Examples: Support and transfer patients, move in and out of treatment areas. Reach equipment or parts of patient's body.

3. Perform multiple motor tasks simultaneously. Fine and gross motor skills sufficient to handle equipment and provide safe and effective patient care; steady arm and hand movements while manipulating objects or assisting patients.

Examples: Operate and manipulate equipment, blood collection devices, several items at once. Administer aerosols, suction patient, and adjust pressure gauges. Lift and transport oxygen cylinders, move in and out of treatment areas. Push/pull hospital beds.

4. Tactile ability sufficient to assess patient's response to therapy.

Examples: Distinguish textures, degrees of firmness, temperature differences, and pulse rate.

5. Visual ability sufficient to monitor and assess patient and equipment function to provide safe and effective respiratory care.

Examples: Read written instructions/orders. Read fine print, monitors, and gauges. Differentiate color/character of sputum for signs/nature of infection/disease. Chart procedures and observation in a permanent medical record.

6. Physical endurance ability sufficient to work in a clinical setting for eight (8) to twelve (12) hours performing physical tasks requiring physical energy without jeopardizing patient safety.

Examples: Remain standing and walking between patient care areas for at least an hour. Perform chest compressions during CPR. Manually ventilate a patient for at least 30 minutes during resuscitation.

7. Mental/attitudinal ability sufficient to interact with patients and other health care personnel in providing appropriate patient care and exhibiting attitudes and actions consistent with the ethical standards of the profession.

Examples: Function safely, effectively, and calmly under stressful situations. Maintain composure while managing multiple tasks simultaneously. Prioritize multiple tasks. Exhibit social skills necessary to interact effectively with patients, families, supervisors, and co-workers of the same or different cultures, such as respect, politeness, tact, collaboration, teamwork, and discretion. Maintain personal hygiene consistent with the close personal contact associated with patient care.

## APPLICATION PROCEDURES AND DEADLINES

Class size is limited and all applicants may not be selected for participation in the program. Early application is encouraged.

### **Bachelor of Science Degree (Little Rock, Texarkana, Batesville):**

Application for fall semester admission to the professional phase of the program must be made between September 1 and May 15 in any academic year. Individuals selected for admission will be notified by the chairman of the department. Applications may be accepted after the deadline depending on class capacity. Individuals are encouraged to apply early, as qualified applicants may receive conditional acceptance to the program prior to application deadline. Applicants must provide:

1. **Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your course work. A CGPA of at least 2.0 is required to be considered for admission.
4. **Professional Observation:** Applicants are required to demonstrate an understanding of the responsibilities and duties of the profession through observation and discussion with a practicing professional in the field. Contact the Department for details.
5. **Interview:** Qualified applicants are contacted to arrange an interview following receipt of application requirements 1–4 listed above.
6. **Testing Results:** All applicants will be required to take the Health Occupations Admission Examination (HOAE) administered by the department. The cost of the on-line examination is \$15.00.
7. TOEFL scores as applicable. See International Applicants on pp. 12-13.

**Transcripts “issued to the student” will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcript.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All application forms may be obtained from the program office.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS Slot 619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

Upon acceptance into the professional program, students must complete the following admission requirements:

1. **CPR Certification:** Students must be certified in Basic Cardiac Life Support (BCLS, Health Care Providers) according to American Heart Association (AHA) standards prior to the first clinical course. The course must be administered or approved by the Department. The AHA “Heartsaver” and the Red Cross CPR course do not fulfill this requirement. All current CPR certifications which expire prior to the program graduation date will require recertification as a prerequisite to the first clinical course.
2. **Physical Examination:** Physical examination forms must be completed and signed by a physician and are due no later than three (3) weeks before the date of registration for the first semester.

## PROFESSIONAL COURSE WORK

### **Bachelor of Science Degree (Little Rock, Texarkana, and Batesville):**

#### **Traditional Program Courses**

##### **RES 3113—Equipment and Techniques I Laboratory**

Respiratory care equipment function, maintenance, and use; guided practice prior to clinical experiences.

##### **RES 3115—Basic Assessment and Diagnosis Laboratory**

Cardio-respiratory assessment and diagnostic equipment function, maintenance and use; guided practice prior to clinical experience.

##### **RES 3116—Pharmacology I**

Practical and clinical pharmacology related to inhaled drugs administered by the respiratory therapist.

##### **RES 3117—Clinical Practicum I**

Supervised clinical experience in basic respiratory care procedures and practices.

##### **RES 3128—Pulmonary Function Testing**

The Registered Respiratory Therapist (RRT) is expected to understand pulmonary function testing (PFT) methods, perform PFT procedures, interpret PFT result, and analyze data related to pulmonary function lab quality control and quality assurance. This course is designed to prepare students for clinical experience with PFT performance, PFT interpretation, use of PFT results in patient care management, an understanding of quality control/quality assurance methods used in the PFT lab.

##### **RES 3132—Pharmacology II**

A continuation of Pharmacology I. Emphasis will be placed on non-steroidal, anti-asthmatic and anti-infective drugs as well as sedatives, analgesics, neuromuscular blocking agents, and cardiac drugs.



**RES 3211—Cardiopulmonary Anatomy and Physiology I**  
Emphasis on the respiratory, cardiac, and renal systems.

**RES 3221—Cardio-Respiratory Disorders I**  
Study of respiratory failure, COPD, and asthma.

**RES 3223—Equipment and Techniques II Laboratory**  
Critical respiratory care equipment and function, maintenance and use; guided practice prior to clinical experiences.

**RES 3225—Cardiopulmonary Anatomy and Physiology II**  
Continuation of RES 3211: Cardiopulmonary Anatomy and Physiology I

**RES 3226—Clinical Practicum II**  
Continuation of Clinical Practicum I; includes an introduction to critical respiratory care procedures and practice.

**RES 3227—Neonatal Cardiopulmonary Care**  
Study of neonatal respiratory care with emphasis on: physiology, cardiopulmonary disorders, assessment, evaluation, monitoring, and modalities of treatment. The laboratory will focus on neonatal critical care equipment function, maintenance, and use and guided practice prior to clinical experiences. Neonatal Resuscitation Program (NRP) certification required.

**RES 3231—Clinical Internship**  
Concentrated clinical experiences in critical and non-critical respiratory care procedures and practices.

**RES 3311—Cardio-Respiratory Anatomy and Physiology**  
Emphasis on the respiratory and cardiac systems.

**RES 3321—Cardio-Respiratory Disorders**  
Study of common respiratory and cardiac diseases.

**RES 3322—Equipment and Techniques II**  
Cardio-respiratory Care of critically ill patients with emphasis on mechanical ventilation and physiologic monitoring.

**RES 3412—Equipment and Techniques I**  
Respiratory Care procedures and equipment; emphasis on basic respiratory care procedures and practice.

**RES 3414—Basic Assessment and Diagnosis**  
Basic cardio-respiratory assessment and diagnostic procedures and practice.

**RES 4144—Scholarship Project**  
An introduction to the application of scientific research methods.

**RES 4240—Cardio-Respiratory Disorders II**  
Study of common respiratory and cardiac disorders.

**RES 4241—Advanced Assessment and Diagnosis**  
Advanced cardiopulmonary assessment and diagnostic procedures and practices.

**RES 4243—Pediatric Cardiopulmonary Care**  
Study of pediatric respiratory care with emphasis on: physiology, cardiopulmonary disorders, assessment evaluation, monitoring, and modalities of treatment. The laboratory will focus on pediatric critical care equipment function, maintenance and use and guided practice prior to clinical experiences. Pediatric Advanced Life Support (PALS) certification required.

**RES 4250—Integration Project**  
Integration of respiratory care course work, focused on a case study.

**RES 4251—Cardio-Respiratory Care in Alternate Care Sites**  
Theory and application of cardio-respiratory diagnostics and therapeutic intervention, including cardio-respiratory care in alternate care sites.

**RES 4254—Leadership and Supervision**  
Basic concepts, principles, and practices necessary for effective supervision and leadership in a health care environment.

**RES 4255—Respiratory Care Seminar**  
Continuation of RES 4143—Current Topics in Cardio-Respiratory Care I.

**RES 4330—Introduction to Research**  
An introduction to the methods of scientific research to include research design and statistical analysis. Critical review of the components of research reports will be performed to include definition of the problem, review of the literature, research design, data analysis, and results.

**RES 4342—Critical Care Practices**  
Special techniques, case studies and pathological complications associated with the critically ill patient; emphasis on the care of the cardiac and trauma patient.

**RES 4354—Disease Management**  
Introduction to chronic disease management.

**RES 4356—Clinical Practicum IV**  
Continuation of Clinical Practicum III; includes alternate care site and additional critical care practices and procedures.

**RES 4445—Clinical Practicum III**  
A continuation of Clinical Practicum II; includes neonatal and diagnostic procedures and practices.

### **Non-Traditional (RRT-to-BS) Program Courses**

**RES-4230—Introduction to Research**  
An introduction to the methods of scientific research including research design.

**RES 4254—Leadership and Supervision**  
Basic concepts, principles, and practices necessary for effective supervision and leadership in a health care environment.

**RES 4257—Literature Review**  
Discussion of advanced theory and application of cardio-respiratory care as found in the professional literature. Prerequisite: RES 4344.

**RES 4258—Capstone I**  
Planning the Capstone practicum, research project, or scholarly activity. Required course for students in the RRT-to-BS track. Prerequisites included RRT credential, admission to CHRP, and for some select Capstone activities, either the Community Health and Education course, RES 4253, or the Research Methods course, RES 4344.

**RES 4354—Disease Management**  
Introduction to chronic disease management.

**RES 4652—Capstone II**

The Capstone practicum is implemented and evaluated, the Capstone research activity is conducted and reported, or in the Capstone scholarly activity, the scientific literature is critically approved and evidenced-based recommendations are disseminated. The Capstone I course, RES 4258, is a prerequisite.

# SPEECH-LANGUAGE PATHOLOGY PROGRAM (M.S.-COMMUNICATION DISORDERS)\*

## Department of Audiology and Speech Pathology

*The Audiology and Speech Pathology Programs are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.*

**Terri J. Hutton, M.F.A.;** *Graduate Coordinator  
Department of Audiology and Speech Pathology  
University of Arkansas for Medical Sciences  
University of Arkansas at Little Rock  
Speech, Language and Hearing Clinic  
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**Faculty:** *R. Atcherson, S. Atcherson, B. Eaton, B. Gentry, T. Guyette, P. Highley, T. Hutton, D. Kelly, R. Kelly, S. Mahurin, B. McWeeny, P. Monoson (Emerita), J. Montague (Emeritus), N. Nicholson, S. Pine (Emerita), G. Robinson, K. Shapley, L. Smith-Olinde, M. Weatherton (Emeritus), G. Weddington, R. Zraick*

**Clinical Faculty:** *J. Brucks, K. Douglas, C. Ford, A. Harmon, A. Hedges, C. Henderson, L. Karpe, P. Martin, T. McCoy, F. Olinde, D. Smiley, T. Sowell*

**Thomas W. Guyette, Ph.D.,** *Chairman and Professor, Department of Audiology and Speech Pathology  
(See pages 24 for information about the Audiology Program (Au.D.) or page 33 for information about the Communication Sciences and Disorders Program (Ph.D.).*

## THE PROFESSION

Speech-language pathologists evaluate and treat people who have communication disorders of speech, language, voice, literacy, and/or fluency. Because speech and/or hearing problems are both communication disorders, audiologists and speech-language pathologists work together to determine sources of communication problems and to coordinate programs of rehabilitation. Graduates of this program are prepared for positions in a variety of professional settings including school systems; community speech, language, and hearing centers; private practice; physician's offices; hospital clinics; rehabilitation centers; day care centers; college-training programs; and residential institutions.

## THE PROGRAM

The Department of Audiology and Speech Pathology offers a Master of Science degree in Communication Disorders with an emphasis in speech-language pathology through the College of Health Related Professions at the University of Arkansas for Medical Sciences in a consortium with the

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\*Students pursuing the Master of Science degree are considered to be students in the Graduate School who are taking courses offered by the faculty of the College of Health Related Professions. Accordingly, the Graduate School Catalog is considered the primary catalog for all students in this program. All provisions (including grievance procedures) in the Graduate School Catalog and the Graduate School Handbook are the authority applicable to students pursuing the Master of Science degree in Communication Disorders.

College of Professional Studies at the University of Arkansas at Little Rock. This unique educational consortium combines the academic and clinical resources of a major medical sciences campus with a large, comprehensive, urban university. The curriculum is designed to emphasize the science of speech, language, and hearing; the acquisition of knowledge about human communication disorders; and the study and practice of methods for evaluation and treatment. Practicum experiences are provided at a large number of settings in the central Arkansas area.

## CERTIFICATION AND LICENSURE

Graduates of the Master of Science degree program are academically and clinically eligible to apply for the Certificate of Clinical Competence through the American Speech-Language-Hearing Association and to apply for licensure in Speech Pathology with the Arkansas Board of Examiners in Speech Pathology and Audiology. Successful completion of the program does not itself ensure certification and/or licensure. All students are responsible for familiarizing themselves with the applicable certification and licensure requirements.

## FINANCIAL ASSISTANCE

In addition to the financial aid opportunities described in the UAMS Student Financial Services sections of the UAMS CHRP and Graduate School Catalogues, the department has program-specific financial assistance for master's degree program students. Contact Ms. Beth McWeeny at (501) 569-3155 for further information regarding aid which may be available to qualified full-time, master's level, speech pathology graduate students.

## PREPROFESSIONAL REQUIREMENTS

Students applying for admission to the Master of Science graduate program must have earned a baccalaureate degree from a regionally accredited college or university. If the major is other than Communication Disorders or Speech-Language Pathology, 30 hours of specified preprofessional, undergraduate course work in these areas are required prior to admission to the Master of Science degree program. The department offers an undergraduate program at the University of Arkansas at Little Rock (UALR).

## PROFESSIONAL CURRICULUM

The Master of Science degree program requires a minimum of 49 graduate semester credit hours. Students choosing the thesis option can count up to six (6) credit hours of ASP 600V-Thesis toward the 49 graduate credit hour minimum. Those choosing the research project option can count up to three (3) credit hours of ASP 516V-Independent Research toward the 49 credit hour minimum. Students must pass a comprehensive examination. A degree is awarded upon successful completion of all academic and practicum requirements for the University of Arkansas for Medical Sciences. More specific information about program requirements can be obtained by contacting the department.

## APPLICATION PROCEDURES AND DEADLINES

Application for the Master of Science degree program is made through the **Graduate School Office, University of Arkansas for Medical Sciences, 4301 West Markham Street, #601, Little Rock, Arkansas, 72205**. For all international applicants, official test results (i.e., scores) of the TOEFL and the GRE examination must be sent directly to UAMS by the Educational Testing Service. All completed applications and application materials must be received by February 15 of each calendar year (see page 9). Earlier submission of applications is recommended. Admission for the Master of Science degree program is for the fall semester only.

## PROFESSIONAL COURSE WORK

The first number listed for courses is the UAMS listing; the second (in parenthesis) is the University of Arkansas at Little Rock listing.

### **ASP 5013 (7360)—Research Methods in Communication Disorders**

Introduction to research methodologies in audiology and speech pathology. Includes prospectus development, funding sources, data collection and analysis, and professional research writing and editing in communicative disorders and/or speech sciences.

**ASP 5042 (7294)—Augmentative and Alternative Communication**  
Theory, design, and organization of nonverbal communication systems. Emphasis on considerations for choosing specific devices for particular clients. Includes manual, graphic, electronic, and mechanical systems.

**ASP 5073 (7366)—Advanced Anatomy and Physiology for Speech**  
Investigates the anatomy and physiology of speech and language. Topics include respiration, phonation, articulation, and neurological control of speech and language, and embryological development of the speech structures.

### **ASP 5093 (7371)—Neurogenic Language Disorders**

Assessment procedures and intervention techniques for acquired neurogenic language disorders in adults. Covers language disorders secondary to cerebrovascular accident, traumatic brain injury, and dementia.

### **ASP 5113 (7364)—Language Assessment and Therapy**

Acquisition of first language competence in relationship to language behavior. Includes the phonological, morphological, syntactical, and semantic components of language. Language deviations-emphasis on symptomology, etiology, evaluation, and therapy. Language testing and therapy explored in the second half of the course.

### **ASP 5122 (7270)—Fluency Disorders**

Procedures, theories, and therapeutic techniques in the treatment of various types and degrees of stuttering and cluttering in adults and children.

### **ASP 5133 (7367)—Infant-Toddler Communication: Development-Assessment**

Investigates prelinguistic/early linguistic communication and feeding/swallowing development. Multidisciplinary assessment and intervention for infants and toddlers (birth to five) with special needs and their families. Current formal and informal assessment tools and techniques, current intervention strategies, enhancing the therapeutic process across environments, utilizing team collaboration, and facilitating parent-infant interaction.

### **ASP 513V (7093)—Topics in Speech-Language Pathology**

A seminar offered for special projects or topics related to procedures and instrumentation, theoretical foundations, assessment, clinical, or rehabilitative speech-language pathology. May be repeated for additional credit not to exceed nine (9) semester credit hours.

### **ASP 5142 (7263)—Sociolinguistics**

The linguistic structure of language, nature, and forms of symbolic behavior. Human uses of symbols from various groups and socio-economic levels, particularly in communication. Prerequisite: Courses in phonetics and normal language acquisition.

### **ASP 5152 (7261)—Organization and Administration**

Organization, administration and accreditation of school, university, and community programs. Private practice and billing procedures. Various and alternative career opportunities including corporate speech pathology practice. Issues related to medicaid, medicare and other third party payers, as well as current legislation. Governmental and professional practice issues.

**ASP 5163 (7320)—Auditory Based Speech/Language Intervention**  
Auditory-based speech and language intervention with infants and toddlers who are deaf and/or hard of hearing. Emphasis is on the principles of the normal developmental sequence of listening skills, assessment of skills obtained within the hierarchy, and intervention aimed at teaching skills not yet acquired. Auditory based intervention for infants and toddlers requires family participation; therefore, learning styles of parents and caregivers will be discussed.

**ASP 5173 (7365)—Counseling in Communication Disorders**  
Principles of counseling for working with persons with communication disorders and their families throughout the lifespan. Students review major theories of counseling and select those most useful for the various settings and practices of audiology and speech pathology. Students demonstrate their understanding of the counseling process through case presentations.

**ASP 5183 (7372)—Advanced Articulation Disorders**  
Advanced study of functional and organic articulation disorders, variables related to articulation, assessment and diagnosis of articulation disorders, and therapeutic procedures.

**ASP 5192 (7273)—Neurogenic Speech Disorders**  
Assessment procedures and intervention techniques for acquired neurogenic speech disorders in adults, especially dysarthria and verbal and oral apraxia.

**ASP 5213 (7368)—Dysphagia**  
Examines normal oral, pharyngeal, and esophageal swallowing function in adults and children including neurology, physiology, and the effects of aging. Swallowing disorders discussed with an emphasis on oral and pharyngeal function. Various methods of evaluation, as well as current management and treatment options.

**ASP 5233 (7385)—Audiologic Rehabilitation: Children**  
Audiometric evaluation procedures and the habilitation/rehabilitation of infants and children with hearing loss. Emphasis is placed on the determination of appropriate remediation, language and speech therapy, auditory training, and counseling parents for home programming.

**ASP 5243 (7386)—Audiologic Rehabilitation: Adult**  
Principles of audiologic rehabilitation for adults, including diagnosis, counseling, use of amplification and other assistive devices, and communication strategies. Various models of audiologic rehabilitation presented.

**ASP 5252 (7276)—Voice Disorders**  
Assessment procedures and rehabilitative techniques for voice disorders in children and adults. Instrumental and behavioral approaches, as well as medical and/or surgical treatment approaches. A team approach to care is emphasized.

**ASP 5262 (7275)—Craniofacial Speech Disorders**  
Provides an understanding of speech disorders often associated with craniofacial differences. Information presented on craniofacial development, relevant anatomy and physiology, as well as procedures for evaluation (both behavioral and instrumental) and treatment of craniofacial speech disorders. A team approach to care is emphasized.

**ASP 5273 (7396)—Advanced Differential Diagnosis of Speech and Language Disorders**  
Advanced study in differential diagnosis of speech and language disorders of children and adults. Proficiency in the use and interpretation of standardized assessment procedures. Prerequisite: an under-graduate course in diagnostic methods or its equivalent.

**ASP 5282 (7282)—Learning Disabilities**  
An introduction to the characteristics, definitions, etiologies, assessment, and therapeutic procedures in the treatment of children diagnosed with learning disabilities. Emphasis placed on the scope of practice for speech-language pathologists and audiologists in the due process procedures for these children.

**ASP 5293 (7392)—Multicultural Issues**  
Systematic analysis of cultural similarities and differences. Examine cultural differences, verbal and nonverbal, in the clinical setting.

**ASP 530V (7193)—Independent Study in Communication Disorders**  
Prerequisites: Consent of the instructor. Directed readings in audiology and/or speech/language pathology, individual discussion with a faculty member. May be repeated for up to six (6) hours of credit. Offered as needed.

**ASP 536V (7092)—Independent Research**  
Research or individual investigation for graduate students. Credits earned may be applied toward meeting degree requirements if the program approves and if a letter grade is given. Repeated registration is permitted. Prerequisite: ASP 5013.

**ASP 540V (7091)—Practicum**  
Applied, supervised practicum experiences for graduate students that encompass the full current scope of practice with both adults and children from culturally diverse backgrounds.

**ASP 600V (8000)—Thesis**  
Thesis students must register for a total of 6 semester hours; one (1) to six (6) credit hours per semester. Prerequisite: ASP 5013.

# SURGICAL TECHNOLOGY PROGRAM

## Department of Respiratory and Surgical Technologies

The Surgical Technology Program is accredited by the Committee on the Accreditation of the Allied Health Education Programs; Accreditation Review Committee for the Surgical Technologist.

**Gennie Castleberry, M.Ed., C.S.T.(R.),** Program Director and Assistant Professor

Department of Respiratory and Surgical Technologies

University of Arkansas for Medical Sciences

College of Health Related Professions, UAMS #737

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E-mail: [castleberrygennier@uams.edu](mailto:castleberrygennier@uams.edu)

Web site: <http://www.uams.edu/chrp/surgicaltechnology/>

**Faculty:** G. Castleberry

**Erna L. Boone, M.Ed., R.R.T.,** Chairman and Associate Professor, Department of Respiratory and Surgical Technologies  
(See page 99 for information about the Respiratory Care Program)

### THE PROFESSION

Surgical Technology involves technical procedures in settings requiring aseptic (sterile) techniques and the use of surgical equipment and instrumentation. The program, jointly sponsored by the University of Arkansas for Medical Sciences and the Department of Veterans Affairs, Central Arkansas Veterans Healthcare System (CAVHS) (North Little Rock Division), emphasizes this technical competence. The surgical technologist works with skill and understanding in surgical processing, materials management, labor and delivery areas, as well as in the operating room.

The primary responsibility of the Surgical Technologist is maintaining the sterile field and being constantly vigilant that all members of the team adhere to proper aseptic techniques that prevent contamination or infection. He/she must anticipate the needs of the surgeon, passing instruments and providing sterile items in an efficient manner.

### THE PROGRAMS

**Little Rock (Associate of Science Degree):** Those students desiring the Associate of Science degree must complete 34 SC of preprofessional basic science and general education courses at a regionally accredited college or university and 31 SC of professional course work. This academic preparation can be completed as a full-time (traditional) student or a part-time (nontraditional) student. The academic courses are not only intended to provide a sound basis for expanding requirements of the health care field, but also to act as a bridge to other health professions.

### CERTIFICATION AND LICENSURE

**C.S.T.:** Completion of professional course work in the Surgical Technology program does not itself ensure certification. It does satisfy the strict eligibility requirement to apply for the national certification examination awarded by the National Board of Surgical Technology and Surgical Assisting. Successful

candidates become Certified Surgical Technologists (CST), having demonstrated a commitment to maximum performance and quality patient care.

### PREPROFESSIONAL CURRICULA

**Associate of Science Degree:** The following 34-35 SC are required from a regionally accredited college or university and must fulfill all College of Health Related Professions requirements regarding acceptance of transfer credit.

Area/Typical Course Title	Minimum Semester Credit
<b>SCIENCE*</b>	
Human Anatomy & Physiology**	4-8
Microbiology	4
Computer Fundamentals	<u>3</u>
	11-15
<b>MATHEMATICS</b>	
College Algebra or Higher Level Mathematics	3
<b>COMMUNICATIONS</b>	
Speech	2
<b>LIBERAL ARTS</b>	
English Composition	6
American History or National Government	<u>3</u>
	9
<b>SOCIAL SCIENCES</b>	
Psychology	3
Sociology	<u>3</u>
	6
<b>ELECTIVES</b>	
	<u>3-0</u>
<b>TOTAL</b>	<b>34-35</b>

\*Science courses must be suitable for science or health professions majors and include a laboratory.

\*\*Anatomy and physiology courses must cover all body systems and include accompanying laboratory sections. At some colleges this requirement can be met with one course, at others two courses will be required. If a 4 SC course is accepted, the applicant is expected to complete 3 SC of an elective, bringing total credits to 34.

A final grade of "C" or better is required in each of the above courses. Documentation of successful completion is required by the date of registration for the first semester.

Actual course titles may vary among institutions. Consult the department for preprofessional counseling.

Fulfillment of the preprofessional curriculum does not in itself ensure admittance into the professional program (please see Application Procedures and Deadlines).

Students entering with a baccalaureate or higher degree from an accredited college or university must complete the following requirements for a CHRP associate's degree: (a) 31 SC in residence in the CHRP; (b) all program-specific mathematics and biological and physical science prerequisites; (c) all program-specific professional requirements; (d) if not completed as part of a previous degree program, a 3 SC college/university course in American history or national government and a 3 SC course in college algebra or higher level mathematics.

## PROFESSIONAL CURRICULA

**Associate of Science Degree Program:** The following 31 SC are required in the professional portion of the curriculum:

Course	Title	Semester	Credit
<b>Fall (1)</b>			
SUT 2510	Basic Operating Room Techniques		5
SUT 2211	Basic Operating Room Techniques I Laboratory		2
SUT 2312	Medical Terminology		3
SUT 2313	Surgical Pathophysiology		3
SUT 2215	Clinical Practicum I		<u>2</u>
			15
<b>Spring (2)</b>			
SUT 2520	Advanced Operating Room Techniques		5
SUT 2221	Pharmacology for the Surgical Technologist		2
SUT 2222	Perioperative Practice		2
SUT 2425	Clinical Practicum II		<u>4</u>
			13
<b>Summer (3)</b>			
SUT 2123	Professional Certifications Seminar		1
SUT 2231	Clinical Practicum III		<u>2</u>
			<u>3</u>
<b>TOTAL</b>			<b>31</b>

A grade of "D" or "F" or a mark of "U" or "NC" in a professional course is not acceptable for progression to the next semester, nor is it acceptable for graduation if it occurs in the last semester of the program.

Part-time students will follow an individualized degree plan to complete the curriculum.

## APPLICATION PROCEDURES AND DEADLINES

**Associate of Science Degree Program:** Applications for admission into the fall semester of the professional phase of the program are accepted between September 1 and May 15 each academic year. The chairman of the department will notify applicants selected for admission. Class size is limited, and all applicants may not be selected for participation in the

program. Individuals are encouraged to apply early, as qualified applicants may receive conditional acceptance to the program prior to the application deadline. Applicants may be accepted after the deadline depending on class capacity. Applicants must provide:

- 1. Application for Admission:** The College of Health Related Professions Application for Admission is required. Please contact the department office or the CHRP Office of Student Affairs for information.
- 2. Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application.
- 3. Official Transcripts:** Arrange for each college and university you have attended to mail an official transcript directly to the CHRP Admissions Officer. A CGPA of at least 2.0 is required to be considered for admission.
- 4. Interview:** Qualified applicants are contacted after receipt of transcripts, references and the CHRP application form to arrange interviews.
- 5. Testing Results:** Writing, reading, and mathematical skills are evaluated at the time of interview.
- 6. TOEFL scores as applicable.** See International Applicants on pp. 12-13.

Conditional admission may be granted to individuals who are enrolled in the required prerequisite course during the application semester. These individuals must, however, document their enrollment. An official transcript, grade report, or letter from each course instructor indicating the final grade (which must be a "C" or better) is required prior to registration.

**Transcripts "issued to the student" will not substitute for official transcripts forwarded directly to the College of Health Related Professions by the institution issuing the transcripts.**

Arkansas residency will be considered during selection for admission.

Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Otherwise qualified individuals with disabilities receive equal consideration.

All documents should be submitted to: **University of Arkansas for Medical Sciences, College of Health Related Professions, Office of Student Affairs, UAMS, #619, 4301 West Markham Street, Little Rock, Arkansas 72205. Telephone: (501) 686-5730.**

Upon acceptance into the Associate of Science professional program, students must complete the following admission requirements:

- 1. CPR Certification:** Students must be certified in Basic Cardiac Life Support (BCLS, Health Care Providers) according to American Heart Association (AHA) standards prior to the first clinical course. The course must be administered or approved by the Department. The AHA "Heartsaver" and the Red Cross CPR course do not fulfill this requirement. All current CPR

certifications which expire prior to the program graduation date will require recertification as a prerequisite to the first clinical course.

2. **Physical Examination:** Physical examination forms must be completed and signed by a physician and are due no later than three (3) weeks before the date of registration for the first semester.

## **PROFESSIONAL COURSE WORK**

### **SUT 2123—Professional Certifications Seminar**

Preparation for the Certification Examination for the Surgical Technology profession.

### **SUT 2211—Basic Operating Room Techniques I Laboratory**

Fundamental procedures of perioperative patient care. Guided practice prior to clinical experiences. Must be taken concurrently with SUT 2510: Basic Operating Room Techniques and successful completion is pre-requisite to SUT 2215: Clinical Practicum I.

### **SUT 2215—Clinical Practicum I**

Supervised clinical experience in the application of basic patient care procedures, safe practice, and beginning skills of sterilization/disinfection and aseptic technique. Prerequisite: Successful completion of competency evaluation in SUT 2211.

### **SUT 2221—Pharmacology for the Surgical Technologist**

Introduction to the classification, actions, and uses of drugs. Emphasis on drugs associated with various surgical, obstetrical, and emergency care procedures. Includes calculation of dosages and drug preparation.

### **SUT 2222—Perioperative Practice**

An overview of surgical technology as a health care profession. Explores standards of care, criteria for professional growth, psychological aspects of the patient including social and cultural dimensions, and the ethical and legal issues surrounding the profession.

### **SUT 2231—Clinical Practicum III**

Four (4) week clinical course work in all subspecialty areas of the operating room at the advanced level. Prerequisites: SUT 2215, SUT 2425.

### **SUT 2312—Medical Terminology**

Introduction to commonly used medical abbreviations and terminology used in the health care setting. Includes prefixes, suffixes, and root words.

### **SUT 2313—Surgical Pathophysiology**

Emphasis on the anatomical structures of those body regions in which surgery is most commonly performed and the diseases related to the surgical patient.

### **SUT 2425—Clinical Practicum II**

Supervised clinical experience in the application of basic, intermediate, and advanced surgical procedures, and a continuation of aseptic technique and sterilization/disinfection skills.

### **SUT 2510—Basic Operating Room Techniques**

Orientation to surgical technology with emphasis on the fundamental principles of basic patient care concepts, asepsis and the surgical environment, and basic case preparation and procedures before, during and after a surgical procedure. Classroom.

### **SUT 2520—Advanced Operating Room Techniques**

Emphasis placed on specialty surgical procedures and instrumentation.



## **CHRP INTERDISCIPLINARY COURSES**

In addition to the discipline-specific courses described on the preceding pages, the College offers courses open to more than one discipline. The health related professions, though different in many ways, share areas of common content and interest. The CHRP interdisciplinary courses were developed on the premise that sharing learning experiences promotes mutual understanding and respect among various disciplines and promotes collaboration in health care delivery; develops a common language among health professionals; and develops a common philosophical framework for sharing of values.

### **CHRP 3101—Legal and Ethical Issues for Allied Health Professionals**

Problems related to ethical dilemmas in health care commonly seen in the professional work place.

### **CHRP 3102—Health Care Management Issues for Allied Health Professionals**

Problems related to management and ethics commonly seen in the professional work place.

### **CHRP 3200—Management in the Allied Health Professions**

Organizational theory, basic concepts, principles, and practices in human resources management. Includes formal and informal structure, planning, decision process, motivation, and leadership.

### **CHRP 3201—Ethics for Allied Health Professionals**

Introduction to the ethical and legal issues encountered by allied health professionals.

### **CHRP4100—Teaching in the Health Related Professions**

An examination of basic educational principles and methods appropriate for instruction in the health related professions. Students will be introduced to the basic elements of teaching and will apply them in completing assignments. This course is available to students in the Imaging and Radiation Sciences Department who are Teaching Associates. It is taken in conjunction with a companion course in one of the divisions of that department; permission to enroll in CHRP 4100 must be granted by the instructor of the companion course. Some examples of companion courses are: DMS 4301—Health Care Systems in America; NMIS—4221 Health Physics; RIS 4398—Managerial Leadership.

### **CHRP 4203—Health and Contemporary Affairs**

This course will explore current developments in world health and their economics, sociological, political, and environmental implications.

### **CHRP 4300—Teaching in the Health Related Professions**

An examination of various educational principles and methods appropriate for instruction in the health related professions. Particular emphasis will be placed on the competency based approach to instruction.

### **CHRP 4V01—Topics in the Health Related Professions**

An examination of selected problems or issues affecting the health related professions. (1–3 SC).

### **CHRP 4V02—Independent Study in the Health Related Professions**

Guided investigation of a topic selected in consultation with the instructor. Open to students of superior ability who seek special research in the field (1–3 SC).

### **CHRP 5100—Teaching in the Health Related Professions**

An examination of basic educational principles and methods appropriate for instruction in the health related professions. Students will be introduced to the basic elements of teaching and will apply them in completing assignments including a capstone project. This course is available to students in the Imaging and Radiation Sciences Department who want to become Teaching Associates. It is taken in conjunction with a companion course in one of the divisions of that department; permission to enroll in CHRP 5100 must be granted by the instructor of the companion course. Some examples of companion courses are: MIS 5281—Geriatric Imaging; MIS 6351—Healthcare Systems; MIS 5321—Clinical Pharmacology.

## **UAMS INTERDISCIPLINARY COURSES**

### **PhPr 5285—Death and Dying**

In an interdisciplinary format, the course prepares the student to manage end-of-life care, particularly through (1) exploring personal issues related to mortality; (2) learning roles of participants in such care; (3) developing communication skills needed for caregiving; (4) examining ethical issues related to death; and (5) examining economic and social aspects of funeral practices.

### **ASP 5352—Communicating with Older Adults**

An interdisciplinary course that will focus on the theory, art, and science of successful communication with older adults and provide students an opportunity to learn skills that will optimize their communications with peers, older adults, and caregivers through classroom exercises and clinical skills lab participation.

# STUDENT INFORMATION

## GRIEVANCE PROCEDURES

### UAMS GRIEVANCE PROCEDURE RELATED TO DISCRIMINATION COMPLAINTS

#### A. Purpose and Scope

1. **Policy Statement:** UAMS prohibits discrimination on the basis of race, color, national origin, disability, sex, or age.
2. **Purpose:** The purpose of this procedure is to provide the process for addressing student grievances alleging discrimination based on race, color, national origin, disability, sex, or age.

#### B. Definitions

1. **Grievance:** Grievance means a complaint of a student alleging any policy, procedure, or practice prohibited by Title VI of the Civil Rights Act of 1964 (Title VI), Title IX of the Education Amendments of 1972 (Title IX), the Age Discrimination Act of 1975, Section 504 of the Rehabilitation Act of 1973 (Section 504), and Title II of the Americans with Disabilities Act of 1990 (Title II), and their implementing regulations.
2. **Procedure:** The steps set out in this procedure shall constitute the grievance procedure for discrimination complaints brought by students based on race, color, national origin, disability, sex, or age.
3. **Grievant:** Grievant means a student who submits a grievance alleging violation of Titles VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, Section 504 of the Rehabilitation Act of 1973, and Title II of the Americans with Disabilities Act of 1990, and their implementing regulations.
4. **UAMS:** UAMS means any college, department, subunit, or program operated by the University of Arkansas for Medical Sciences. When used in this Agreement, the term "college" shall be deemed to include the Graduate School.
5. **Coordinator:** The person serving as the designated Title IX and/or Section 504/Title II Coordinator.
6. **Respondent:** Respondent means a person alleged to be responsible for the violation alleged in a grievance. The term may be used to designate persons with direct responsibility for a particular action or those persons with supervisory responsibility for procedures and policies in those areas covered in the grievance.

7. **Associate Dean Responsible for Student and Academic Affairs:** Refers to the Associate Dean in the college where the grievant is enrolled as a student. Since there is no Associate Dean for the Graduate School, reference to Associate Dean shall be deemed to include the Assistant Dean for Graduate Studies and Institutional Reporting, where applicable.

8. **Dean:** Refers to the Dean of the college where the grievant is enrolled as a student.

#### C. Filing of Grievance

1. **Eligibility for Filing:** Any UAMS student may file a grievance alleging discrimination on the basis of race, color, national origin, disability, sex, or age.

2. **Pre-Grievance Meeting:** Prior to the filing of a written grievance, the grievant(s) should first consult with the appropriate Associate Dean responsible for student and academic affairs, who shall attempt to resolve the grievance informally by agreement between the grievant and the respondent alleged to be directly responsible for the possible violation, and/or persons with immediate supervisory authority related to the grievance.

If the matter cannot be resolved at this level, a written grievance should be submitted to the appropriate Associate Dean responsible for student and academic affairs for subsequent processing in accordance with the procedures for formal grievances outlined below.

3. **Filing a Grievance:** Grievances filed with the appropriate Associate Dean shall be in writing and shall provide the following information:

--name and address of the grievant(s);

--nature, date and description of alleged violation;

--name(s) of persons responsible for the alleged violation;

--requested relief for corrective action; and

--any background information that the grievant believes to be relevant.

4. **Time Limit for Grievance Filing:** A grievance must be filed within twenty (20) calendar days of the occurrence of the alleged violation or within twenty (20) calendar days of the date the grievant became aware of the alleged violation. If the last day for filing a grievance

falls on a Saturday, Sunday, or a day on which the University is closed for business, then the grievance may be filed on the first day following the Saturday, Sunday, or date when the University is closed.

5. **Notification of Respondent(s):** Immediately upon receipt of a formal grievance, the appropriate Associate Dean will give the respondent a copy of the grievance, and will direct the respondent to submit a written response to the charges within ten (10) calendar days. If the last day for filing a response falls on a Saturday, Sunday, or a day on which the University is closed for business, then the response may be filed on the first day following the Saturday, Sunday, or date when the University is closed. The respondent will be specifically warned not to retaliate against the grievant in any way. Retaliation will subject the respondent to appropriate disciplinary action.
6. **Response:** The response should include any denial, in whole or in part, of the charges. Failure to respond may subject the respondent to disciplinary action by the Dean of the appropriate college or other appropriate UAMS official.
7. **Notification of Appropriate Administrative Officers:** The appropriate Associate Dean will notify the appropriate administrative officers to whom the respondent reports of the existence of the complaint. However, all administrative officers will attempt to maintain the confidentiality of the information during the grievance process.
8. **Role of the Associate Dean Responsible for Student and Academic Affairs in Discrimination Grievances Filed by Students:** The appropriate Associate Dean responsible for student and academic affairs must conduct a preliminary investigation of the complaint, and take one of the following steps, within thirty (30) calendar days after its receipt:
  - a. dismiss the grievance on the grounds that the evidence submitted in support of the complaint or developed in the preliminary investigation does not warrant a detailed investigation or a formal hearing (for example: grievant failed to articulate the factual basis for his or her belief that discrimination occurred; the grievance is so weak, attenuated, or insubstantial that it is without merit, or so replete with incoherent statements that the grievance, as a whole, cannot be

considered to be grounded in fact; the grievance anticipates discrimination that has not yet occurred);

- b. refer the grievance to a hearing before the Grievance Panel; or
- c. allow the parties to sign a written statement resolving the grievance. It should be understood that without the approval in writing by the appropriate Associate Dean, any agreement between the parties does not preclude further action by the University against either party.

It is the responsibility of the Associate Dean responsible for student and academic affairs of each College to ensure the effective record keeping, and notifications required by the grievance procedures.

If an appeal of a dismissal of a grievance is filed, the Associate Dean will forward a copy of the investigative report and determination to the Dean. If the Associate Dean refers a grievance to a hearing before the Grievance Panel, the Associate Dean will forward a copy of the investigative report to the Panel.

9. **Appeal of Grievance Dismissal:** A student may appeal the dismissal of his/her grievance by submitting a written request for review with his/her Dean. The request for review must be submitted within five (5) calendar days of receipt of the decision to dismiss. Upon receipt of an appeal of the dismissal of a grievance, the Dean shall carefully consider the relevant information contained in the appeal as well as the investigative report and determination of the Associate Dean, to ascertain that the evidence either submitted in support of the complaint or developed in the preliminary investigation did not warrant a detailed investigation or a formal hearing. The Dean will notify the student of his/her decision in writing within ten (10) calendar days of receipt of the request for review. The decision of the Dean will be final.
10. **Notification of Dean:** Upon receipt of a formal grievance from a student, the appropriate Associate Dean shall send a copy of the grievance to the Dean of the appropriate College. The Associate Dean or his/her designated representative shall be notified of any hearing and shall be required to attend all student grievance hearings pertaining to alleged discrimination on the basis of race, color, national origin, disability, sex, or age to

serve as a University resource person. This individual shall not have a vote at the hearing, nor be present during deliberations of the Grievance Panel.

#### D. Prehearing Procedures

1. **Selection of Grievance Panel:** When a grievance is referred to the Grievance Panel, the appropriate Associate Dean shall forward a copy of his/her investigative report to a six member Grievance Panel. The Grievance Panel shall be selected as follows: A Grievance Committee will be appointed by each College Dean, consisting of nine (9) faculty and nine (9) students. For every hearing held under this procedure, the person filing the grievance and the appropriate Associate Dean or designee jointly will meet within ten (10) calendar days after the decision to refer the grievance to the Grievance Panel, and review the members of the Grievance Committee, removing from consideration any member who may with reason be considered inappropriate for the hearing (e.g., a faculty member directly involved in the issue being grieved should not sit on the Panel for that grievance). The names of the remaining members will then be written on tabs of paper, folded, placed into separate containers for faculty and students, and randomized by mixing. The grievant will draw three names from each container. The first six names will constitute the Grievance Panel, which shall be composed of three faculty and three students. The remaining names shall be drawn alternatively from each container until all names are drawn in order to develop a list of alternate members. Should a Panel member be removed for any reason during the process, that member shall be replaced by an alternate having the same status (faculty or student).
2. **Scheduling of Hearing of Grievance:** Hearings before the Grievance Panel will be conducted no sooner than ten (10) calendar days and not later than twenty (20) calendar days after the selection of the Grievance Panel. The date of the hearing must be adhered to except for unusual circumstances which must be reported in writing as soon as possible to the appropriate Associate Dean. The hearing shall be conducted in accordance with the procedure set forth in Section E, 1 through 7 of this procedure.
3. **Representation:** The grievant and the respondent have the right to be assisted by no more than two representatives, including attorneys, at any point during the initiation, filing processing, or hearing of the formal grievance; however, no representative may examine witnesses or

otherwise actively participate in a hearing. The Panel may also be assisted and advised by an attorney or other representative at its discretion.

4. **Evidence:** The grievant and respondent shall provide the appropriate Associate Dean with all documents to be used and relied on at the hearing, and with the name, address and telephone number of their representative(s) and witnesses no later than seven (7) calendar days prior to the date of the hearing. There will be a simultaneous exchange of this information between the parties, which will be facilitated by the Associate Dean five (5) calendar days before the date of the hearing.

#### E. Hearing Procedures

1. **Record of Hearing:** The hearing will be recorded by recording devices supplied by UAMS. These recordings shall be maintained for a period of three years after resolution of the grievance. The grievant or respondent may obtain a copy of the tapes from any recorded hearing, at the requesting party's expense. The deliberations of the Grievance Panel will not be recorded.
2. **Counsel:** The grievant and respondent shall have the right to advice of counsel of his/her choice; however, counsel may not examine witnesses or otherwise actively participate in any hearing.
3. **Private Hearing:** The hearing shall be conducted in private. Witnesses shall not be present during the testimony of any party or other witness. Witnesses shall be admitted for testimony only and then asked to leave. The parties may hear and question all witnesses testifying before the Grievance Panel.
4. **Presentation of Case:** The grievant and respondent shall be afforded reasonable opportunity for oral opening statements and closing arguments and/or presentation of witnesses and pertinent documentary evidence, including sworn, written statements.
5. **Grievance Panel Rights:** The Grievance Panel shall have the right to question any and all witnesses, to examine documentary evidence presented, and to summon other witnesses to review other documentation as the Panel deems necessary.
6. **Grievance Panel Deliberation:** After the hearing is concluded, the Grievance Panel shall convene to deliberate in closed session and arrive at a majority recommendation.
7. **Transmittal of the Recommendation:** Within five (5) calendar days after the hearing is concluded, the Grievance Panel shall transmit a

written copy of its recommendation to the appropriate Associate Dean responsible for student and academic affairs, who will then mail, by certified mail, return receipt requested, a copy of the written document to the grievant and respondent at addresses previously provided by the grievant and the respondent.

8. **Appeal of Recommendation of the Grievance Panel:** If no appeal is received by the appropriate Associate Dean within seven (7) calendar days of receipt of the recommendation by the grievant and the respondent, any recommendations by the Grievance Panel shall be forwarded to the appropriate Dean for consideration. The Dean may accept the Grievance Panel recommendation, reverse it, or refer the grievance back to the Panel for reconsideration. If the last day for filing an appeal falls on a Saturday, Sunday, or a day on which the University is closed for business, then the appeal may be filed on the first day following the Saturday, Sunday, or date when the University is closed.

If the grievant or respondent wishes to appeal the recommendation of the Grievance Panel, the respondent and/or grievant shall, within seven (7) calendar days of the receipt of the recommendation, appeal the grievance recommendation to the Dean through the Associate Dean. The appeal shall be in writing.

If an appeal is submitted, it will be transmitted to the appropriate Dean. The Dean shall review the appeal and notify the parties of his/her determination within ten (10) calendar days from the date of his/her receipt of the appeal. The decision of the Dean is final and may not be appealed further.

The Dean's review is the final institutional step in matters of discrimination grievances. However, nothing precludes the grievant or respondent from filing a complaint with any external agency that handles discrimination complaints.

F. Other

1. **Grievances Involving a Grievant and Respondent from Different Units of UAMS:** Whenever a grievance is instituted by a student grievant in one college against a respondent in another college or unit, the grievance shall proceed through the Associate Dean, Dean, and Grievance Committee from the college in which the student is enrolled.
2. **Maintenance of Written Grievance Records:** Records shall be kept of each grievance process. These records shall be confidential to the extent allowed by law, and shall include, at minimum: the written grievant complaint filed

by the grievant, the written response filed by the respondent, the investigative report of the Associate Dean, the recording and documents of the hearing, the written recommendation of the Grievance Panel, the results of any appeal, the decision of the Dean, and any other material designated by the Associate Dean responsible for Student and Academic Affairs. A file of these records shall be maintained in the Office of the Associate Dean responsible for Student and Academic Affairs for each college.

For purposes of the dissemination of grievance precedents, separate records may be created and kept which indicate only the subject matter of each grievance, the resolution of each grievance, and the date of the resolution. These records shall not refer to any specific individuals and they may be open to the public in accordance with the Arkansas Freedom of Information Act or pertinent Federal laws.

3. **Retaliation:** No person shall be subjected to retaliation for having utilized or having assisted others in the utilization of the grievance process.

## CHRP GENERAL STUDENT GRIEVANCE PROCEDURE

A grievance based upon a complaint of discrimination should follow the UAMS Grievance Procedure found on page 112 of this catalog.

A. Prologue

The Student Grievance Procedure represents a mechanism whereby any student may obtain a review of a complaint of unfair treatment. The Grievance Procedure shall not be used to question a rule, procedure or policy established by an authorized faculty or administrative body. Rather it shall be used for a hearing and due process for those who believe that a rule, procedure or policy has been applied in an unfair or inequitable manner, or that there has been unfair or improper treatment by a person or persons.

B. Informal Procedure

In the academic community, the responsibility for course development, course delivery, and the assessment of student achievement rests primarily with each course instructor. Any student who has a complaint of unfair treatment related to a course should first seek to resolve it informally with the course instructor. A student with such a complaint must request reconsideration of the application of a rule, procedure, or policy or unfair or improper treatment within five (5) working days following the incident which forms the basis for the complaint (e.g., five days after grades are posted). The instructor will meet with the student (or speak with the student via telephone or interactive video, for those students located more than 50 miles from the location of the

instructor's office if so requested by the student) within three (3) working days of receiving the student's request for reconsideration and will notify the student of his/her decision regarding the complaint within two (2) working days following the meeting or discussion. If resolution is not achieved at this level, the student should seek resolution with the chairman of the department in which the course is offered within five (5) working days following notification by the instructor that the complaint cannot be resolved. If the course instructor is the Department Chairman, the student should seek resolution with him/her at the outset. The chairman will meet with the student (or speak with the student via telephone or interactive video, for those students located more than 50 miles from the location of the chairmans's office if so requested by the student) within three (3) working days of receiving the student's request for resolution and will notify the student of his/her decision regarding the complaint within two (2) working days following the meeting or discussion. If, after the informal attempt to resolve the complaint, the chairman concludes that the complaint cannot be resolved, the student will be so notified by the chairman within five (5) working days of receiving the request for resolution from the student. Accordingly, if the student concludes after the informal attempt that the complaint cannot be resolved, the student will so notify the chairman. In either case, then and only then should the formal grievance procedure be initiated by the student. For issues or complaints that are not course-specific, the student should seek resolution with his/her Department Chairman first, before considering initiating the grievance procedure.

### C. Formal Procedure

A student with a grievance (the grievant) must submit a written statement to the Dean of the College of Health Related Professions or his/her designee outlining specifics within five (5) working days following notification of the failure to resolve the complaint using the Informal Procedure described under section B. above. The student may request that the Dean convene a Grievance Panel for the purpose of conducting a hearing to determine the facts; the panel may then recommend a resolution to the Dean (or his/her designee). In the absence of such a request from the grievant, the Dean (or his/her designee) may choose to convene a Grievance Panel, or the Dean (or his/her designee) may render a decision without participation by a Grievance Panel.

In the College of Health Related Professions, the Grievance Panel shall be selected as follows: A Grievance Committee consisting of 10 faculty and 10 students, will be appointed annually by the Dean. For every hearing held under this procedure,

the grievant and the appropriate Associate Dean or designee jointly will meet within eight (8) working days after the decision to refer the grievance to the Grievance Panel and review the members of the Grievance Committee, removing from consideration any member who may with reason be considered inappropriate for the hearing (e.g., a faculty member directly involved in the issue being grieved should not sit on the Panel for that grievance). The names of the remaining members will then be written on tabs of paper which will be folded and placed into separate containers for faculty and students and randomized by mixing. The grievant will draw three names from each container. The first six names will constitute the Grievance Panel, which shall be composed of three faculty and three students. The remaining names shall be drawn alternatively from each container until all names are drawn in order to develop a list of alternate members. Should a Panel member be removed for any reason during the process, that member shall be replaced by an alternate having the same status (faculty or student).

The Dean will schedule the hearing to take place no sooner than three (3) working days and not later than ten (10) working days after the Panel is notified, unless there is a specific reason why another time must be selected (e.g., availability of participants).

Students who have begun the grievance procedure may request permission to progress to the next semester or participate in Commencement if the decision of the Department Chairman during the informal phase would preclude progression to the next semester or participation in Commencement at the end of the current semester, and if the resolution of the grievance could reasonably extend past the respective dates for these activities. If resolution the grievance procedure results in suspension or dismissal, the student will not be allowed to continue to attend classes nor will the student graduate from his/her program, regardless of participation in Commencement activities.

#### 1. The Pre-Hearing

At a prearranged time prior to the hearing, the members of the Panel, the grievant, and faculty members directly named in the grievance will meet briefly with the Dean, or his/her designee, to be given the charge (*i.e.*, to determine whether the grievant has been treated fairly and equitably), plus all relevant background data. The grievant and faculty members named in the grievance should identify documents which they intend to submit to the hearing as well as a list of witnesses whom they believe have information relevant to the grievance. The Panel may restrict the number of documents

and witnesses if it considers their proposed testimony to be cumulative, repetitive or not relevant to the grievance. The grievant may have one (1) person from the UAMS campus community (*i.e.*, faculty, student, or staff) present during the pre-hearing to advise him/her. This person may not address the Panel, speak on behalf of the grievant, or otherwise actively participate in the pre-hearing. Faculty members named in the grievance may be present during the pre-hearing but may not speak. The Panel will then meet in closed session to elect a chairman who will preside at the subsequent hearing. The Panel may require copies of relevant documents be presented prior to the hearing as well as any written statements by the grievant or the faculty members named in the grievance in support or defense of the grievance.

## 2. The Hearing

The hearing will be conducted in private. Witnesses will be admitted for testimony only and then asked to leave. The testimony will be tape-recorded, but deliberations of the Panel will not be recorded. The grievant may have one (1) person from the UAMS campus community (*i.e.*, faculty, student, or staff) present during the hearing to advise him/her. This person may not address the Panel, speak on behalf of the grievant, question witnesses, or otherwise actively participate in the hearing. The grievant must appear in person, make an oral statement of the grievance and answer questions from the faculty directly named in the grievance and from members of the Panel. The grievant may submit sworn written statements, other exhibits, and witnesses in his/her behalf. The grievant, Panel, and faculty directly named in the grievance may hear and question all witnesses testifying before the Panel. The faculty directly named in the grievance must appear in person, make an oral statement in response to the grievance, and answer questions from the grievant and from members of the Panel. The faculty directly named in the grievance may submit sworn written statements and other exhibits and witnesses. The Panel shall make its determination of whether the grievant was treated fairly or unfairly based upon the evidence presented at the hearing which is relevant to the issue or issues before the Panel. The grievant, the grievant's advisor, witnesses, and faculty directly named in the grievance may not be present during the Panel's deliberations. The determination will be presented by the Grievance Panel to the Dean, or his/her designee, in writing by the end of the third working day following the conclusion of the

deliberations. The Panel may make recommendations for resolution of the dispute. The grievant and faculty directly named in the grievance shall be notified in writing by the Dean or his/her designee of the Panel's determination within three (3) working days following his/her receipt of the Panel's determination. The notification may be hand-delivered to the grievant and faculty directly named in the grievance or sent by registered mail with return receipt (and with a copy by regular mail) to their last known addresses. In the event a registered letter is returned undelivered after a notice has been left for the addressee, it shall be presumed that the copy sent by regular mail was received three (3) days following the date of mailing unless it is returned undelivered. Within seven (7) working days of the receipt of the Dean's or his/her designee's notification to the grievant or the faculty directly named in the grievance of the Panel's determination, either party by a request for reconsideration may contest in writing to the Dean or his/her designee that a substantial mistake of fact occurred, a fundamental misinterpretation of official policies is evident, or a significant procedural defect took place. These are the only bases for contesting the determination of the Panel. After receipt of a determination from the Panel, and if the seven day period has elapsed without the filing of a request for reconsideration, the determination of the Panel shall be a recommendation which the Dean or his/her designee may accept or reject, in whole or in part.

If the determination of the Panel is contested by a grievant or by the faculty directly named in the grievance, the Panel will reconvene within ten (10) working days of the Dean's or his/her designee's receipt of the request for reconsideration to review the bases of the contest. If the Panel concurs with the contestant, it will correct the procedural defect, reinterpret the policy as appropriate, or review the factual error, and then review its determination and revise it if the Panel deems appropriate. The Panel will present its determination in writing to the Dean or his/her designee within three (3) working days following the conclusion of its deliberations. A second determination from the panel, if submitted to the Dean or his/her designee by the Panel subsequent to a second hearing resulting from a request for reconsideration, shall be a recommendation which the Dean or his/her designee may accept or reject, in whole or in part. The decision of the Dean or his/her designee shall be sent in writing to the grievant and faculty directly named in the grievance within five (5) working days thereafter.

The notification may be hand-delivered to the grievant and faculty directly named in the grievance or sent by registered mail with return receipt (and a copy by regular mail) to their last known addresses. The decision of the Dean or his/her designee shall be final.

## NONCOGNITIVE PERFORMANCE STANDARDS

Students are accountable for conducting themselves as responsible adults. A Student Handbook, available from the Department Chairman, has been developed to aid in this process.

**Student Conduct:** A College of Health Related Professions student is considered to be a mature adult whose attitude, conduct, and morals are compatible with the functions and missions of the University of Arkansas for Medical Sciences as an educational institution, and with the ethical standards of his/her chosen profession. Each student is expected to comply with requests of University officials in the performance of his/her duties; to obey the laws of the city, state, and nation; and to refrain from conduct which would demean the ethics and integrity of his/her chosen profession.

**CHRP Student Responsibilities Code:** Failure to comply with the requirements of any code item could result in a conference with the Department Chairman or his/her designee to discuss the difficulty. Should a conference be held and the problem continue after the conference, the chairman will place the student on disciplinary probation or dismiss him/her from the department and the College. In very serious cases, the chairman may dismiss the student immediately after the conference. The following is a description of the principal noncognitive responsibilities of students in the College:

1. Come adequately prepared for class.
2. Attend all classes, laboratories, and clinical/field experiences, as scheduled, unless previous arrangements have been made with the instructor or department chairman.
3. Request instructor/student conferences when needed.
4. Treat patients and co-workers justly and impartially, regardless of their sex or their physical, mental, emotional, political, economic, racial, or religious characteristics.
5. Maintain a non-biased, open point-of-view during class sessions.
6. Request and take makeup examinations, if permitted by the instructor, within the specified period of time for the given course.
7. Act as a favorable role model for your chosen health profession at all times.
8. Be responsible for the condition of the instructional area during and at the completion of a class session.

9. Refrain from smoking, eating, or drinking in classrooms and in specifically designated areas during class or clinic sessions.
10. Maintain and arrange class materials in a form which will be usable in the future as a professional reference.
11. Attempt to resolve concerns and questions in a courteous and informal manner, utilizing only when necessary the Grievance Procedure according to the published rules.
12. Adhere to the student responsibilities required by the program in which enrolled.
13. Maintain academic integrity (see Academic Integrity Statement in the Student Handbook) by doing one's own work.

The University of Arkansas for Medical Sciences, College of Health Related Professions reserves the right to dismiss a student at any time on the grounds the University and College judge to be appropriate. Each student by his own admission to the College recognizes this right of the University and College.

The continuance of any student on the roster of the College, the receipt of academic credit, graduation, and the granting of a degree or certificate rest solely within the powers of the University and College.

## SERVICES FOR STUDENTS

The following is an alphabetical listing of some of the services available to students of the College. It is intended as a brief introduction of what is available and where to go for further information. Consult the CHRP Student Handbook for details.

**ATHLETIC TICKETS:** Check with the Student Activities and Housing Office for applications and current policies. Call (501) 686-5850 for further information.

**AUTOMATIC BANKING TELLERS:** Banking services are available via automatic tellers located in the lobby of the Central Building near the Information desk and in the lower level of the Central Building near the cafeteria entrance and across the hallway from the College of Medicine offices.

**DENTAL HYGIENE SERVICES:** Dental hygiene care is available at the Dental Hygiene Clinic, Room S1/23 of the Shorey Building. Services include teeth cleaning, diagnostic radiographs, and fluoride applications. For appointments call (501) 686-5733.

**EDUCATIONAL DEVELOPMENT SERVICES:** Assistance in such areas as study habits and test taking skills are available. For appointments, call the UAMS Office of Educational Development at (501) 686-5720.

**HEALTH SERVICES:** The Employee Health/Student Preventive Health Service (EH/SPHS) is located in the Family Medical Center at 521 S. Elm Street. EH/SPHS provides the following services at no cost to the student:



- ◆ Establishing and maintenance of an immunization record
- ◆ Tuberculosis skin test
- ◆ Measles/Mumps/Rubella (MMR) vaccine
- ◆ Tetanus/Diphtheria vaccine
- ◆ Hepatitis B vaccine series
- ◆ Post-vaccination Hepatitis B antibody testing
- ◆ Varicella vaccine series
- ◆ Influenza vaccine
- ◆ Health Risk Appraisal questionnaire
- ◆ Care of needlesticks and blood/body fluid exposures.

All other services are billed to the student and his/her insurance company. Students and their families are invited to take advantage of the comprehensive range of health services available in the Family Medical Center including episodic care, continuity medical care, and preventive services. Telephone (501) 686-6560 for further information.

**LIBRARY SERVICES:** Call (501) 686-5980 for further information.

**Computer Searches**—The library has a full array of electronic services both internally and through the INTERNET, including an online catalog, MEDLINE, CINAHL, PsychInfo, Health Administration, CancerLit, IPA, several CD-ROM stand-alone packages and an INTERNET workstation. Mediated searching and document delivery are offered for a fee.

**Interlibrary Loan**—Many materials not available in the UAMS Library collection may be borrowed through interlibrary loan. Details and request forms are available from the Interlibrary Loan Office.

**Learning Resources Center**—Both audiovisual and computer-based instruction are available.

**Microforms**—Reader/Printers for both microfilm and microfiche formats are available for student use.

**MENTAL HEALTH SERVICES:** Preventative service created to provide short term, confidential, assistance for students who are actively enrolled at UAMS (Little Rock Campus). Students may seek help for depression, anxiety, grief, relationship conflicts, academic difficulties, and numerous other issues interfering with their maximal functioning. For further information, call (501) 686-8408.

**MINORITY STUDENT ASSISTANCE:** The Associate Director of the CHRP Office of Student Affairs may be able to assist in responding to minority student needs or problems. For further information, call (501) 686-5730.

**PHARMACY SERVICES:** Students receive discounts on prescriptions filled at the UAMS Ambulatory Care Center Pharmacy. For details, call (501) 686-5530.

**RECREATIONAL SERVICES:** The Student Activities and Housing Office is a good source of information as to what is currently available. Volleyball, basketball, table tennis, ping-pong equipment may be checked out upon presentation of a UAMS ID. A weight room is also available for student use. For further information, call (501) 686-5850.

**SPEECH, LANGUAGE, HEARING CLINIC:** The College cooperatively sponsors a clinic for clients with communication disorders. Speech, language and hearing evaluations and therapy are available to students at reduced rates. This clinic is located at the University of Arkansas at Little Rock. For further information, call (501)569-3155.

**TRANSCRIPT SERVICES:** All undergraduate transcripts are available from the CHRP Office of Student Affairs, Room 325 in the Administration West. Call (501) 686-5730 for further information.

## USEFUL ADDRESSES

**For general career information, general program information, Speaker's Bureau requests:**

Dean's Office  
College of Health Related Professions  
University of Arkansas for Medical Sciences  
Administration West Building, Third Floor  
4301 West Markham, UAMS #619  
Little Rock, Arkansas 72205

**For application requests, catalog requests, transcript requests, transfer credit inquiries, student records inquiries, applicant letters of recommendation, applicant transcripts for undergraduate programs and CHRP graduate degree programs (Au.D., Dietetics Internship, M.I.S.)\*, applicant examination scores:**

Office of Student Affairs  
College of Health Related Professions  
University of Arkansas for Medical Sciences  
Administration West Building, Third Floor  
4301 West Markham, UAMS #619  
Little Rock, Arkansas 72205

\*Applications and transcript requests for the Master of Science Degree programs in Clinical Nutrition, Communicative Disorders, and Genetic Counseling should be directed to the Graduate School Office, 4301 West Markham, UAMS #601, Little Rock, Arkansas 72205. Application and inquires for the Dietetic Internship should be directed to the Dietetics and Nutrition Department.

**For Financial Aid Inquiries, Financial Aid Form requests, Work Study, and student employment inquiries:**

UAMS Student Financial Services Office  
University of Arkansas for Medical Sciences  
COPH, 1st Floor, Room 1252B  
4301 West Markham, UAMS #864  
Little Rock, Arkansas 72205

**For housing inquiries, occupancy requirements inquiries, occupancy exemptions appeals, student insurance inquiries:**

UAMS Student Activities and Housing Office  
University of Arkansas for Medical Sciences  
Residence Hall  
4601 West Markham, UAMS #536  
Little Rock, Arkansas 72205

**For specific program information, inquiries and forms, and interview appointments:**

**Audiology Program (Au.D.)**

Nannette Nicholson, Ph.D.; Director of the Audiology Program  
Department of Audiology and Speech Pathology  
University of Arkansas for Medical Sciences  
University of Arkansas at Little Rock  
Speech, Language and Hearing Clinic  
2801 South University Avenue  
Little Rock, Arkansas 72204  
Telephone: (501) 569-3155  
E-mail: nn@uams.edu  
Web site: <http://www.uams.edu/chrp/audiospeech/default.asp>

Thomas W. Guyette, Ph.D.; Chairman and Professor  
Department of Audiology and Speech Pathology

**Clinical Nutrition Program (M.S. Clinical Nutrition)**

Reza Hakkak, Ph.D.; Chairman and Professor  
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- Smiley, Donna, Ph.D., C.C.C.-A.** Assistant Professor of Audiology and Speech Pathology (2008). B.S., Henderson State, 1988; M.S., University of Arkansas for Medical Sciences, 1990; Ph.D., University of Tennessee-Knoxville, 2002.
- Smith, Catherine M., B.S., C.T.(ASCP).** Instructor of Cytotechnology (2008). B.S., University of Arkansas, 2004; B.S., University of Arkansas for Medical Sciences, 2006.
- Smith, Karen K., B.S., R.H.I.A., C.P.C.** Instructor of Health Information Management (2006). A.S., University of Arkansas for Medical Sciences, 1999; B.S., John Brown University, 2003.
- Smith, Malcolm, M.D.** Medical Director of Respiratory Care (2003). B.S., Vanderbilt University, 1985; M.D., University of Arkansas for Medical Sciences, 1990.
- Smith, Nancy, R.D.H., M.Ed.** Assistant Professor of Dental Hygiene, AHEC-North Central (2009). B.S., University of Arkansas for Medical Sciences, 1986; M.Ed., University of Phoenix, 2006.

- Smith, Tawanna, M.A., R.T.(R)(T)(CT)(ARRT).** Assistant Professor of Radiation Therapy, CARTI (1995). B.S., University of Arkansas for Medical Sciences, 1988; M.A., Webster University, 1991.
- Smith-Olinde, Laura, Ph.D., C.C.C.-A.** Associate Professor of Audiology (2001). B.A., Louisiana State University, 1985; M.A., Louisiana State University, 1994; Ph.D., Louisiana State University, 1995.
- Snow, Paige, B.S., R.D.** Clinical Instructor of Dietetics and Nutrition, ACH (1993). B.S., University of Arkansas, 1982.
- Sowell, Thomas W., M.S., C.C.C.-S.L.P.** Instructor of Audiology and Speech Pathology, CAVHS (1991). B.S., University of Nebraska at Omaha, 1972; M.S. University of Nebraska at Omaha, 1974.
- Spencer, Gwen, B.S., R.T.(R)(T)(ARRT).** Instructor of Radiation Therapy, CARTI (1998). B.S., University of Central Arkansas, 1985.
- Spray, John Robert, D.D.S.** Associate Professor of Dental Hygiene (1993). B.S., Memphis State University, 1965; D.D.S., University of Tennessee at Memphis, 1968; Certificate in Periodontics, Medical College of Georgia, 1976.
- Spurlock, Leslie D., B.S.R.T., (R)(MR)(ARRT).** Instructor of Radiologic Imaging Sciences, AHEC Northwest (2008). B.S., University of Arkansas for Medical Sciences, 2004.
- Standridge, Jeffrey D., Ed.D., R.R.T., N.R.E.M.T.-P.** Adjunct Assistant Professor of Respiratory Care (1993). A.S., University of Arkansas for Medical Sciences, 1990 & 1992. B.S., University of Central Arkansas, 1990; M.Ed., University of Arkansas at Little Rock, 1995; Ed.D., University of Arkansas at Little Rock, 1999.
- Staples, Steve S., B.S., COMT.** Instructor of Ophthalmic Technologies (2004). B.S., Arkansas Tech University, 1996; B.S., University of Arkansas for Medical Sciences, 2002.
- Staten, Karan D., M.S., R.D.** Instructor of Dietetics and Nutrition, ACH (2006). M.S., University of Nebraska, 1983; Colorado State University, 1982.
- Tank, Suzanne, M.Ed., M.T.(ASCP).** Clinical Instructor of Medical Technology, ACH (1992). B.S., Western Michigan University, 1973; M.Ed., University of Arkansas at Little Rock, 1997.
- Tanner, Doug, B.S., R.T.(R)(T)ARRT, C.M.D., (M.D.C.B.)** Instructor of Radiation Therapy, CARTI (1992). A.S., Meridan Community College, 1989; B.S., John Brown, 2005.
- Taylor, Jessika, B.S., R.D.H.** Instructor of Dental Hygiene, LRAFB (2008). B.S., University of Arkansas for Medical Sciences, 2006.
- Thaxton, Paul D., M.A.T., C.N.M.T., ARRT(N.).** Assistant Professor and Division Director of Nuclear Medicine Imaging Sciences (1994). B.S., University of Arkansas for Medical Sciences, 1989; M.A.T., Webster University, 2002.
- Thurrow, Shawn G., M.S.R.S., R.T.(R)(ARRT).** Instructor of Radiologic Imaging Sciences, AHEC Northwest (2002). B.S., University of Arkansas for Medical Sciences, 1996.
- Tomlinson, Debra, G., M.A., R.T.(R)(T)(ARRT).** Assistant Professor and Division Director of Radiation Therapy, CARTI (1986). B.S., University of Central Arkansas, 1993; M.A., Webster University, 1995.
- Trawick, Kathy C., Ed.D., R.H.I.A.** Associate Professor and Chairman of Health Information Management (1995). B.A., University of Montevallo, 1982; B.S., University of Alabama, 1985; M.A.Ed., University of Alabama, 1990; Ed.D., University of Arkansas at Little Rock, 2002.
- Truax, Kurt, D.D.S.** Emeritus Associate Professor, Department of Dental Hygiene (1982). B.A., University of Iowa, 1962; D.D.S., University of Iowa, 1965; M.P.H., University of North Carolina at Chapel Hill, 1986.
- Turpin, Thomas L., D.D.S.** Assistant Professor of Dental Hygiene (2000). B.S., Memphis State University, 1980; D.D.S., University of Tennessee, 1986.
- Vester, Stephen, D.D.S.** Assistant Professor of Dental Hygiene (2010). B.S., Arkansas State University, 1978; D.D.S., University of Tennessee at Memphis, 1982.
- Wagner, Kenneth P., Ph.D.** Assistant Professor of Medical Technology (1978). B.S., University of California at Irvine, 1968; Ph.D., University of California at Irvine, 1974.
- Wall, Jan, M.S., R.D.** Clinical Instructor of Dietetics and Nutrition (1993). B.S., Arizona State University, 1984; M.S., Texas Woman's University, 1993.
- Wallace, Ama, B.S., R.D.** Instructor of Dietetics and Nutrition, CAVHS (1993). B.S., University of Arkansas, 1981.
- Wallenmeyer, Mark, M.B.A., C.N.M.T.** Assistant Professor of Nuclear Medicine Imaging Sciences (2003). B.A., Southwest Baptist University, 1990; Certificate of Nuclear Medicine, Baylor College of Medicine, 1992; M.B.A., University of Phoenix, 2005.
- Wallis, Marisa, R.D.H., B.S.** Instructor of Dental Hygiene (2010). B.S., Missouri Southern State University in Joplin, 2008.
- Warner, Mary Catherine, B.S., C.N.M.T.** Clinical Instructor of Nuclear Medicine Imaging Sciences, Our Lady of the Lake Regional Medical Center (2002). B.S., University of Arkansas for Medical Sciences, 2001.
- Warren, Catherine G., M.Ed., R.D.H.** Associate Professor of Dental Hygiene (1972). B.S., University of Arkansas, 1967; M.Ed., University of Arkansas, 1981; Post-Baccalaureate Certificate of Public Health, University of Arkansas for Medical Sciences, 2005.
- Weatherton, Maurice A., Ph.D., C.C.C.-A.** Emeritus Professor of Audiology and Speech Pathology (1974). B.A., Henderson State Teachers College, 1961; M.A., University of Alabama, 1965; Ph.D., University of Kansas, 1970.

- Weddington, Gail L., Au.D., C.C.C.-A./S.L.P.** Instructor of Audiology and Speech Pathology (2006). B.A., Wayne State University, 1980; M.A., Western Michigan University, 1981; M.A., Ohio University, 1986; Au.D., University of Florida, 2000.
- Welch, Marianne, B.S., M.T.(ASCP).** Clinical Instructor of Medical Technology (2006). B.S., University of Arkansas for Medical Sciences, 1981.
- Westfall, Christopher T., M.D., F.A.C.S** Professor of Ophthalmic Technologies (2000), B.S., U.S. Military Academy at West Point, New York; M.D., Ohio State University, 1976.
- Whitney, Ella C., B.S., R.D.M.S., R.D.C.S., R.V.T.** Instructor of Diagnostic Medical Sonography and Assistant Clinical Coordinator (2008). B.S., Nicholls State University, 1984.
- Wiggins, Michael N., M.D.** Associate Professor and Medical Director of Ophthalmic Technologies (2005). B.S., University of Central Arkansas, 1993; M.D., University of Arkansas for Medical Sciences, 1997.
- Winters, Ronald H., Ph.D.** Professor and Dean of College of Health Related Professions (1982). B.A., California State University, Northridge, 1963; Ph.D., Oregon State University, 1969.
- Woods, Cathryn, B.S., R.D.** Instructor of Dietetics and Nutrition, CAVHS (1992). B.S., Mississippi State University, 1992.
- Woods, Lugene A., M.Ed., M.T.(ASCP), C.L.S.(NCA).** Assistant Professor of Medical Technology (2005). B.S., University of Arkansas for Medical Sciences, 1976; M.Ed., University of Arkansas at Little Rock, 1996.
- Yakoubian, Scott, M.S.** Assistant Professor of Radiation Therapy, CARTI (1997). B.S., University of Arkansas at Little Rock, 1991; M.S., Georgia Institute of Technology, 1993.
- Yan, Yulong, Ph.D., D.A.B.R.** Associate Professor and Division Director of Medical Dosimetry (2002). B.S., Nanjing University of Aeronautics & Astronautics, 1985; M.S., Nanjing University of Aeronautics & Astronautics, 1988; Ph.D., Southeast University, China, 1997.
- Young, Quinnie J., M.A., R.T.(R)(ARRT).** Associate Professor of Radiologic Imaging Sciences (1966). B.S., University of Arkansas for Medical Sciences, 1979. M.Ed., University of Arkansas at Fayetteville, 1987; M.A., University of Arkansas at Little Rock, 1996.
- Younger, Frank, Jr., D.D.S.** Instructor of Dental Hygiene, CAVHS (1987). B.S., University of Tennessee, 1973; D.D.S., University of Tennessee at Memphis, 1977.
- Yousaf, Muhammad, M.D.** Assistant Professor and Medical Director of Radiologist Assistant (2009). M.D., Punjab Medical College, 1990.
- Zhang, Xin, Ph.D.** Assistant Professor of Medical Dosimetry (2008). B.S., Hengyang Engineering College, 1990; M.S., Institute of Radiation Therapy Medicine, 1996; M.S., Colorado State University, 2001; Ph.D., Georgia Institute of Technology, 2006.
- Zoeller, Mark, D.D.S.** Associate Professor of Dental Hygiene (1995). B.S., Southwest Texas State University, 1977; D.D.S., University of Tennessee, 1983.
- Zraick, Richard., Ph.D., C.C.C.-S.L.P.** Associate Professor of Audiology and Speech Pathology (1997). B.A., University of Arizona, 1984; M.S., University of Arizona, 1987; Ph.D., Arizona State University, 1998.

# GENERAL CALENDAR

Unless otherwise noted, the terms “College” and “University” refer to the College of Health Related Professions and the University of Arkansas for Medical Sciences respectively. The terms “you” or “the student” refer to duly-registered students in the College. “Program” refers to the appropriate CHRP Program previously mentioned in that section.

The following are dates for registration and beginning of classes for the College for the 2010–2011 academic year. Please note that special courses and cooperative programs with other institutions do not always conform to this calendar. Contact the appropriate department office to determine if any non-standard dates apply.

## FALL SEMESTER 2010

August 17, Tuesday	Registration and Orientation
August 18, Wednesday	Registration
August 19, Thursday	Classes begin

## SPRING SEMESTER 2011

January 12, Wednesday	Registration
January 12, Wednesday	Classes begin

## COMMENCEMENT 2011

May 21, Saturday

## SUMMER SESSION 2011

May 31, Tuesday	Registration
May 31, Tuesday	Classes begin

## STUDENT HOLIDAYS

Labor Day	(first Monday in September)
Presidents’ Day	(third Monday in February)
Veterans’ Day*	(November 11)
Spring Semester Break	
Thanksgiving and following Friday	
Memorial Day	(last Monday in May)
Christmas Vacation and New Year’s Day*	
Independence Day*	
Martin Luther King, Jr. Day	(third Monday in January)

\*When these holidays fall on Saturday, the preceding Friday is observed as the holiday. When the holiday falls on Sunday, the following Monday is observed. When Christmas Day falls on Saturday, the following Monday is observed. In addition to the above, unscheduled holidays as declared by the Governor of Arkansas are observed.

Class schedules for individual programs in the College should be consulted to determine the availability of specific courses to be offered during a given semester. There is no assurance that a given course or program will be offered every year.

The College of Health Related Professions reserves the right to withdraw courses at any time, change fees, policies, procedures, rules, calendar, curricula, degree programs, degree requirements, graduation procedures, and any other requirement affecting students. The provisions of this catalog do not constitute a contract, expressed or implied, between any applicant or student and the College of Health Related Professions.





**CHRP UNDERGRADUATE APPLICATION FOR ADMISSION**  
**COLLEGE OF HEALTH RELATED PROFESSIONS**  
**UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES**

Return this form and a non-refundable application fee to: CHRP Admissions Office, 4301 West Markham, #619, Little Rock, AR 72205. The application fee is \$20.00 for the first program and \$10.00 for each additional program. Call the Office of Student Affairs for the latest information. Telephone: (501) 686-5730.

*All sections must be completed to process the application.*

**PERSONAL INFORMATION**

**PLEASE PRINT**

Date of Birth: Month/Day/Year

Social Security Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Legal Name: Last/First/Middle \_\_\_\_\_

Other Names Under Which Transcripts Might Appear: \_\_\_\_\_

Birthplace \_\_\_\_\_ Citizenship \_\_\_\_\_

U.S. State of Legal Residence \_\_\_\_\_ Native Language \_\_\_\_\_

Reg. No. (If Permanent Resident Alien\*) \_\_\_\_\_ Visa Type (If Non-Resident Alien\*) \_\_\_\_\_

**CURRENT MAILING ADDRESS:** Street/City/State/Zip \_\_\_\_\_

\_\_\_\_\_ County/Parish \_\_\_\_\_

Home Phone ( ) \_\_\_\_\_ Work Phone ( ) \_\_\_\_\_

If less than six (6) months, indicate previous address: \_\_\_\_\_

**PERMANENT MAILING ADDRESS:** Street/City/State/Zip \_\_\_\_\_

\_\_\_\_\_ County/Parish \_\_\_\_\_

Home Phone ( ) \_\_\_\_\_ E-mail Address \_\_\_\_\_

Have you ever been convicted of a felony? \_\_\_\_\_Yes \_\_\_\_\_No If Yes, please attach a separate sheet with an explanation.

**FEDERAL AND STATE REPORTS REQUIRE THE FOLLOWING INFORMATION:**

Male \_\_\_\_\_ Female \_\_\_\_\_ Are you Hispanic/Latino? Yes \_\_\_\_\_ No \_\_\_\_\_

**Please select one or more of the following:**

\_\_\_\_\_ American Indian or Alaska Native \_\_\_\_\_ Asian \_\_\_\_\_ Black or African American  
\_\_\_\_\_ Native Hawaiian or Other Pacific Islander \_\_\_\_\_ White

\*Non-resident aliens and permanent resident aliens or immigrants must provide proof of visa type with application.

## ACADEMIC INFORMATION

**CHRP PROGRAM FOR WHICH YOU ARE APPLYING (CHECK ALL THAT ARE APPLICABLE):**

- |   |  |
|---|--|
| <input type="checkbox"/> Cytotechnology<br><input type="checkbox"/> Dental Hygiene<br><input type="checkbox"/> Little Rock <input type="checkbox"/> Mountain Home<br><input type="checkbox"/> Diagnostic Medical Sonography<br><input type="checkbox"/> Little Rock<br><input type="checkbox"/> Texarkana<br><input type="checkbox"/> Degree Completion (Already ARDMS Certified)<br><input type="checkbox"/> Emergency Medical Sciences<br><input type="checkbox"/> EMT <input type="checkbox"/> Paramedic<br><input type="checkbox"/> Health Information Management (Medical Record Tech)<br><input type="checkbox"/> Full-Time <input type="checkbox"/> Part-Time<br><input type="checkbox"/> Medical Dosimetry<br><input type="checkbox"/> Medical Technology<br><input type="checkbox"/> Traditional Degree Program<br><input type="checkbox"/> MLT-MT <input type="checkbox"/> MT-Fstrk | <input type="checkbox"/> Nuclear Medicine Imaging Sciences<br><input type="checkbox"/> Ophthalmic Technologies (Ophthalmic Medical Technology)<br><input type="checkbox"/> Radiation Therapy <small>(Students must have earned 39 hours of Radiologic Imaging Sciences course work to apply for this program)</small><br><input type="checkbox"/> Radiologic Imaging Sciences <b>(Indicate 1st, 2nd, 3rd preference)</b><br><input type="checkbox"/> Fayetteville <input type="checkbox"/> Texarkana<br><input type="checkbox"/> Little Rock<br><input type="checkbox"/> Respiratory Care <b>(Indicate 1st and 2nd preference)</b><br><input type="checkbox"/> Little Rock <input type="checkbox"/> Batesville<br><input type="checkbox"/> Texarkana<br><b>Note:</b> Check one of the following for Respiratory Care:<br><input type="checkbox"/> Traditional Degree Program<br><input type="checkbox"/> Three-year Program Option<br><input type="checkbox"/> RRT to BS<br><input type="checkbox"/> Surgical Technology |
|---|--|

Semester you wish to enroll:    Fall            Spring            Summer

Year you wish to enroll: \_\_\_\_\_ Have you ever applied to CHRP before?    Yes    No

**DEGREE/CERTIFICATE SOUGHT (CHECK ONE):**

Certificate    Associate of Science    Bachelor of Science    Advanced Certificate

**ARE YOU ATTENDING COLLEGE NOW:**    Yes    No    If Yes, where? \_\_\_\_\_

<b>EDUCATIONAL INSTITUTIONS ATTENDED</b> —List in Chronological Order (Last Institution First) All Colleges, Universities, or Other Post Educational Institutions Attended.				
Name of Institution (Do Not Abbreviate)	Dates Attended	Credits Earned Semester (S) or Quarter (Q) System	Credit System (Circle One)	Degrees/Certificates Earned (if any)
			S	
			Q	
			S	
			Q	
			S	
			Q	
			S	
			Q	

Return completed application and have each educational institution you attended send one official transcript to the address listed on the opposite side of this application. Transcripts issued to students are NOT acceptable. **NOTE:** Some departments/programs do not require high school transcripts (refer to latest CHRP catalog).

I hereby affirm that all information supplied on this form is complete and accurate. It is my understanding that I shall not be considered for admission to the University of Arkansas for Medical Sciences until I have submitted all credentials specified by the College and Department or Program. I understand that withholding information requested or giving false information will make me ineligible for participation in the program.

**SIGNED** \_\_\_\_\_

**DATE** \_\_\_\_\_

**CHRP GRADUATE APPLICATION FOR ADMISSION**  
**COLLEGE OF HEALTH RELATED PROFESSIONS**  
**UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES**

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*All sections must be completed to process the application.*

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**PLEASE PRINT**

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Social Security Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Legal Name: Last/First/Middle \_\_\_\_\_

Other Names Under Which Transcripts Might Appear: \_\_\_\_\_

Birthplace \_\_\_\_\_ Citizenship \_\_\_\_\_

U.S. State of Legal Residence \_\_\_\_\_ Native Language \_\_\_\_\_

Reg. No. (If Permanent Resident Alien\*) \_\_\_\_\_ Visa Type (If Non-Resident Alien\*) \_\_\_\_\_

**CURRENT MAILING ADDRESS:** Street/City/State/Zip \_\_\_\_\_

\_\_\_\_\_ County/Parish \_\_\_\_\_

Home Phone ( ) \_\_\_\_\_ Work Phone ( ) \_\_\_\_\_

If less than six (6) months, indicate previous address: \_\_\_\_\_

**PERMANENT MAILING ADDRESS:** Street/City/State/Zip \_\_\_\_\_

\_\_\_\_\_ County/Parish \_\_\_\_\_

Home Phone ( ) \_\_\_\_\_ E-mail Address \_\_\_\_\_

Have you ever been convicted of a felony? \_\_\_\_\_ Yes \_\_\_\_\_ No If Yes, please attach a separate sheet with an explanation.

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Male \_\_\_\_\_ Female \_\_\_\_\_ Are you Hispanic/Latino? Yes \_\_\_\_\_ No \_\_\_\_\_

**Please select one or more of the following:**

\_\_\_\_\_ American Indian or Alaska Native \_\_\_\_\_ Asian \_\_\_\_\_ Black or African American  
\_\_\_\_\_ Native Hawaiian or Other Pacific Islander \_\_\_\_\_ White

\*Non-resident aliens and permanent resident aliens or immigrants must provide proof of visa type with application.

## ACADEMIC INFORMATION

**CHRP GRADUATE PROGRAM FOR WHICH YOU ARE APPLYING (CHECK ALL THAT ARE APPLICABLE):**

\_\_\_\_\_Audiology (Au.D.)      \_\_\_\_\_Nuclear Medicine Advanced Associate (M.I.S.)      \_\_\_\_\_Radiologist Assistant (M.I.S.)

Semester you wish to enroll:    \_\_\_\_\_ Fall                      \_\_\_\_\_ Spring                      \_\_\_\_\_ Summer  
 (Audiology only allows for admission in the fall semester)

Year you wish to enroll: \_\_\_\_\_ Have you ever applied to CHRP before?    \_\_\_\_\_Yes                      \_\_\_\_\_No

**ARE YOU ATTENDING COLLEGE NOW:** \_\_\_\_\_Yes    \_\_\_\_\_No      If Yes, where? \_\_\_\_\_

**EDUCATIONAL INSTITUTIONS ATTENDED**—List in Chronological Order (Last Institution First) All Colleges, Universities, or Other Post Educational Institutions Attended.

Name of Institution (Do Not Abbreviate)	Dates Attended	Credits Earned Semester (S) or Quarter (Q) System	Credit System (Circle One)	Degrees/Certificates Earned (if any)
			S	
			Q	
			S	
			Q	
			S	
			Q	
			S	
			Q	

Return completed application and have each educational institution you attended send one official transcript to the address listed on the opposite side of this application. Transcripts issued to students are NOT acceptable.

I hereby affirm that all information supplied on this form is complete and accurate. It is my understanding that I shall not be considered for admission to the University of Arkansas for Medical Sciences until I have submitted all credentials specified by the College and Department or Program. I understand that withholding information requested or giving false information will make me ineligible for participation in the program.

**SIGNED** \_\_\_\_\_

**DATE** \_\_\_\_\_

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