



INSTRUCTIONAL PACKAGE

RAD 115

Radiographic Imaging II

Effective Term

Fall 2025/Spring 2026/Summer 2026

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Part I: Course Information

Effective Term: Fall 2025/Spring 2026/Summer 2026

COURSE PREFIX: RAD 115

COURSE TITLE: Radiographic Imaging II

CONTACT HOURS: 3

CREDIT HOURS: 3

RATIONALE FOR THE COURSE:

Students' need to understand the basic physics, specialized equipment and procedures needed for the production of x rays and acquisition of an image. Students will learn and understand the X-ray machine operation in regards to technical factors and image quality

COURSE DESCRIPTION:

This course continues a detailed study of primary and secondary influencing factors and accessory equipment related to imaging. It is a continuation of imaging and exposure principles covering concepts that include processing, the basic fundamentals of radiologic physics, the atom, EM radiation, electricity, magnetism, electromagnetism and the X-Ray imaging system including mammographic units.

PREREQUISITES/CO-REQUISITES: RAD 110

REQUIRED MATERIALS:

Please visit the [BOOKSTORE](#) online site for most current textbook information.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

Textbooks: **Radiologic Science for Technologists**, Stewart Bushong, 12th Edition, Elsevier publisher.

ISBN: 978-0-323-66134-8

Radiologic Science for Technologist Workbook, Stewart Bushong, 12th Edition, Elsevier publisher. ISBN: 978-0-323-70973-6

Recommended Textbook:

Essentials of Radiologic Science Robert Fosbinder/Denise Orth, 2nd Edition, Wolters Kluwer publisher - ISBN: 978-149631727-8

ADDITIONAL REQUIREMENTS: Calculator

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials.

Access to myHGTC portal for student self-services.

College email access – this is the college's primary official form of communication.

CLASSROOM ETIQUETTE:

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

As a group we are with each other for a long time and sometimes with familiarity we can become too comfortable with one another and we can display inappropriate behavior. Occasionally, we do not realize our behavior is not appropriate for the classroom setting. Although we have a lot of policy and procedures already to follow, here is a review of proper classroom etiquette as adopted from Dr. Nardo of Ogelthorpe University. Demonstrating the following qualities **show respect for your professor and fellow students**. It also upholds the integrity of the classroom.

1. Arrive on time to class.
2. Bring the materials needed for class.
3. **Turn off cell phones and texting devices in class.** Students' texting or using their cell phones in class will be dismissed from class and will be charged with an absence. A written warning will be issued on the first offense and a second offense will result in a final written warning.
4. Use laptops/computers as it relates to classroom activities.
5. Use your HGTC college email account/address for all email correspondence. When emailing Dr. Gleasman also use **douglas.gleasman@hgtc.edu**
6. **Be attentive in class.**
7. Dress appropriately.
8. Stay the entire class.
9. **Do the work and avoid excuses/complaints.**
10. Use professional language and avoid sarcastic and inappropriate comments. You are entering the medical profession and should act and **speak in mature and respectful manor utilizing medical terminology.**
11. Take your own notes and **do your own work.**
12. Avoid asking **inappropriate** or **thoughtless** questions.

Abide by the honor and conduct code of HGTC as outlined in the College Catalog.

NETIQUETTE: is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

1. Understand the atomic and molecular nature of matter, energy and ionizing radiation. Review the discovery and development and basic radiation protection in of modern radiology.
2. Solve basic physics and math problems associated with electricity and magnetism.
3. Understand and use the basic units of energy, work, power and heat. Recognize and use the SI units of radiologic measure.
4. Identify the components of the x-ray imaging system operating console: Auto-transformer, Exposure timers, rectifier, and high voltage generator.
5. Solve basic physics and math problems associated with electricity and magnetism.
6. Distinguish the difference between High-Frequency, Capacitor Discharge and Falling Load Generators.
6. Comprehend elementary facts about other imaging modalities, specifically nuclear medicine and mammography.
7. Interpret and summarize technical aspects of imaging equipment such as Voltage, Amperage, Rectification, Voltage Ripple, Step-up and Step-down Transformers and Wave Rectification.
9. Compare the basic electrical components of an x -ray system, single phase, three phase and high frequency generators
10. Relate the generators electrical waveform to its output of energy.
11. Compare basic physical differences b/w routine radiographic equipment and mammography units. Distinguish how Mammography soft tissue images are produced in relation to tissue interactions.

****Students – please refer to the Instructor’s Course Information sheet for specific information on assessments and due dates.***

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*:

Students’ performance will be assessed, and the weight associated with the various measures/artifacts are listed below.

EVALUATION*

Tests	50%
Assignments	5%
Quizzes	20%
Final Exam	25%
	100%

****Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.***

GRADING SYSTEM:

State the College's or departmental grading system as delineated in the Catalog. Please note the College adheres to a 10-point grading scale A = 100 – 90, B = 89- 80, C = 79 – 70, D = 69 – 60, F = 59 and below. You must have your Dean's approval if changes in the scale are made.

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the [academic calendar](#) for deadlines for add/drop. You must attend at least one meeting of all your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Methods of Instruction: Lecture, laboratory experiments, discussion, note taking, AV materials, problem solving and class handouts.

Types of Questions: Questions will be based on knowledge, comprehension, application, analysis and evaluation skills. Most questions will be in a multiple-choice format, although short answer, true and false, matching and diagramming may be incorporated. **Questions are designed to promote critical thinking** and, in most cases, will require more than memorization to obtain the correct answer. Unit Exams, Final Exam, Homework assignments, Quizzes and Lab Assignments comprise your assigned final grade. **If a student receives a grade below 80% on any Unit Test or 70% on a Quiz, it will be MANDATORY for the student contact the SSTC to schedule an appointment with the radiology tutor to review the material on the test or quiz.** If the radiology tutor is unavailable, the student will be required to make an appointment with the course instructor. All examination and quiz grades will be posted on D2L after everyone in the class has completed the exam or turned in the assignment and the instructor has had ample time to perform an assessment outcome. The time frame may vary depending on the type of assignment or examination.

Students' performance will be assessed, and the weight associated with the various measures/artifacts are listed below. Final grades will be weighted/calculated based on the following:

<u>Grading scale:</u>	92 - 100	A
	83 – 91	B
	74 – 82	C
	65 - 73	D
	64 and below	F

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the [academic calendar](#) for deadlines for add/drop. You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student, and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

Students at HGTC are responsible for all course work and assignments. Attendance is a must. In this course a student **may not exceed more than 3 absences** as the ***Radiography Program requires a 90% attendance.*** A verbal warning will result after the first absence. A written warning results after your second absence. A third absence results in a final written warning. Any further absences are grounds for dismissal. If a student is absent on the day of a test or quiz, the student must notify the instructor within 24 hours of the date and time of the scheduled makeup exam. The student will be responsible for contacting the testing center on the Grand

Strand campus to make up the test prior to next schedule class. Maximum score on make-up exams will be 90%. A student who calls in absent a second time on a test day must have a valid written, dated excuse for the absence faxed to the HGTC email of the instructor directly from the doctor's office/party responsible for the absence in order to make up the test/quiz. Failure to do so will result in a grade of zero for that test/quiz.

Tardies- (3) tardies = (1) absence with a verbal warning, (4) = written warning, (5)th final written warning. A (6)th offense will result in dismissal from the program.

Part V: Student Resources



THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

The SSTC offers to all students the following **free** resources:

1. Academic tutors for most subject areas, Writing Center support, and Academic Coaching for college success skills.
2. Online tutoring and academic support resources.
3. Professional and interpersonal communication coaching in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring or coaching, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the SSTC [Online Resource Center](#) to access on-demand resources.



STUDENT INFORMATION CENTER: TECH Central

TECH Central offers to all students the following **free** resources:

1. Getting around HGTC: General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. In-person and remote assistance are available for Desire2Learn, Student Portal, Degree Works, and Office 365.
3. Chat with our staff on TECH Talk, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-

8552. Visit the Tech Central website for more information. Live Chat and Center locations are posted on the website. Or please call (843) 349 – TECH (8324), Option # 1.



HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries have librarians and staff who can aid with research, computers to support academic research and related school-work, and individual/group study rooms. Printing is available as well at each location. Visit the [Library](#) website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L.
- Test administered in writing on paper.
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, tests may have time limits and/or require a proctor.

Testing candidates must make their appointments 24 hours in advance.

Students must bring a physical ID in order to take a test.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

DISABILITY SERVICES:

HGTC is committed to providing an accessible environment for students with disabilities. Students seeking accommodations are encouraged to visit HGTC's [Accessibility and Disability Service webpage](#) for detailed information.

It is the student's responsibility to self-identify as needing accommodations and to provide appropriate documentation. Once documentation is submitted, the student will participate in an interactive process with Accessibility and Disability Services staff to determine reasonable accommodations. Students may begin the accommodations process at any

time; however, accommodations are **not retroactive** and will only be applied from the point at which they are approved. Students must contact the office **each semester** to renew their accommodations.

For assistance, please contact the Accessibility and Disability Services team at disabilityservices@hgtc.edu or 843-796-8818 (call or text).

COUNSELING SERVICES:

HGTC Counseling Services strives to optimize student success through managing personal and academic concerns that may interfere with achieving educational goals. Staff are available to every student for assistance and guidance on personal matters, academic concerns and other areas of concern. HGTC offers free in-person and telehealth counseling services to students. For more information about counseling services, please reach out to counseling@hgtc.edu or visit the website the [Counseling Services webpage](#).

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the [Pregnancy Intake Form](#)

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Our sincere commitment to both effective business management and equitable treatment of our employees requires that we present this Policy Statement as an embodiment of that commitment to the fullest.

Discrimination is conduct that includes unjust or prejudicial treatment based upon an individual's sex, race/color, religion, national origin, age, disability, service in the uniformed services (as defined in state and federal law), veteran status, political ideas, marital or family status, pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation, genetic information, genetic identity, gender expression, or sexual orientation that excludes an individual from participation in, denies the individual the benefits of, treats the individual differently, or otherwise adversely affects a term or condition of a person's working or learning environment. This includes failing to provide

reasonable accommodation, consistent with state and federal law, to persons with disabilities.

INQUIRIES REGARDING THE NON-DISCRIMINATION/TITLE IX POLICIES:

Student and prospective student inquiries concerning Section 504, Title II, Title VII, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.

Dr. Melissa Batten, VP Student Affairs

Title IX, Section 504, and Title II Coordinator

Building 1100, Room 107A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5228

Melissa.Batten@hgtc.edu

Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.

Jacquelyne Snyder, VP Human Resources

Affirmative Action/Equal Opportunity Officer and Title IX Coordinator

Building 200, Room 205B, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5212

Jacquelyne.Snyder@hgtc.edu

TITLE IX REQUIREMENTS:

Title IX of the Education Amendments of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination.

HGTC prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking and will provide students, faculty, and staff with necessary information regarding prevention, policies, procedures, and resources.

Any student, or other member of the college community, who believes that they have been a victim of sexual harassment, domestic violence, dating violence, sexual assault, or stalking may file a report with the college's Title IX Coordinator or campus law enforcement*.

*Faculty and Staff are required to report these incidents to the Title IX Coordinator when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

Student and prospective student inquiries concerning Title IX and its application to the College or any student decision may be directed to the Vice President for Student Affairs.

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PREGNANCY ACCOMMODATIONS

Under Title IX, colleges must not exclude a pregnant student from participating in any part of an educational program. Horry-Georgetown Technical College is committed to ensuring that pregnant students receive reasonable accommodations to ensure access to our educational programs.

Students should advise the Title IX Coordinator of a potential need for accommodations as soon as they know they are pregnant. It is extremely important that communication between student, instructors, and the Title IX Coordinator begin as soon as possible. Each situation is unique and will be addressed individually.

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the *Pregnancy Intake Form* that can be found [here](#).