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**RAD**



TRAIN FOR A CAREER IN

# Radiography

ASSOCIATE OF OCCUPATIONAL  
SCIENCE DEGREE PROGRAM



# Overview

➤ As a Radiologic Technologist you could have a career that helps identify injuries and helps people heal. As the population grows older, there will be an increase in medical conditions, such as breaks and fractures caused by osteoporosis, which may require imaging to diagnose.

At ACC, you will learn through a combination of lectures, interactive and self-discovery activities, problem-based case presentations, small group presentations, mentoring, and hands-on experience in labs and clinical practicums.

As a Radiologic Technologist, you could find employment opportunities in hospitals, doctors' offices, diagnostic laboratories and other healthcare facilities.

|                                |  |
|--------------------------------|--|
| <b>LOCATION</b>                | Los Angeles and Ontario Campuses   |
| <b>DURATION</b>                | Approximately <b>25 months</b>   |
| <b>ENROLLMENT REQUIREMENTS</b> | <p><b>Each program has entrance requirements, including an entrance exam. Some of the admissions requirements include:</b></p> <ul style="list-style-type: none"> <li>• Must be at least 18 or have a parent or guardian's signature</li> <li>• Must have a high school diploma or the equivalent</li> <li>• All applicants must take and pass entrance exams before admission</li> </ul> <p>Be sure to consult with an Admissions Advisor to get all the information on admission into the Radiography program.</p> |
| <b>EQUIPMENT LIST</b>          | <p><b>Here are some of the exciting tools you will get hands-on experience with:</b> Cassettes for digital unit, CR digital reader, densitometer, lead aprons, lead gloves, lead mats, mini c-arm unit, mobile shields, patient shields, penetrometer, phantoms: torso, chest, hand, elbow, foot and knee, portable radiography unit, sandbags, sensitometer, sponges, thyroid shields, X-ray unit: console, table with float top, tube/collimator, and wall unit</p>  |



## Program Outline

### General Education Courses:

| Course #                                    | Course Title                                | Clock Hours | Quarter Credits |
|---|---|-------------|-----------------|
| ANAT200                                     | Introduction to Anatomy and Physiology*     | 20          | 2.0             |
| ANAT200-L                                   | Introduction to Anatomy and Physiology Lab* | 40          | 2.0             |
| ENGL100                                     | Written Communications I*                   | 40          | 4.0             |
| MATH100                                     | College Mathematics I                       | 40          | 4.0             |
| PSYC100                                     | Introduction to Psychology*                 | 40          | 4.0             |
| <b>Subtotal – General Education Courses</b> |   | <b>180</b>  | <b>16.0</b>     |

### Core Radiography and Other Courses:

|  |  |             |              |
|--|--|-------------|--------------|
| CAREER300  | Career Advantage*                              | 30          | 3.0          |
| RAD101   | Introduction to Radiologic Sciences*           | 10          | 1.0          |
| RAD102   | Medical Terminology*                           | 30          | 3.0          |
| RAD103   | Radiographic Physics*                          | 30          | 3.0          |
| RAD104   | Principles of Image Production*                | 70          | 6.0          |
| RAD105   | Patient Care*                                  | 40          | 3.0          |
| RAD106   | Radiographic Positioning I*                    | 60          | 4.0          |
| RAD107   | Principles of Radiation and Radiation Biology* | 40          | 3.0          |
| RAD108   | Radiation Protection*                          | 40          | 3.0          |
| RAD109   | Radiographic Positioning II*                   | 60          | 4.0          |
| RAD110   | Digital Imaging*                               | 20          | 2.0          |
| RAD111   | Law and Ethics in Imaging*                     | 20          | 2.0          |
| RAD112   | Pharmacology/Venipuncture*                     | 30          | 2.0          |
| RAD113   | Radiographic Positioning III*                  | 40          | 3.0          |
| RAD114   | Cross-Sectional Anatomy*                       | 30          | 3.0          |
| RAD115   | Introduction to Computed Tomography*           | 30          | 3.0          |
| RAD116   | Radiology Seminar*                             | 40          | 4.0          |
| RAD201   | Clinical Practicum I                           | 240         | 8.0          |
| RAD202   | Clinical Practicum II                          | 270         | 9.0          |
| RAD203   | Clinical Practicum III                         | 300         | 10.0         |
| RAD204   | Clinical Practicum IV                          | 330         | 11.0         |
| RAD205   | Clinical Practicum V                           | 330         | 11.0         |
| RAD206   | Clinical Practicum VI                          | 390         | 13.0         |
| <b>Subtotal – Core Radiography and other courses</b> |  | <b>2480</b> | <b>114.0</b> |
| <b>Program Total</b>                                 |  | <b>2660</b> | <b>130.0</b> |

\*Courses offered in a blended format, a combination of online and on-ground

ACC's Radiography program provides the required knowledge and skills to become an entry-level Radiologic Technologist.

In this field, you may choose to further your education and become certified in multiple specialty areas with advanced training after completing your degree at ACC. For example, some Radiologic Technologists specialize in mammography where low-dose x-ray systems are used to produce images of the breast.

Certain specialty certifications may not be directly associated with or a part of the ACC curriculum.





## Course Descriptions

### GENERAL EDUCATION COURSES:

#### ANAT200

##### Introduction to Anatomy and Physiology\*

The purpose of this course is to understand the organization and general plan of the body and the importance of how the human body functions.

This includes an introduction to the human body, chemical aspects of the life, cells, tissues, membranes, and the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.

**Corequisite:** ANAT200-L

#### ANAT200-L

##### Introduction to Anatomy and Physiology Lab

The purpose of this laboratory course is to develop an understanding of the organization and general plan of the body, maintaining homeostasis, and the importance of how the human body functions through applied and practical learning. Practical exposure to systems of study will include, but is not limited to: the study of cells and tissues, the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Concepts of development, metabolism, fluid and electrolyte balance, pregnancy, prenatal development, genetics and their impact on human movement and health are included. Laboratory learning activities will include identification of anatomical structures, surface anatomy, and their function and relationship to homeostasis.

**Corequisite:** ANAT200

#### ENGL100

##### Written Communications I\*

This course provides instruction in the process of effective written communication for a variety of formats. It initially focuses on four basic areas of effective writing: unity, specifics, coherence, and grammar. The course will utilize reading, discussion, and personal insight to increase students' capacity to write simple paragraphs, formal essays, reports and research projects. Students will be equipped with techniques that facilitate creative, academic, and professional written communication. Additionally, students will be given library activities to enhance research skills.

**Prerequisite:** None

#### MATH100

##### College Mathematics I

This course will cover mathematical logic, Boolean algebra, set theory, number abstractions, operations and their properties, monomials, polynomials, equations, and inequalities.

**Prerequisite:** None

#### PSYC100

##### Introduction to Psychology\*

This course provides basic psychological concepts such as the nervous system, memory, intelligence and development along with Freudian, humanistic, social, cognitive, and trait theories.

**Prerequisite:** None

### CORE RADIOGRAPHY AND OTHER COURSES:

#### CAREER300

##### Career Advantage\*

Career Advantage is a course designed to prepare students to develop career planning and job search skills. Thorough, relevant job search preparation is required to compete successfully for jobs in today's market. To prepare the student, the course will address six areas: resumes, job search process, networking techniques in a job search, interview planning and preparation, communication, and workplace skills.

**Prerequisite:** None

#### RAD101

##### Introduction to Radiologic Sciences\*

This introductory course outlines the role of a Radiologic Technologist, the history of radiology, hospital and imaging department operations, and exam reimbursement protocol. Students will be introduced to accreditation, certification, professional organizations, and the policies/regulations for the program.

**Prerequisite:** None

**Corequisites:** ANAT200, ANAT200-L, MATH100, RAD102

#### RAD102

##### Medical Terminology\*

This course is an introduction to basic medical imaging terminology and prepares students for more advanced course work in subsequent courses by providing an introduction to general

medical imaging terminology. Students will study the roots, prefixes, suffixes, and abbreviations as well as general terms and their appropriate usage in medical imaging practice.

**Prerequisite:** None

**Corequisites:** ANAT200, ANAT200-L, MATH100, RAD101

#### RAD103

##### Radiographic Physics\*

This course provides the needed concepts of how a radiographic image is produced for diagnostic radiography, fluoroscopy, and mobile radiography. Atomic structure, magnetism, electricity, and the circuitry of the x-ray unit are covered.

**Prerequisites:** ANAT200, ANAT200-L, MATH100, RAD101, RAD102

**Corequisites:** ENGL100, RAD104

#### RAD104

##### Principles of Image Production\*

This course will provide a knowledge base about the factors of x-ray image creation, which will include the equipment accessories and exposure factors that affect the quality of a radiograph. The darkroom area and film-processing procedures will be described. Students will participate in laboratory experiments to enhance the comprehension of image creation concepts.

**Prerequisites:** ANAT200, ANAT200-L, MATH100, RAD101, RAD102

**Corequisites:** ENGL100, RAD103

#### RAD105

##### Patient Care\*

This course will provide the basic concepts and skills that are required for the appropriate standard of care for patients, which include communication, medical history documentation, and patient assistance. Students will demonstrate competence in taking vital signs and patient transfers. The importance of infection control and the technologists' role in medical emergencies will be discussed.

**Prerequisites:** Term 1, Term 2, Term 3

**Corequisites:** RAD109, RAD110, RAD115

#### RAD106

##### Radiographic Positioning I\*

This course will provide the theory and laboratory practice for students to position patients for

radiographic examinations of the respiratory system, abdomen, bony thorax, upper and lower extremities, and related joints. Students will also be taught the use of proper radiation protection, and to analyze and critique the produced diagnostic images.

**Prerequisites:** Term 1, Term 2

**Corequisites:** RAD107, RAD108, PSYC100

### **RAD107**

#### **Principles of Radiation and Radiation Biology\***

This course provides the concepts of the effects of ionizing radiation on living matter. The material will include the cell structure as it relates to ionizing radiation interactions.

**Prerequisites:** Term 1, Term 2

**Corequisites:** PSYC100, RAD106, RAD108

### **RAD108**

#### **Radiation Protection\***

This course will provide the concepts of proper radiation protection protocols for the general public and imaging personnel. Regulatory agencies, dosage, shielding, and radiation protection principles for radiography, mobile radiography, and fluoroscopy will be explained. Students will perform laboratory experiments to enforce the concepts taught.

**Prerequisites:** Term 1, Term 2

**Corequisites:** PSYC100, RAD106, RAD107

### **RAD109**

#### **Radiographic Positioning II\***

This course will provide the theory and laboratory practice for students to position patients for radiographic examinations of the vertebral column, cranium, facial bones, and sinuses. Students will also be taught the use of proper radiation protection, and to analyze and critique the produced diagnostic images.

**Prerequisites:** Term 1, Term 2, Term 3

**Corequisites:** RAD105, RAD110, RAD115

### **RAD110**

#### **Digital Imaging\***

This course provides the base knowledge of computer/digital technology and the practical application of use within the radiologic field.

**Prerequisites:** Term 1, Term 2, Term 3

**Corequisites:** RAD105, RAD109, RAD115

### **RAD111**

#### **Law and Ethics in Imaging\***

This course introduces the medico-legal and medical ethics principles of the healthcare profession specific to the imaging profession.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4

**Corequisites:** RAD113, RAD201

### **RAD112**

#### **Pharmacology/Venipuncture\***

This course provides the basic methods for the administration of contrast material and the basic practices of venipuncture for the Radiologic Technologist. This course meets California Health and Safety Code, Section 106985.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5, Term 6

**Corequisite:** RAD203

### **RAD113**

#### **Radiographic Positioning III\***

This course will provide the theory and laboratory practice for students to position patients for radiographic examinations of the gastrointestinal, genitourinary, and special procedures using contrast material. Students will also be taught the use of proper radiation protection, and to analyze and critique the produced diagnostic images.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4

**Corequisites:** RAD111, RAD201

### **RAD114**

#### **Cross-Sectional Anatomy\***

This course provides the basic principles and applications of cross-sectional anatomy as it relates to the imaging profession. The anatomy and relationships of organs to each other in the thorax, abdomen, and cranium will be covered.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5

**Corequisite:** RAD202

### **RAD115**

#### **Introduction to Computed Tomography\***

This course provides the advanced student with an introduction to the principles and applications of computed tomography (CT) in the imaging department.

**Prerequisites:** Term 1, Term 2, Term 3

**Corequisites:** RAD105, RAD109, RAD110

### **RAD116**

#### **Radiology Seminar\***

This course is a review of the content specifications that are critical for the American Registry of Radiologic Technologists (ARRT) certification examination.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5, Term 6, Term 7, Term 8

**Corequisite:** RAD205

### **RAD201**

#### **Clinical Practicum I**

This course is a practical application of the concurrent theoretical learning. Competency based assignments in thorax, abdomen, extremities, vertebral column, cranium, facial bones, and sinuses to include mobile radiography will be introduced under the supervision of certified Radiologic Technologists.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4

**Corequisites:** RAD111, RAD113

### **RAD202**

#### **Clinical Practicum II**

This course is a practical application of the concurrent theoretical learning. Competency based assignments in thorax, abdomen, and extremities, vertebral column, cranium, facial bones, and sinuses will continue and competency based assignments for gastrointestinal, genitourinary, and special procedures with contrast will be introduced under the supervision of certified Radiologic Technologists.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5

**Corequisite:** RAD114

### **RAD203**

#### **Clinical Practicum III**

This course is a practical application of the concurrent theoretical learning. Competency based assignments in thorax, abdomen, extremities, vertebral column, cranium, facial bones, sinuses, gastrointestinal, genitourinary, and special procedures with contrast will continue and competency-based assignments for mobile radiography, surgical and interventional procedures done under the supervision of certified Radiologic Technologists.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5, Term 6

**Corequisite:** RAD112

### **RAD204**

#### **Clinical Practicum IV**

This course is a practical application of all theoretical learning. Competency based assignments in thorax, abdomen, extremities, vertebral column, cranium, facial bones, sinuses, gastrointestinal, genitourinary and special procedures with contrast, mobile radiography, surgical and interventional procedures will continue under the supervision of certified Radiologic Technologists.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5, Term 6, Term 7

**Corequisite:** CAREER300

### **RAD205**

#### **Clinical Practicum V**

This course is a practical application of all theoretical learning. Competency-based assignments in thorax, abdomen, extremities, vertebral column, cranium, facial bones, sinuses, gastrointestinal, genitourinary and special procedures with contrast, mobile radiography, surgical and interventional procedures will continue as well as clinical assignments for observing Computed Tomography (CT) under the supervision of certified Radiologic Technologists.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5, Term 6, Term 7, Term 8

**Corequisite:** RAD116

### **RAD206**

#### **Clinical Practicum VI**

This course is a practical application of all theoretical learning. Competency-based assignments in thorax, abdomen, extremities, vertebral column, cranium, facial bones, sinuses, gastrointestinal, genitourinary, and special procedures with contrast, mobile radiography, surgical and interventional procedures will continue as well as clinical assignments for observing Computed Tomography (CT) and Magnetic Resonance Imaging (MRI), under the supervision of certified Radiologic Technologists. Clinical rotation for observing additional imaging modalities will be assigned. Additional imaging modalities will include ultrasound, mammography, radiation therapy, and nuclear medicine.

**Prerequisites:** Term 1, Term 2, Term 3, Term 4, Term 5, Term 6, Term 7, Term 8, Term 9

\*Courses offered in a blended format, a combination of online and on-ground

# Radiography

## Accreditation

ACC is institutionally accredited by the **Accrediting Bureau of Health Education Schools (ABHES)**.

ABHES: 7777 Leesburg Pike, Suite 314N, Falls Church, VA 22043 / Phone (703) 917-9503 / Fax (703) 917-4109 / [www.abhes.org](http://www.abhes.org)

The Radiography (Associate of Occupational Science) program at the Ontario campus is approved by the **California Department of Public Health, Radiologic Health Branch (CDPH-RHB)**. The Radiography (Associate of Occupational Science) program at the Los Angeles campus is in the process of seeking approval by the **California Department of Public Health, Radiologic Health Branch (CDPH-RHB)**. **CDPH-RHB**: 1500 Capitol Avenue, 5th Floor, MS 7610, Sacramento, CA 95814-5006 / Phone: (916) 327-5106 / Fax: (916) 440-7999 / [www.cdph.ca.gov](http://www.cdph.ca.gov)

| Campus Locations   | Ontario                | Los Angeles  |
|--|------------------------|--|
| <b>ACCREDITING BUREAU OF HEALTH EDUCATION SCHOOLS (ABHES)</b>  |                        |  |
| <b>Retention Rates</b>   |                        |  |
| Based on the calculation required by ACC's accrediting body, ABHES. ABHES defines retention rate as the number of graduates plus students who enrolled as of June 30, 2018 divided by the number of students who were in school from July 1, 2016 to June 30, 2017 and were still enrolled as of July 1, 2017 plus new starts during the reporting period and students who reentered between July 1, 2017 and June 30, 2018.   | 94%                    | New Program*   |
| <b>Placement Rates</b>   |                        |  |
| Based on the calculation required by ACC's accrediting body, ABHES. ABHES defines placement rates as the number of graduates who complete the program during the reporting period (July 1, 2017-June 30, 2018) who are graduates who were available for employment and found a job in their field of training.   | 76%                    | New Program*   |
| <b>CALIFORNIA BUREAU FOR PRIVATE POSTSECONDARY EDUCATION (BPPE)</b>  |                        |  |
| <b>On-time Completion Rates</b>  |                        |  |
| The number of students who completed the program within 100% of the published program length within 2017 divided by the number of students who began the program who were scheduled to complete the program within 100% of the published program length within 2017 and excludes all students who canceled during the cancellation period, minus the number of students who have died, been incarcerated, or been called to active military duty.  | 65%                    | New Program*   |
| <b>Placement Rates</b>   |                        |  |
| The number of 2017 graduates gainfully employed in the field divided by the number of graduates available for employment. Graduates employed in the field means graduates who beginning within six months after a student completes the applicable educational program are gainfully employed, whose employment has been reported, and for whom the institution has documented verification of 35 days employment. For occupations for which the state requires passing an examination, the six months' period begins after the announcement of the examination results for the first examination available after a student completes an applicable educational program. | 25%                    | New Program*   |
| <b>Program Costs</b>   |                        |  |
| Includes tuition and fees for the entire program, and assumes normal completion. Tuition and Fees are subject to change.   | \$67,025               | \$67,025   |
| <b>Licensure Passage Rate</b>  |                        |  |
| The number of graduates who passed the exam divided by the number of graduates who took the reported licensing exam.   | 84%                    | New Program*   |
| <b>O*Net Occupation Titles</b>   |                        |  |
| Computed Tomography Technologist (CT Technologist), MRI Technologist (Magnetic Resonance Imaging Technologist), Mammographer, Mammography Technologist, Radiographer, Radiologic Technologist (RT), Radiological Technologist, Radiology Technologist, Staff Technologist, X-Ray Technologist (X-Ray Tech)   | SOC Code<br>29-2034.00 | Links to Occupational Profiles on O*Net<br><a href="http://www.onetonline.org/link/summary/29-2034.00">http://www.onetonline.org/link/summary/29-2034.00</a> |
| *New Program This is a new program that has yet to have a graduate or students available for employment. To obtain a list of the objective sources of information used to substantiate the salary disclosures; please refer to the California Employment Development Department website at: <a href="http://www.labormarketinfo.edd.ca.gov/occguides/Search.asp">http://www.labormarketinfo.edd.ca.gov/occguides/Search.asp</a> . ACC cannot guarantee employment. Programs lengths vary by schedule and session.  |                        |  |



## Start Your Change Today

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