

# Radiologic Technology (RAD)

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Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

## **RAD 2000 Introduction to Radiologic Technology .....2 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** Admission to the RAD Technology Program.

**Corequisite:** RAD 2009 RAD 2011 RAD 2088 and RAD 2140

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course introduces the scope of activities and responsibilities necessary to become a radiologic technologist. An overview of the curriculum will be provided to identify the responsibilities of the radiographer. Fundamental ethical and legal obligations to patients and society are discussed, as well as basic radiation safety and protective measures and quality assurance. Identification of the physical and emotional needs of the patient, nursing procedures, and patient care techniques used with specific radiographic examinations are included. BILLABLE CONTACT HOURS: 2

## **RAD 2009 Radiographic Procedures I ..... 2 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** Admission to the RAD Technology Program.

**Corequisite:** RAD 2000 RAD 2011 RAD 2140 and RAD 2088

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course will provide instruction and practical applications in positioning of the chest, abdomen, upper and lower extremities, for various radiographic projections. Emphasis will also be placed on anatomy and evaluation of radiographs. BILLABLE CONTACT HOURS: 2

## **RAD 2011 Procedures Lab I .....1 Credit Hour**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** Admission and advancement in the RAD Technology Program.

**Corequisite:** RAD 2000 RAD 2009 RAD 2140 and RAD 2088

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides the student with practical applications and simulations of the positioning procedures taught in Radiographic Procedures I. Additional emphasis is placed on patient care, communication and safe practice. Instruction takes place in the campus radiography lab. BILLABLE CONTACT HOURS: 2

## **RAD 2021 Radiographic Procedures II ..... 2 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** RAD 2000 RAD 2009 RAD 2011 RAD 2140 and RAD 2088

**Corequisite:** RAD 2110 RAD 2022 and RAD 2199

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is a continuation of RAD 2009 which introduces additional procedures such as the spine and pelvis, bony thorax and contrast studies of the digestive, hepatobiliary and urinary systems. Emphasis will also be placed on anatomy and evaluation of radiographs. BILLABLE CONTACT HOURS: 2

## **RAD 2022 Procedures Lab II .....1 Credit Hour**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** RAD 2000 RAD 2009 RAD 2011 RAD 2140 and RAD 2088

**Corequisite:** RAD 2021 RAD 2110 and RAD 2199

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides practical applications and simulations of the positioning procedures taught in Radiographic Procedures II. Additional emphasis is placed on patient care, communication and safe practice. Instruction takes place in the campus radiography lab. BILLABLE CONTACT HOURS: 2

## **RAD 2030 Advanced Radiographic Procedures 2 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** RAD 2080 and RAD 2244

**Corequisite:** RAD 2033 and RAD 2266

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course introduces advanced procedures which includes radiographic anatomy and positioning of the skull, trauma radiography, pediatric procedures and cross sectional anatomy. Emphasis will also be placed on the critique of radiographs. BILLABLE CONTACT HOURS: 2

## **RAD 2033 Procedures Lab III .....1 Credit Hour**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** RAD 2080 and RAD 2244

**Corequisite:** RAD 2030 and RAD 2266

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course provides practical applications and simulations of the positioning procedures taught in Advanced Radiographic Procedures. Additional emphasis is placed on independent clinical judgment and critical thinking skills. Instruction takes place in the campus radiography lab. BILLABLE CONTACT HOURS: 2

**RAD 2080 Radiation Physics ..... 3 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** RAD 2021 RAD 2110 RAD 2022 and RAD 2199 or consent of instructor.

**Corequisite:** RAD 2244

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course emphasizes the fundamentals of radiation production and the basic principles underlying the operation of radiographic equipment. Information on electromagnetic radiation, beam characteristics, units of measure, tube housing, anodes and cathodes and x-ray circuitry are also presented. BILLABLE CONTACT HOURS: 3

**RAD 2088 Clinical Practice I ..... 4 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** Admission to the RAD Technology Program.

**Corequisite:** RAD 2000 RAD 2009 RAD 2011 RAD 2140

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This is a clinical course which will be conducted in an assigned clinical facility where the supervised practice in performing selected procedures will be provided. Simple competencies will be mastered before progressing to more complicated levels. The development of a greater understanding in the practice of professional behaviors, responsibilities and team work is expected. BILLABLE CONTACT HOURS: 7

**RAD 2110 Radiographic Exposure/Quality Assurance And Imaging Systems ..... 3 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** RAD 2000 RAD 2009 RAD 2011 RAD 2088 and RAD 2140

**Corequisite:** RAD 2021 RAD 2022 RAD 2199

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course will provide the practical and theoretical knowledge necessary to function in a radiographic room by setting technical factors, implementing accessory tools such as grids, filters and screens.

This course will also provide knowledge of the relationship between radiographic exposure and processing used to produce the finished radiograph. Computed Radiographic Imaging and Digital Imaging procedures will also be discussed. BILLABLE CONTACT HOURS: 3

**RAD 2120 Radiologic Pathology ..... 2 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** RAD 2030 RAD 2033 and RAD 2266

**Corequisite:** RAD 2220 RAD 2277

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is designed to provide an appreciation of the pathophysiological states that can exist within the human body and how these pathologic states relate to the changes which will be seen on radiographic images. A systematic approach to the study of diseases will be used and will include all body systems. Radiologic diagnosis in trauma situations will also be discussed. BILLABLE CONTACT HOURS: 2

**RAD 2140 Radiation Protection/Radiation Biology ..... 3 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** Admission to the Radiologic Technology Program.

**Corequisite:** RAD 2000 RAD 2009 RAD 2011

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is designed to teach the basic principles of radiation safety for patients, personnel and self. Quantities and units of radiation protection, detection instruments, protection devices and state and federal laws governing the use of radiation will be presented. The radiation biology portion of this course will emphasize interactions of radiation with physiological systems, genetics, radiation injury and radiation dosimetry. BILLABLE CONTACT HOURS: 3

**RAD 2199 Clinical Practice II ..... 6 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** RAD 2000 RAD 2009 RAD 2011 RAD 2088 and RAD 2140

**Corequisite:** RAD 2021 RAD 2022 RAD 2110

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This clinical course will be conducted in an assigned clinical facility where the student will receive supervised practice in performing selected procedures. This course will build on the competencies gained in Clinical Practice I. Progress will occur in accordance with the level of student competence. BILLABLE CONTACT HOURS: 9

**RAD 2220 Radiation Seminar ..... 2 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** RAD 2030 RAD 2033 and RAD 2266

**Corequisite:** RAD 2120 RAD 2277

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course will be conducted in the format of a seminar in which the student will have an opportunity to research special imaging devices and procedures and make classroom presentation of the research. Emphasis will be on the most current types of imaging modalities and guest lecturers will participate whenever appropriate. BILLABLE CONTACT HOURS: 2

**RAD 2244 Clinical Practice III ..... 5 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL)

students, placement in ESL 2520.

**Prerequisite:** RAD 2021 RAD 2022 and RAD 2110

**Corequisite:** RAD 2080 RAD 2033

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is a continuation of Clinical Practice I & II. Emphasis is placed on the development of problem solving skills with more complex, multiple approach radiographic procedures. ER & OR experience will be gained and skills will be further developed in the evaluation of radiographic images. Progress in clinical practice will occur in accordance with the level of student competence. BILLABLE CONTACT HOURS: 8

**RAD 2266 Clinical Practice IV .....8 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** RAD 2080 and RAD 2244

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution. Corequisite: RAD 2030, RAD 2033

This course is a continuation of Clinical Practice I, II and III. Skills will be refined in critiquing images and performing complex exams requiring problem solving and/or critical thinking approaches. Experience will be gained with more advanced modalities such as interventional radiography, CT and, MRI. BILLABLE CONTACT HOURS: 11

**RAD 2277 Clinical Practice V .....8 Credit Hours**

**ESL Placement Level:** For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

**Prerequisite:** RAD 2030 RAD 2033 and RAD 2266

**Corequisite:** RAD 2120 RAD 2220 (Required)

**Note:** Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

This course is a continuation of Clinical Practice I, II, III and IV. Skills in critiquing images and performing complex exams will be refined requiring problem solving and/or critical thinking approaches. Students will gain experience with more advanced modalities such as interventional radiography, CT, and MRI. BILLABLE CONTACT HOURS: 11