

344 Occupational Performance Areas II (4) This course examines the occupational therapy process with an emphasis on optimal occupational performance which enhances lifespan role functioning across occupational performance contexts. This course examines the interplay of performance components and their effects on subsequent performance areas, particularly work and productive activities. Prereq: OTA 343. Su

350 Independent Study (1-12) This elective course may be customized for the special interest of the student. Students may complete this independent study by participating in faculty-approved supervised service delivery, research projects under the direction of faculty, or another faculty approved project. F, Sp, Su

362 Occupational Therapy Assistant Issues (3) This course will provide opportunities to recognize the necessity of participating in the promotion of occupational therapy through educating professionals, consumers, third-party payers, and the public; to assume individual responsibility for planning future professional development to maintain a level of practice consistent with accepted standards; and to understand environmental and policy issues which impact the provision of occupational therapy services. Prereq: departmental consent. Su

372 Management for Occupational Therapy Assistants (3) General management principles such as planning, organizing, staffing, coordinating/directing, controlling, budgeting, marketing, strategic planning are applied to the management of activities service. There is an emphasis on the development of supervisory skills for occupational therapy students, certified occupational therapy assistants, and other personnel. Prereq: departmental consent. Su

397 Technical Fieldwork A (3) While working with persons having various levels of psychosocial, sensorimotor, and cognitive performance components, students have opportunities for synthesis, the integration and application of knowledge gained throughout their educational experiences which include general education/liberal arts courses as well as the sequence of occupational therapy coursework. Students will examine the interplay among occupational performance areas, components, and contexts; develop and expand a repertoire of occupational therapy treatment interventions; and employ clinical reasoning and reflective practice skills. Fieldwork A, a Level II internship of at least 8 weeks (full-time) in duration, must vary from Fieldwork B to reflect a difference in ages across the lifespan of persons requiring occupational therapy services, in the setting with regard to chronic conditions (long term versus short term), and in facility type (institutional versus community based). Prereq: 43 OTA hours. F, Sp, Su

398 Technical Fieldwork B (3) While working with persons having various levels of psychosocial, sensorimotor, and cognitive performance components, students have opportunities for synthesis, the integration and application of knowledge gained throughout their educational experiences which include general education/liberal arts courses as well as the sequence of occupational therapy coursework. Students will examine the interplay among occupational performance areas, components, and contexts, develop and expand a repertoire of occupational therapy treatment interventions, and employ clinical reasoning and reflective practice skills. Fieldwork B, a Level II internship of at least 8 weeks (full-time) in duration, must vary from Fieldwork A to reflect a difference in ages across the lifespan of persons requiring occupational therapy services, in the setting with regard to chronicity (long term versus short term disability/disease process), and in facility type (institutional versus community based). Prereq: 46 OTA hours (must include OTA 397). F, Sp, Su

Radiologic and Imaging Sciences and Radiologic Technology

The Bachelor of Science in Radiologic and Imaging Sciences programs prepares individuals to function as entry-level radiographers. Radiologic technology and sonography specialty tracks are offered. The radiologic technologists and sonographer perform diagnostic examinations and assist physicians in the performance of fluoroscopic, special radiographic procedures, and special sonographic procedures. Radiologic examinations are performed in a variety of settings including radiographic rooms, patient rooms, emergency rooms, surgery, and critical care units. The radiographer and sonographer are responsible for operating diagnostic equipment, preparing contrast materials, positioning the patient to produce the proper image, caring for the patient during the examination, and evaluating the quality of resulting images. Radiographers are employed by hospitals, medical centers, physicians' offices, clinics, and other care centers.

The Bachelor of Science in Radiologic and Imaging Sciences degree program offers three separate tracks of study. Track 1 is radiologic technology for the traditional student preparing for the radiologic technology role; Track 2 is sonography for the traditional student preparing for the sonographer role; and Track 3 is for the distance student seeking a radiologic technology or a sonography specialty in the radiologic and imaging sciences area who is already certified in radiography, nursing, or allied health.

Pre-radiologic and imaging sciences majors who do not have prior health care experience can apply for either Track 1—Radiologic Technology or Track 2—Sonography. The three semesters of study for the pre-radiologic imaging sciences Track 1 and Track 2 majors provide the prerequisite courses needed to enter the professional study program. Students accepted into the Bachelor of Science in Radiologic and Imaging Sciences specialty programs begin professional course work during the spring semester of their second year. Graduates of the Bachelor of Science in Radiologic and Imaging Sciences Track 1 – Radiologic Technology program are also awarded the Associate of Sciences in Radiologic Technology degree and are eligible to sit for the national registry examination. Students completing Track 2—Sonography receive the Bachelor of Science in Radiologic and Imaging Sciences and are eligible to sit for selected registry examinations.

Registered radiologic technologists, registered sonographers, registered nurses, registered respiratory therapists,

or others who have completed an allied health program recognized by the American Registry of Diagnostic Medical Sonographers (ARDMS) or the American Registry of Radiologic Technologists (ARRT) are eligible to enroll in the Radiologic and Imaging Sciences Track 3. Upon completion of the Bachelor of Science in Radiologic and Imaging Sciences Track 3 specialty courses, graduates are eligible to sit for the national registry examinations in sonography or magnetic resonance imaging and computed tomography. All Track 3 professional course work is offered via the Internet with preceptored clinical practice.

To obtain the knowledge and skills necessary for success in radiologic and imaging sciences, students must follow a prescribed sequence of academic and clinical courses including the University Core Curriculum. Core Curriculum and radiologic technology and sonography didactic courses are taught on campus. Clinical courses are conducted at regional health care centers. Most courses are scheduled during the day but some clinical courses include late afternoon and evening hours. To provide comprehensive clinical experiences, students are required to complete occasional weekend assignments and rotate on limited second and third shifts. Clinical sites for Track 1 and Track 2 students will be located within 75 miles of Evansville.

Admission Requirements

Applicants must be accepted for admission to the University before being admitted to the radiologic and imaging sciences program. A separate application must be submitted for admission to the program. Program application forms may be obtained from the College of Nursing and Health Professions. Completed applications for the BS in Radiologic and Imaging Sciences Track 1 or Track 2 specialty areas must be received by September 15 of the requested academic admission year. A copy of all college/university transcripts must be submitted with the application. Applicants are encouraged to apply early and enroll in required University Core Curriculum courses. Admission to the program is competitive and is based on academic and other professional related qualifications. Additional information related to the admission process is available on the program's Web site.

Preferred applicant qualifications include:

- A postsecondary grade point average of 2.7 or above (4.0 scale); and
- completion of the required pre-radiology courses.

All qualified applicants are interviewed by the

Radiologic Technology Admissions Committee or the Sonography Admissions Committee, which consists of program faculty, clinical instructors, and area health care providers. All interviews are confidential, private, and scheduled by appointment. The committee's decision is conveyed by letter within one month following the completion of interviews.

Students meeting academic requirements must be in good health, capable of fulfilling clinical practice requirements, and eligible for radiologic technology or sonography certification.

Radiologic and Imaging Sciences Degree Requirements

Candidates for the Radiologic and Imaging Sciences must meet the following general requirements and complete the Radiologic and Imaging Sciences courses required for the major specialty area of study:

- completion of the University Core Curriculum: 50 semester credit hours;
- a grade of C or better in all Radiologic and Imaging Sciences courses and other selected courses; and
- maintain an average of 2.0 grade point average or better.

Radiologic and Imaging Science Program: Track 1 – Radiologic Technology Curriculum

First Year		
Fall Semester		
BIOL 121	Anatomy and Physiology I	3
ENG 101	Rhetoric and Composition I	3
HP 115	Medical Terminology	2
MATH 111	College Algebra or any A2 approved course	4
IND. DEV./SOC. BEH	(Choose a C2 approved course)	<u>3</u>
Total		<u>15</u>
Spring Semester		
ARTS	Choose any B2 approved course	3
BIOL 122	Anatomy and Physiology II	3
PHYS 101	Introduction to Physical Sciences or CHEM 103 – General Chemistry/Non-majors	3
RADT 196	Orientation to Radiographic & Imaging Sciences	2
CMST 101	Introduction to Public Speaking or CMST 107 – Interpersonal Communications	<u>3</u>
		14
Second Year		
Fall Semester		
ENG 201	Rhetoric and Composition II	3
HEALTH/FITNESS	(Choose a B3 approved course)	1
PED	Activity	1
HIST	(Choose a C1 approved course)	3
IND. DEV./SOC. BEH.	(Choose a C2 approved course)	3
WESTERN CULTURE	(Choose a C4 approved course) – HUM I or For. Lang 203	3
HP 211	The Health Care Delivery System	<u>3</u>
		17
Spring Semester		
DMS 301	Patient Care for Imaging Sciences Professionals	2
DMS 302	Medical Ethics & Law in Imaging	2

RADT 305	Current Issues in Radiologic and Imaging Sciences	3	MATH 111	College Algebra or any A2 approved course	4
RADT 308	Introduction to Radiographic Procedures	3	IND. DEV./SOC. BEH	(Choose a C2 approved course)	3
RADT 311	Introduction to Radiographic Technology	3			15
WESTERN CULTURE (Choose a C4 approved course) – UM II or For. Lang 204		3	Spring Semester		
		16	ARTS	Choose any B2 approved course	3
Summer Sessions			BIOL 122	Anatomy and Physiology II	3
RADT 333	Clinical Applications of Radiology	2	PHYS 101	Introduction to Physical Sciences or CHEM 103 – General Chemistry/Non-majors	3
RADT 312	Radiographic Exposure	3	RADT 196	Orientation to Radiographic & Imaging Sciences	2
RADT 313	Radiographic Procedures I	3	CMST 101	Introduction to Public Speaking or CMST 107 – Interpersonal Communications	3
		8	14		

Third Year

Fall Semester			Second Year		
RADT 343	Clinical I	2	Fall Semester		
RADT 316	Radiographic Procedures II	3	ENG 201	Rhetoric and Composition II	3
RADT 334	Radiographic Physics	2	HEALTH/FITNESS (Choose a B3 approved course)		
RADT 307	Critical Thinking Skills in Radiography	3	PED	Activity	1
RADT 411	CT/MRI Physics and Instrumentation	3	HIST	(Choose a C1 approved course)	3
		13	IND. DEV./SOC. BEH. (Choose a C2 approved course)		
			WESTERN CULTURE (Choose a C4 approved course) – HUM I or For. Lang 203		
			HP 211	The Health Care Delivery System	3
			17		
Spring Semester			Spring Semester		
RADT 353	Clinical II	2	DMS 301	Patient Care for Imaging Sciences Professionals	2
RADT 337	Special Procedures	2	DMS 302	Medical Ethics & Law in Imaging	2
RADT 318	Radiographic Procedures III	3	GLOBAL COMM. (Choose a C5 approved course)		
RADT 335	Radiation Biology	2	ETHICS	(Choose a B1 approved course)	3
RADT 413	MRI/CT Procedures I	3	WESTERN CULTURE (Choose a C4 approved course) – HUM II or For. Lang 204		
ETHICS	(Choose a B1 Course)	3	3		
		15	13		
Summer Sessions			Summer Semester		
RADT 435	Clinical III	3	DMS 312	Introduction to DMS Principles and Procedures	2
RADT 415	MRI/CT Procedures II	3	DMS 313	Sonographic Sectional Anatomy	2
		6	DMS 315	Abdominal Procedures	3
			DMS 316	Sonographic Lab Practice I	3
			10		

Fourth Year

Fall Semester			Third Year		
RADT 445	Clinical IV	3	Fall Semester		
RADT 382	Radiographic Quality Control	2	DMS 321	Sonographic Physics and Instrumentation I	3
RADT 421	Radiologic and Imaging Sciences Clinical Education Methods	3	DMS 322	Pathologic Images in Sonography	2
RADT 425	Radiographic Critique	3	DMS 323	Obstetric Procedures	2
GLOBAL COMM.	(Choose a C5 approved Course)	3	DMS 324	Gynecology Procedures	2
		14	DMS 326	Sonographic Lab Practice II	2
			DMS 327	Clinical Practice I (24 hours)	3
			14		
Spring Semester			Spring Semester		
RADT 365	Directed Study in Diagnostic Imaging	1	DMS 331	Sonographic Physics and Instrumentation II	3
RADT 345	Radiography Pathology	2	DMS 332	Small parts, Neurosonography & Spec Exams	3
RADT 455	Clinical V	3	DMS 333	Critique, Clinical Correlation & Case Analysis	2
RADT 427	Radiology Department Information Systems	3	DMS 337	Clinical Practice II (32 hours)	4
SYNTHESIS	(Choose a D approved Course)	3	12		
		12			
BS in Radiologic and Imaging Sciences (Radiologic Technology) =130 semester hrs			Summer Semester		
			DVT 398	Introduction to Sonographic Vascular Lab	2
			DMS 347	Advanced Clinical Practice (32 Hours)	4
			DVT 401	Introduction to Vascular Anatomy and Proced	2
			8		

Radiologic and Imaging Science Program: Track 2 – Sonography Curriculum

First Year

Fall Semester		
BIOL 121	Anatomy and Physiology I	3
ENG 101	Rhetoric and Composition I	3
HP 115	Medical Terminology	2

Fourth Year

Fall Semester		
DVT 402	Vascular Procedures I	3
DVT 422	Introduction to Echocardiography	3
DVT 423	Sonographic Vascular Lab Practice II	2
DVT 426	Clinical Practice I – Vascular (24 hours)	3
SYNTHESIS (Choose a D approved course)		3
		14

Spring Semester		
DVT 421	Vascular Procedures II	2
DVT 423	Advanced Echocardiography	3
DVT 436	Critique, Clinical Correlation & Case Analysis	3
DVT 437	Clinical Practice II – Vascular (32 hours)	4
		12

BS in Radiologic and Imaging Sciences
(Sonography – General/Vascular/Cardiac Specialties) = 129 semester hrs

Radiologic and Imaging Science Program: Track 3 Specialty Areas

Admission to Track 3 requires graduation from an allied health professions program recognized by the American Registry of Diagnostic Medical Sonographers (ARDMS), the American Registry of Radiologic Technologists (ARRT), or Registered Nurses (e.g. Nursing including a current state license). Students for this track also must hold appropriate licensure or be registered in their practice area.

Track 3 majors will select one of the following five specialty areas to complete their BS in Radiologic and Imaging Sciences program:

- *Track 3 A — Clinical Education;
- *Track 3 B — Radiologic Management;
- *Track 3 C — Magnetic Resonance Imaging and Computed Tomography;
- Track 3 D — General Sonography;
- Track 3 E — Vascular Sonography.

*Admission to Tracks 3 A, B, and C require that the student is a registered radiographer.

Specialty Area Track 3 Curricula:

Completion of the University Core Curriculum 50 credit hours, completion of an allied health professions program recognized by the American Registry of Radiologic Technologists or the American Registry of Diagnostic Medical Sonographers (ARDMS), completion of Track 3 specialty area courses

Track 3 A: Clinical Education Specialty Track

DMS 302	Medical Ethics & Law in Imaging (2) or HP 456 Ethics & Health Care in a Pluralistic Society (3)	2 or 3
RADT 305	Current Issues in Radiologic and Imaging Sciences	3
RADT 426	Radiologic & Imaging Sciences Practicum II	3
RADT 427	Radiology Department Information Systems or RADT 423- Rad and Imaging Sciences Program Standards	3
HP 211	The Health Care Delivery System	3
HP 402	Health Care Research and Statistics or	
HP 411	Health Care System Management	3
HP 478	School and Community Health Education Methods or *RADT 421 Radiologic and Imaging Sciences Clinical Education	3
GERO 315	Health Care Aspects of Gerontology	3
NUTR 376	Principles and Applications in Nutrition	3
Elective	Choose any RADT, HP, NUTR, or GERO 300-400 Level Course	3
		29 or 30

Track 3 B: Management Specialty Track

HP 211	The Health Care Delivery System	3
HP 402	Health Care Research and Statistics	3
HP 411	Health Care System Management	3
HP 421	Financial Management in Health Care	3
HP 431	Health Information and Quality Improvement Management	3
HP 496	Marketing in Health Care Organization	3
RADT 424	Radiologic & Imaging Sciences Practicum I	3
RADT 427	Radiology Department Information Systems	3
Elective	Choose any two RADT, HP, NUTR, or GERO 300-400	3
Level Courses		6
		30

Track 3 C: Magnetic Resonance Imaging and Computed Tomography Specialty Track

HP 211	The Health Care Delivery System	3
DMS 302	Medical Ethics & Law in Imaging (2) or HP 456 Ethics & Health Care in a Pluralistic Society (3)	2 or 3
RADT 411	CT/MRI Physics and Instrumentation	3
RADT 413	MRI/CT Procedures I	3
RADT 414	Clinical VII – CT/MRI	3
RADT 415	MRI/CT Procedures II	3
RADT 416	Clinical VIII – CT/MRI	3
RADT 427	Radiology Department Information Systems	3
RADT 486	Clinical IX – CT/MRI	3
Elective	Choose any RADT, HP, NUTR, or GERO 300-400 Level Course	3
		29 or 30

Track 3 D: Allied Health Registry (License) + General Sonography Track

HP 211	The Health Care Delivery System	3
DMS 302	Medical Ethics & Law in Imaging (2) or HP 456 Ethics & Health Care in a Pluralistic Society (3)	2 or 3
DMS 312	Introduction to DMS Principles and Procedures	2
DMS 313	Sonographic Sectional Anatomy	2
DMS 315	Abdominal Procedures	3
DMS 316	Sonographic Lab Practice I	3
DMS 321	Sonographic Physics and Instrumentation I	3
DMS 322	Pathologic Images in Sonography	2
DMS 323	Obstetric Procedures	2
DMS 324	Gynecology Procedures	2
DMS 326	Sonographic Lab Practice II	2
DMS 327	Clinical Practice I (24 hours)	3
DMS 331	Sonographic Physics and Instrumentation II	3
DMS 332	Small parts, Neurosonography & Spec Exams	3
DMS 333	Critique, Clinical Correlation & Case Analysis	2
DMS 337	Clinical Practice II (32 hours)	4
DMS 351	Clinical Practice III – General (40 hours)**	5
		46 or 47

Track 3 E: Vascular Sonography Track

HP 211	The Health Care Delivery System	3
DMS 302	Medical Ethics & Law in Imaging (2) or HP 456 Ethics & Health Care in a Pluralistic Society (3)	2 or 3
DMS 312	Introduction to DMS Principles and Procedures	2
DMS 313	Sonographic Sectional Anatomy	2
DMS 321	Sonographic Physics and Instrumentation I	3
DMS 331	Sonographic Physics and Instrumentation II	3
DVT 401	Introduction to Vascular Anatomy and Procedures	2
DVT 402	Vascular Procedures I	3

DVT 422	Introduction to Echocardiography	3	RADT 435	Clinical III	3
DVT 426	Clinical Practice I – Vascular (24 hours)	3	RADT 318	Radiographic Procedures III	3
DVT 421	Vascular Procedures II	2	RADT 445	Clinical IV	2
DVT 432	Advanced Echocardiography	3	RADT 345	Radiography Pathology	2
DVT 436	Critique, Clinical Correlation & Case Analysis	3	RADT 365	Directed Study in Diagnostic Imaging	1
DVT 437	Clinical Practice II – Vascular (32 hours)	4	RADT 455	Clinical IV	3
DVT 438	Clinical Practice III – Vascular (40 hours)***	5	RADT 382	Radiographic Quality Control	2
		43 or 44			46

Total Semester Hours = 89

Associate of Science in Radiologic Technology

The Associate of Science in Radiologic Technology program courses are listed below and are included in the Bachelor of Sciences in Radiologic and Imaging Sciences Track I required courses. An associate of science degree is awarded to students concurrently with the Bachelor of Sciences in Radiologic and Imaging Sciences Track 1 curriculum. Students must pass all required University Core courses and receive at least a C in all required RADT and DMS courses.

The Associate of Science in Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-2901, phone 312/704-5300, fax 312/704-5304, e-mail mail@jrcert.org.

Associate of Science in Radiologic Technology Curriculum

The associate of science program consists of 91 credit hours in the University Core Curriculum courses, required pre-radiology courses, and radiologic and imaging sciences courses.

University Core Curriculum Courses		
BIOL 121	Anatomy & Physiology I	3
BIOL 122	Anatomy & Physiology II	3
MATH 111	College Algebra or (Choose an A2 course)	4
ENG 101	Rhetoric & Composition I	3
ENG 201	Rhetoric & Composition II	3
CMST 101	Introduction to Public Speaking or	
CMST 107	Interpersonal Communications	3
PSY 201	Introduction to Psychology	3
SOC 121	Principles of Sociology	3
PHYS 101	Introduction to Physical Sciences or	
CHEM 103	General Chemistry/Non-majors	3
ARTS	(Choose a B2 approved course)	3
ETHICS	(Choose a B1 Course)	3
HEALTH/FITNESS	(Choose a B3 approved course)	1
PED Activity	(Choose any B3 activity course)	1
WESTERN CULTURE	(Choose one from the C4 -HUM I)	3
		39
Additional Required Courses		
HP 115	Medical Terminology	2
RADT 196	Orientation to Radiologic and Imaging Sci	2
		4
Required Radiologic and Imaging Sciences Courses		
DMS 301	Patient Care for Imaging Sciences Prof	2
RADT 308	Introduction to Radiographic Procedures	3
RADT 333	Clinical Applications of Radiology	2
RADT 311	Introduction to Radiographic Technology	3
RADT 312	Radiographic Exposure	3
RADT 343	Clinical I	2
RADT 313	Radiographic Procedures I	3
RADT 316	Radiographic Procedures II	2
RADT 337	Special Procedures	2
RADT 334	Radiographic Physics	2

Course Descriptions

Following certain course descriptions are the designations: F, Sp, Su. These indicate the semesters fall, spring, summer in which the course is normally offered and are intended as an aid to students planning their programs of study in radiologic and imaging sciences.

196 Orientation to Radiologic and Imaging Sciences (2) This course provides a general overview of radiologic technology history and practice. Students gain a beginning understanding of the value of radiologic sciences in a health care setting, survey the role of radiologic technologists in a variety of settings, recognize national and state credentialing requirements, identify radiologic technology association functions at all levels, and recognize ARRT standards, ethics, and policies and their effects on practicing radiologic technologists' conduct and patient treatment. No prereq. F, Sp, S

305 Current Issues in Radiologic and Imaging Sciences (3) This course examines the issues important to the radiographers and radiologic technologist practicing in the field of radiography. Human diversity, ethics, health care systems, hospital organizations, radiology organizations, accreditation, professional credentialing, professional organizations, and professional development are studied in relation to the field of technology. Prereq: Pre-radiology majors and students admitted to the radiologic and imaging sciences programs or consent of instructor. Sp

307 Critical Thinking Skills in Radiography (3) This course is designed to emphasize the need for critical thinking and to identify factors that hinder critical thinking. This course focuses on identifying the qualities of a critical thinker through the review of numerous case studies, performance case studies for the ionized laboratory, and critical analysis of radiographs. Prereq: Acceptance in the Radiologic Technology program. Sp

308 Introduction to Radiographic Positioning (3) This course includes general anatomy, terminology, imaging principles, and positioning principles. Positioning methods required for radiographic examinations of the chest and abdomen will be performed. One hour of lecture and one hour of lab activity each day. Prereq: Acceptance in the Radiologic Technology program. S

311 Introduction to Radiologic Technology (3) An introduction to the field of radiologic technology with reference to the duties and responsibilities of the radiographer, types of equipment used, and image production. Radiation protection, personnel, and organizational structure also are discussed. Prereq: Acceptance in the Radiologic Technology program. S

312 Radiographic Exposure (3) Studies the principles of radiographic image formation with respect to the variables that affect contrast, density, recorded detail, distortion, radiographic facilities, equipment, chemicals, film, radiographic processing, radiographic artifacts, silver recovery systems, x-ray tubes, tube rating, tube cooling charts, control of secondary radiation, and radiographic grids. Prereq: RADT 308. S

313 Radiographic Procedures I (3) A detailed study of the anatomy and positioning methods required for radiographic examinations of the chest and abdomen; urinary, gastrointestinal, and biliary systems; upper extremity and shoulder girdle; and lower extremity. One-and-a-half hours of lecture and one hour of lab activity each class day. Prereq: RADT 308. S

316 Radiographic Procedures II (3) A detailed study of the anatomy and positioning methods required for radiographic examinations of the pelvis/hip, spine, ribs, sternum, sacrum, coccyx, SI joints, SC joints, cranium, and facial bones. Two hours of lecture and one hour of lab activity each class day. Prereq: RADT 313. F

318 Radiographic Procedures III (3) A detailed study of positioning methods required for trauma radiographic examinations of the cranium, facial bones, spine, chest, shoulder, upper extremities, abdomen, pelvis, hip, and lower extremities. Vital signs, patient assessment, medical emergencies, trauma terminology, types of fractures, common injuries for various types of trauma, common injuries for various types of trauma, common radiographic exposure factors, grid usage, and case studies will be presented. Prereq: RADT 316. Sp

333 Clinical Application of Radiology (2) A 10-week orientation to the hospital. Introduction to radiographic/fluoroscopic rooms, film processing, radiology office and files, hospital nursing units, and ancillary departments. General radiographic positioning terminology and chest positioning is included in the first five weeks of the class. Prereq: RADT 308. S

334 Radiologic Physics (2) This course studies the physical principles underlying radiologic technology, with special attention given to the equipment required to generate x-rays, the nature and behavior of x-radiation, and the devices relevant to the practical applications of x-rays in diagnosis. Prereq: RADT 312 F

335 Radiation Biology (2) This course is designed to study the biological effects of radiation at atomic, molecular, cellular, and systemic levels. In addition, short- and long-term somatic and genetic effect, dose limits, and methods of radiation protection for the patient and the technologist are discussed. S

337 Special Procedures (2) This course is an introduction to cardiovascular, neurological, and other specialized radiographic procedures and imaging equipment including tomography, fluoroscopy, and digital imaging. Prereq: RADT 334. Sp

343 Clinical I (2) Supervised clinical education allowing students to apply knowledge and essential skills of radiographic positioning and exposure, with emphasis on examinations of the chest and abdomen. Correlates with RADT 333, 312, 313, and DMS 301. F

345 Radiographic Pathology (2) Studies the changes that occur with disease in the various systems of the body and the methods of examination and application to radiologic technology. Sp

353 Clinical II (2) A continuation of supervised clinical education. Emphasis on radiographic/fluoroscopic procedures and examinations of the extremities. Introduces special procedures and CT scanning. Correlates with RADT 218, and 222. (16 hours/week). Prereq: RADT 343. Sp

365 Directed Study (1) This course emphasizes individualized study in the five major areas of diagnostic imaging which include radiation protection; radiographic equipment operation and maintenance; image production and evaluation; radiographic procedures; and patient care procedures. Sp

382 Radiographic Quality Control (2) An introduction to the concepts of quality control and quality assurance in the radiology department. Includes the study of quality assurance tests for radiographic machines and film processors. F

411 CT/MRI Physics and Instrumentation (3) This course provides the students with a detailed study of the computed tomography and magnetic resonance imaging physics and instrumentation information. Course topics include principles of operation, system components, image characteristics, image resolution, image quality, scan design for spiral computed tomography, nuclear magnetism, precession of nuclei, larmor frequencies, production of the nuclear magnetic resonance signal, nuclear magnetic resonance pulses, nuclear magnetic resonance decay, production of the magnetic resonance image, magnetic resonance imaging equipment, image quality, image contrast, paramagnetic contrast agents, safety, and biological hazards. Prereq: Acceptance in the Radiologic Technology program. F

413 Magnetic Resonance Imaging and Computed Tomography Procedures I (4) This course provides the students with a detailed study of the magnetic resonance imaging computed tomography procedures of the head and spine. Prereq: Acceptance in the Radiologic Technology program. Sp

414 Clinical VII – CT/MRI (3) This course provides the students with an introduction to the functions and basic procedures of magnetic resonance imaging and computed tomography. This course includes an overview of the field of MRI/CT, ethics, patient care, professional standards, and the clinical application of imaging skills of the following examinations: routine examinations of the head, skull, neck, cervical spine, thoracic spine, and lumbar spine. All MRI/CT procedures will be performed under the direct supervision of a registered MRI/CT technologist. Prereq: Acceptance in the Radiologic Technology program. F, S

415 Magnetic Resonance Imaging and Computed Tomography Procedures II (3) This course provides the students with a detailed study of the magnetic resonance imaging physics and computed tomography procedures of the thorax, abdomen, urogenital system, pelvis, hip, and knee. Prereq: Acceptance in the Radiologic Technology program. S

416 Clinical VIII – CT/MRI (3) This course provides the students with the introduction to the functions of magnetic resonance imaging and computed tomography. The students will perform the following routine examinations: the thorax, abdomen, pelvis, and knee. All MRI/CT procedures will be performed under the direct supervision of a registered MRI/CT technologist. Prereq: Acceptance in the Radiologic Technology program. Sp, S

421 Radiologic and Imaging Sciences Clinical Education Methods (3) This course focuses on clinical education principles and procedures for radiology programs. Lesson plan formation, unit plan organization, teaching strategies for the clinical educator, and evaluation methods are studied. Prereq: Acceptance in the Radiologic Technology program. F

424 Radiologic and Imaging Sciences Practicum I (3) This course will provide students with a practicum in clinical applications within general radiography and radiology management. The student will intern as an assistant clinical instructor or assistant radiologic manager in an accredited radiology clinical site. Concurrent with the clinical practicum the student will participate in classroom instruction or Internet delivered instruction. Students will share knowledge with each other concerning positive experiences and difficulties they may have encountered in their clinical practicum. Students will be supervised by clinical instructors and departmental managers. F

425 Radiographic Critique (3) This course focuses on the general guidelines for radiographic critique. The student will critique radiographs on the following regions: chest and abdomen; upper and lower extremities; shoulder; pelvis and hip; cervical, thoracic, and lumbar vertebrae; ribs; and cranium. F

426 Radiologic and Imaging Sciences Practicum II (3) This course will provide students with a practicum in clinical education at an accredited clinical site. The student will intern as an assistant clinical instructor in a hospital setting. The educational experience will prepare students to become clinical instructors in a Joint Review Committee on Education in Radiologic Technology accredited clinical site. The focus of this course is on the development, instruction, and evaluation of radiologic technology lessons in the clinical environment. Concurrent with the clinical practicum the student will participate in classroom instruction or Internet delivered instruction. Students will share knowledge with each other concerning positive experiences and difficulties they may encounter in their clinical education practicum. Students will be supervised by clinical instructors. Sp

427 Radiology Department Information Systems (3) This course focuses on the most current radiology management systems and picture archival medical systems. Sp

435 Clinical III (3) A 15-week summer session permitting further development of radiographic/fluoroscopic procedures and clinical skills learned during the first year with continued emphasis on skeletal examinations and introduction to skull radiography. Introduction to second shift and weekends. Prereq: RADT 353. S

445 Clinical IV (3) A continuation of supervised clinical education, this course continues to emphasize skeletal examinations and skull radiography. Prereq: RADT 435. F

455 Clinical V (3) Final mastery of all clinical competencies with an introduction to night shift and alternate clinical environments. (30 hours/week). Prereq: RADT 445. Sp

480 Special Topics in Radiologic and Imaging Sciences (1-3) This course provides the opportunity for analysis and synthesis of concepts and research related to special topics in imaging sciences and health care. Students admitted to the radiologic and imaging sciences program or consent of instructor. F, Sp, S

486 Clinical IX – CT/MRI (3) This course provides the students with the knowledge, theory, and proficiency in performing the following MRI/CT examinations: skull, head, sinuses, neck, cervical spine, thoracic spine, lumbar spine, pelvis, hip, and knee. S

301 Patient Care for Imaging Sciences Professionals (2) This course provides basic concepts of nursing procedures in order to maintain continuous, smoothly integrated patient care with due regard to necessary diagnostic and therapeutic techniques. The topics of the course include the health care team; attitudes and communication in patient care; patient interactions; psychological considerations; interactions with the patient; patient safety; transferring techniques; trauma and reactions to contrast agents; patient tubes, lines, and catheters; care of patients during and following special procedures; and patient care during mobile or surgical procedures. The role of the radiologic and imaging science professional in patient education will be identified. Prereq: Acceptance into the Radiologic Technology or DMS program. Sp

302 Medical Ethics and Law in Imaging (2) The course is designed to provide a fundamental background in ethics and law. An introduction to historical perspective, medicine and law, civil liability, negligence, standards of care, informed consent, documentation, risk management, safety issues, whistle blowing, and education will be presented. Topics

include misconduct, malpractice, legal and professional standards, Code of Ethics, Code of Professional Conduct for Diagnostic Medical Sonographers, Code of Professional Conduct, and the ASRT scope of practice. The importance of proper documentation and informed consent is emphasized. Prereq: Acceptance into the Radiologic Technology or DMS program. Sp

312 Introduction to DMS Principles and Procedures (2) This course provides the beginning sonography student with a thorough understanding of the ultrasound department, key terms and definitions pertaining to the field of diagnostic sonography, important laboratory values, and surgical procedures. Students gain a beginning understanding of the value of diagnostic medical sonography in a health care setting, survey the role of sonographers in a variety of settings, recognize national and state credentialing requirements, identify sonography association functions at all levels, and recognize ARDMS standards, ethics, and policies and their effects on practicing sonographers' conduct and patient treatment. Prereq: DMS 302 or consent of the instructor. Su

313 Sonographic Sectional Anatomy (2) This course provides the student with a basic knowledge of cross-sectional abdominal and pelvic sonography. Students gain a beginning understanding of sonographic sectional anatomy in the transverse, longitudinal, and coronal planes. Emphasis is placed on the sonographic appearance of abdominal and pelvic organs and vessels and their anatomical relationship to each other. Prereq: DMS 302 or consent of the instructor. Su

315 Abdominal Procedures (3) This course provides the student with a study of the clinical applications within the specialty of abdominal sonography. Emphasis is placed on the correct use of all technical and medical terms that are necessary for a complete discussion of sonographic procedures within the abdomen, related clinical symptoms and laboratory tests, normal vs. abnormal sonographic patterns of the anatomy studied, related disease processes, and sonographic protocol for each of the exams covered in the course. Prereq: DMS 302 or consent of the instructor. Su

316 Sonographic Lab Practice I (3) This course provides the student with an introduction to the sonography clinical environment through campus laboratory practice. Students will gain an understanding of the daily activities within an ultrasound department, necessary skills to properly operate diagnostic ultrasound equipment, and proper patient care for sonography exams. Emphasis is placed on the application of skills studied in DMS 315, Abdominal Procedures. The student will achieve an understanding of clinical and practical experience in support of classroom studies. Prereq: DMS 302 or consent of the instructor. Su

321 Sonographic Physics and Instrumentation I (3) This course provides the student with an introductory study of sonographic physics and instrumentation within the practice of general diagnostic medical sonography. Emphasis is placed on the principles of ultrasound and its propagation through tissues, construction of the ultrasound transducer, and the various types of continuous wave and pulse echo imaging modalities. Prereq: DMS 316 or consent of the instructor. F

322 Pathologic Images in Sonography (2) This course studies the pathological changes that occur with disease in the various systems of the human body. Emphasis is placed on discussion of how the sonographic appearance of abdominal, obstetric, and gynecologic organs change in the presence of pathology. Surgical implications and alternative scanning approaches are addressed. Prereq: DMS 316 or consent of the instructor. F

323 Obstetric Procedures (2) This course provides the student with a study of the clinical applications within the specialty of obstetric sonography. Emphasis is placed on the correct use of all technical and medical terms that are necessary for a complete discussion of sonographic procedures within the field of obstetrics. Topics will include the related clinical symptoms and laboratory tests used in obstetrics, fetal embryology, normal vs. abnormal sonographic patterns of fetal anatomy, related maternal and fetal disease processes, fetal anomalies and their sonographic appearance, and sonographic protocol for each of the registry exams covered in the course. Prereq: DMS 316 or consent of the instructor. F

324 Gynecology Procedures (2) This course provides the student with a study of the clinical applications within the specialty of gynecologic sonography. Emphasis is placed on the correct use of all technical and medical terms that are necessary for a complete discussion of sonographic procedures within the field of gynecology. Topics will include the related clinical symptoms and laboratory tests, embryology of the female reproductive and genitourinary systems, female reproductive anomalies and their sonographic appearance, normal vs. abnormal sonographic patterns of female anatomy, related disease processes and their sonographic appearance, and sonographic protocol for each of the registry exams covered in the course. Prereq: DMS 316 or consent of the instructor. F

326 Sonographic Lab Practice II (2) This course provides the student with continued preparation in the sonography clinical environment through campus laboratory practice. Students will continue to build on skills introduced in DMS 316 by gaining an understanding of the daily activities within an ultrasound department, necessary skills needed to properly operate diagnostic ultrasound equipment, and proper patient care for sonography exams. Emphasis is placed on the application of skills studied in DMS 323, Obstetric Procedures and DMS 324 Gynecology Procedures. The student will achieve an understanding of clinical and practical experience in support of classroom studies. Prereq: DMS 316 or consent of the instructor. F

327 Clinical Practice I-General (3) Supervised clinical education allowing students to apply knowledge and essential skills of diagnostic medical sonography. Emphasis is placed on the application of skills studied in DMS 315 Abdominal Procedures and DMS 316, Sonographic Lab Practice I. Prereq: DMS 316 or consent of the instructor. F

331 Sonographic Physics and Instrumentation II (3) This course provides the student with an advanced study of sonographic physics and instrumentation within the practice of general diagnostic medical sonography. Emphasis is placed on the principles of continuous wave and Doppler ultrasound, image artifacts, system operation and display, and biological effects of medical sonography. Prereq: DMS 327 or consent of the instructor. Sp

332 Small Parts, Neurosonography, and Specialty Exams (3) This course provides the student with a study of the clinical applications within the areas of small parts, neurosonography, and specialty exams performed in diagnostic medical sonography. Emphasis is placed on the correct use of all technical and medical terms that are necessary for a complete discussion of sonographic procedures, related clinical symptoms and laboratory tests, normal vs. abnormal sonographic patterns of the anatomy studied, related disease processes, and sonographic protocol for each of the exams covered in the course. Prereq: DMS 327 or consent of the instructor. Sp

333 Critique, Clinical Correlation, & Case Analysis (2) This course provides the student with advanced discussions and critical reviews of abdominal, obstetric, and gynecologic ultrasound. Emphasis is placed

on correlating underlying pathophysiology with its sonographic presentation, related diagnostic procedures, and the role of ultrasound in the medical diagnostic process. Prereq: DMS 327 or consent of the instructor. Sp

337 Clinical Practice II-General (4) This course is a continuation of supervised clinical education. Emphasis is placed on the application of skills studied in DMS 323. Obstetric Procedures, DMS 324. Gynecology Procedures, and DMS 326. Sonographic Lab Practice II. The course introduces alternate clinical shifts and environments. Prerequisite: DMS 326 and DMS 327 or consent of the instructor. Sp

347 Advanced Clinical Practice (4) A final mastery of all sonographic clinical competencies within a supervised clinical education setting. Emphasis will be on general skill achievement with introduction to specialized sonographic examinations and procedures. Prereq: DMS 337 or consent of the instructor. Su

351 Clinical Practice III-General (5) A final mastery of all sonographic clinical competencies. Emphasis is placed on improving general sonography skills studied in DMS 327 and DMS 337. This course introduces alternate clinical rotations and surgical applications. Prereq: DMS 337 or consent of the instructor. Su

398 Introduction to Sonographic Vascular Lab (2) This course provides the student with an introduction to the sonographic vascular lab clinical through campus laboratory practice. Students will gain an understanding of the daily activities within a vascular laboratory, necessary skills to properly operate vascular diagnostic ultrasound equipment, and proper patient care for all vascular sonography exams. The student will achieve an understanding of clinical and practical experience in support of classroom studies. Prereq: DMS 337 or consent of the instructor. Su

401 Introduction to Noninvasive Vascular Testing (2) This course provides the student with an introduction to the testing procedures within the specialty of vascular sonography. Emphasis is placed on various types of vascular testing methods, equipment utilized, and conditions warranting vascular examination. Prereq: DVT 398 or consent of the instructor. Su

402 Vascular Anatomy, Physiology, and Pathophysiology (3) This course provides the student with an introduction to the vascular anatomy and physiology as it pertains to diagnostic vascular sonography. Emphasis is placed on gross anatomy arterial and venous systems. Topics include vascular physiology and fluid dynamics of the circulatory system. Prereq: DVT 398 or consent of the instructor. Su

421 Noninvasive Diagnosis of Vascular Disease (2) This course provides the student with a study of the disease processes pertaining to diagnostic vascular sonography. Emphasis is placed on clinical signs, symptoms, and relative laboratory tests of vascular diseases. Topics include patient history, risk factors, contributing diseases, and normal vs. abnormal vascular sonographic patterns of diseases. Prereq: DVT 402 or consent of the instructor. F

422 Introduction to Echocardiography (3) This course provides the student with an introductory study of the clinical applications within the specialty of cardiac sonography. Emphasis is placed on the anatomic and physiologic relationships within the thoracic cavity. Prereq: DVT 402 or consent of the instructor. F

423 Sonographic Vascular Lab Practice I (2) This course provides the student with continued preparation in the vascular sonography clinical environment through campus laboratory practice. Students will continue to build

on skills introduced in DVT 398 by gaining an understanding of the daily activities within a vascular lab, necessary skills needed to properly operate vascular diagnostic ultrasound equipment, and proper patient care for all vascular sonography exams. Emphasis is placed on the application of skills studied in DVT 401 Introduction to Noninvasive Vascular Testing. The student will achieve an understanding of clinical and practical experience in support of classroom studies. Prereq: DVT 402 or consent of the instructor. F

426 Clinical Practice I-Vascular (2) Supervised clinical education allowing students to apply knowledge and essential skills of vascular sonography. Emphasis is placed on the application of skills studied in DVT 398 Introduction to Sonographic Vascular Lab and DVT 401 Introduction to Noninvasive Vascular Testing. Prereq: DVT 402 or consent of the instructor. F

432 Advanced Echocardiography (3) This course provides the student with an advanced study of the clinical applications within the specialty of cardiac sonography. Emphasis is placed on echocardiographic evaluation procedures and techniques. Prereq: DVT 422 or consent of the instructor. Sp

436 Critique, Clinical Correlation, and Case Analysis (3) This course provides the student with advanced discussions and critical reviews of vascular and cardiac ultrasound. Emphasis is placed on correlating underlying pathophysiology with its sonographic presentation, related diagnostic procedures, and the role of ultrasound in the medical diagnostic process. Prereq: DVT 426 or consent of the instructor. Sp

437 Clinical Practice II-Vascular (4) A continuation of supervised clinical education. Emphasis is placed on the application of skills studied in DVT 421 Noninvasive Diagnosis of Vascular Disease, and DVT 423 Sonographic Vascular Lab Practice I. Introduces alternate clinical shifts and environments. Prereq: DVT 423 and DVT 426 or consent of the instructor. Sp

438 Clinical Practice III-Vascular (5) A final mastery of all sonographic clinical competencies. Emphasis is placed on improving vascular sonography skills studied in DVT 426 and DVT 437. Introduces alternate clinical rotations and surgical applications. Prereq: DVT 437 or consent of the instructor. Su

Respiratory Therapy

This program prepares individuals to function effectively as entry-level respiratory therapists. Respiratory therapists work in a rapidly changing, fast-paced medical environment and possess advanced knowledge for the care and treatment of patients with cardiopulmonary deficiencies and diseases. Respiratory therapy is a health profession whose practitioners function in the diagnosis, treatment, management, and preventive care of patients with medical disorders such as asthma, emphysema, pneumonia, pulmonary edema, croup, bronchitis, and newborn and acute respiratory distress. These professionals utilize their specialized knowledge, clinical expertise, and interpersonal skills to care directly for patients. The respiratory therapist is proficient in the therapeutic use of medical gases, humidification, aerosols, artificial airways, mechanical ventilation, chest physiotherapy, and cardiopulmonary resuscitation.

To obtain required knowledge and skills needed for respiratory therapy, students must follow a prescribed sequence of academic and clinical courses. University Core Curriculum courses also are required for completion of degree requirements. All University Core Curriculum courses and most respiratory therapy (REST) courses are taught on campus. Clinical courses are conducted at various clinical sites including Deaconess Hospital, St. Mary's Medical Center, Henderson Community Methodist Hospital, Good Samaritan Hospital of Vincennes, Owensboro Mercy Health Systems, and other area health care facilities.

The program involves 24 months of continuous full-time study. To complete the program, students must pass all required University Core Curriculum courses, and maintain at least a C in all REST courses. University Core Curriculum courses may be completed on a part-time basis prior to entering the program, or they can be transferred from other approved institutions. Students interested in completing University Core Curriculum courses prior to entering the program or transferring credits should contact the program director.

An Associate of Science degree in Respiratory Therapy is awarded to students who successfully complete the program. Graduates are eligible to take the examinations (entry-level and registry) given by the National Board for Respiratory Care and become registered therapists (R.R.T.) upon successful completion of the credentialing process. Graduates are encouraged to continue their studies for a Bachelor of Science degree in Health Services.

The program is approved by the Committee on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, TX 76021, phone 817/283-2835, and the Commission on Accreditation of Allied Health Education Programs, 515 N. State Street, Suite 7530, Chicago, IL 60610, phone 312/464-5333.

Admission Requirements

Applicants must apply for admission to the University before being admitted to the respiratory therapy program. A separate application must be submitted for admission to the program. Application forms for the respiratory therapy program may be obtained from the College of Nursing and Health Professions or by calling 812/464-1702. The completed form must be submitted to the respiratory therapy program by April 1 of the year the student wishes to enter. Due to limited enrollment in this program, applicants are encouraged to apply as soon as possible. A complete set of official high school and any