



TENTATIVE --- SUBJECT TO CHANGE

**RADT 1075 Radiographic Imaging
HYBRID COURSE SYLLABUS
Fall Semester 2021 (202212)**

COURSE INFORMATION

Credit Hours/Minutes: 4 / 3750

Campus/Class Location: Vidalia / Gillis Building / Room 741

Class Meets: 40% Hybrid / 60% face to face on Tuesday 8:00 AM-12:30 PM

Course Reference Number (CRN): 20258

Preferred Method of Contact: EMAIL/ Microsoft TEAMS

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Tara W. Powell, M.B.A., R.T. (R) (M) (CT), RDMS

Office Location: 714

Office Hours: Mondays & Wednesdays 1:00 PM – 5:00 PM by appointment

Email Address: tpowell@southeasterntech.edu

Phone: 912-538-3152

Fax Number: 912-538-3106

Tutoring Hours: by appointment

This course is taught in a hybrid format. Hybrid classes require students to complete a portion of the required contact hours traditionally by attending classes on campus while completing the remaining portion online at the student's convenience with respect to the instructor's requirements.

SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook](https://catalog.southeasterntech.edu/college-catalog/downloads/current.pdf) (<https://catalog.southeasterntech.edu/college-catalog/downloads/current.pdf>)

REQUIRED TEXT

Fauber, T. (2021). *Radiographic imaging & exposure*, 6th edition. Elsevier

ISBN: 9780323661393

Rad Tech Boot Camp, Clover Learning. Online academic license purchased through STC Book store.

REQUIRED SUPPLIES & SOFTWARE

Pen, pencil, highlighter, notebook, paper, computer access, earphones (for Rad Tech Boot Camp Unit Videos),

calculator, Rad Tech Boot Camp, Clover Learning. Online academic license purchased through STC Book store.
Dosimeter

Dosimeter fees are due as outlined in the Rad Tech Orientation and Radiologic Technology Handbook. If fees are not paid by due date, the student will not be allowed to perform course laboratory. Laboratories missed will not be made up.

Laptop computers are REQUIRED with the following suggested specification:

Processor i5 or i7

Memory 8GB or higher

Hard drive 250GB or larger

DVD Drive either internal or external

Webcam with microphone

Internet speed of 5 Mbps is required (10 Mbps or more is recommended) Test your internet speed using speed test (<http://www.speedtest.net/>)

MOBILE HOTSPOTS ARE NOT ALLOWED

Note: Although students can use their smart phones and tablets to access their online course(s), exams, discussions, assignments, and other graded activities should be performed on a personal computer. Neither Blackboard nor Georgia Virtual Technical Connection (GVTC) provide technical support for issues relating to the use of a smart phone or tablet, so students are advised to not rely on these devices to take an online course.

Students should not share login credentials with others and should change passwords periodically to maintain security.

COURSE DESCRIPTION

The content of this course introduces factors that govern and influence the production of the radiographic image using digital radiographic equipment found in diagnostic radiology. Emphasis will be placed on knowledge and techniques required to produce high-quality diagnostic radiographic images. Topics include Image quality (radiographic IR exposure; radiographic contrast; spatial resolution; distortion; grids; image receptors and holders; processing considerations; image acquisition; image analysis; image artifacts; and guidelines for selecting exposure factors and evaluating images within a digital system. Laboratory experiences will demonstrate applications of theoretical principles and concepts.

MAJOR COURSE COMPETENCIES

1. Principles of Imaging and Image Quality
2. Criteria for Image Evaluation
3. Image Acquisition and Processing
4. Exposure Indicator Determination
5. Imaging Systems

PREREQUISITE(S)

Program Admission

COREQUISITE(S)

None

COURSE OUTLINE

1.0 Principles of Imaging and Image Quality

	Description	Learning Domain	Level of Learning
1.1	Discuss practical considerations in setting standards for acceptable image quality.	Cognitive	Comprehension
1.2	Describe receptor exposure, contrast, spatial resolution, and distortion.	Cognitive	Knowledge
1.3	Identify and analyze the relationships of factors that control and affect receptor exposure.	Cognitive	Analysis
1.4	Identify and analyze the relationship of factors that control and affect contrast	Cognitive	Analysis
1.5	Identify and analyze the relationships of factors that control and affect spatial resolution.	Cognitive	Analysis
1.6	Identify and analyze the relationship of factors that control and affect distortion.	Cognitive	Analysis
1.7	Differentiate between size and shape distortion.	Cognitive	Analysis
1.8	Perform calculations to determine image magnification and percent magnification.	Psychomotor	Guided Response
1.9	Apply conversion factors for changes in the following areas: distance (inverse square law), grid, mAs reciprocity, exposure maintenance and the 15 percent rule.	Cognitive	Application
1.10	Describe the basic principles of digital radiography and the terminology associated with digital imaging systems.	Cognitive	Comprehension
1.11	Define digital imaging characteristics of receptor exposure, contrast, spatial resolution, and distortion.	Cognitive	Knowledge
1.12	Describe digital imaging characteristics related to spatial resolution to include pixel size, matrix size, bit depth, contrast resolution, sampling frequency, and DEL size.	Cognitive	Comprehension
1.13	Describe digital imaging characteristics related to image signal, to include dynamic range, quantum mottle (noise), signal-to-noise ratio and contrast-to-noise ratio.	Cognitive	Comprehension
1.14	Define window level and window width and how they translate into displayed image brightness and gray scale.	Cognitive	Knowledge
1.15	Define scattered/secondary radiation and the effects of scattered radiation on the image.	Cognitive	Knowledge
1.16	Identify and compare grid types and identify the most appropriate grid for a given clinical situation.	Cognitive	Knowledge
1.17	Interpret grid efficiency in terms of grid ratio and frequency.	Cognitive	Evaluation
1.18	Compare short dimension vs. long dimension grids.	Cognitive	Analysis

	Description	Learning Domain	Level of Learning
1.19	Define grid cut off, summarize factors affecting grid cut off, and describe the various grid artifacts.	Cognitive	Knowledge

2.0 Criteria for Image Evaluation

	Description	Learning Domain	Level of Learning
2.1	Identify the criteria for image evaluation.	Cognitive	Knowledge
2.2	Apply problem-solving process for evaluating images for adequate density/brightness, contrast, recorded detail/spatial resolution, and acceptable limits of distortion.	Cognitive	Application
2.3	Identify factors relating to image identification and documentation of ordered exam(s).	Cognitive	Knowledge
2.4	Evaluate images to determine the appropriate use of beam restriction.	Cognitive	Evaluation
2.5	Identify common equipment malfunctions that affect image quality, and corrective action.	Cognitive	Knowledge
2.6	Differentiate between technical factor problems, procedural factor problems and equipment malfunctions.	Cognitive	Analysis
2.7	Critique images for appropriate technical, procedural and pathologic factors, and employ corrective actions if necessary.	Cognitive	Evaluation

3.0 Image Acquisition and Processing

	Description	Learning Domain	Level of Learning
3.1	Describe the various types of digital receptors (Computed Radiography and Digital Radiography, including direct digital and indirect digital capture)	Cognitive	Knowledge
3.2	Discuss the fundamentals of digital radiography, distinguishing between cassette-based systems and cassette-less systems.	Cognitive	Comprehension
3.3	Compare the image acquisition and extraction of cassette-based vs. cassette less systems, including detector mechanism, initial image processing, histogram analysis, automatic rescaling, look up tables and exposure index determination.	Cognitive	Synthesis
3.4	Compare detector properties and evaluation criteria such as DQE (detective quantum efficiency), exposure index, and spatial resolution.	Cognitive	Synthesis
3.5	Describe digital receptors, to include Amorphous selenium/Thin film transistor (TFT) arrays, Cesium iodide/amorphous silicon thin film transistor (TFT) arrays, Charged coupled device (CCD) and complementary metal oxide semiconductor (CMOS) systems and Photostimulable phosphor (PSP) plates.	Cognitive	Knowledge
3.6	Compare the advantages and limits of each digital system.	Cognitive	Analysis

	Description	Learning Domain	Level of Learning
3.7	Describe the response of digital detectors to exposure variations.	Cognitive	Knowledge
3.8	Describe the response of PSP systems to background and scatter radiation.	Cognitive	Knowledge
3.9	Identify grid use errors associated with grid cut off and Moiré effect.	Cognitive	Knowledge
3.10	Identify common limitations and technical problems encountered when using PSP systems.	Cognitive	Knowledge
3.11	Employ appropriate beam/part/receptor alignment to avoid histogram analysis errors.	Cognitive	Knowledge
3.12	Describe the selection of technical factors and technical factor systems to assure appropriate receptor exposure levels for digital detectors.	Cognitive	Knowledge
3.13	Describe the conditions that cause quantum mottle in a digital image.	Cognitive	Knowledge
3.14	Formulate a procedure or process to minimize histogram analysis and rescaling errors.	Cognitive	Application
3.15	Describe the histogram and the process of histogram analysis as it relates to automatic rescaling and determining an exposure indicator.	Cognitive	Knowledge
3.16	Relate the receptor exposure indicator values to technical factors, system calibration, part/beam/plate alignment and patient exposure.	Cognitive	Analysis

4.0 Exposure Indicator Determination

	Description	Learning Domain	Level of Learning
4.1	Describe the difference between dose area product (DAP) measured with a flat panel system vs. the vendor specific exposure indicators for a PSP-based system.	Cognitive	Knowledge
4.2	Identify optimal value ranges for exposure indicators and relationship to patient exposure.	Cognitive	Knowledge
4.3	Describe the exposure precautions and limitations associated with PSP-based systems.	Cognitive	Knowledge
4.4	Examine the potential impact of digital radiographic systems on patient exposure and methods of practicing the as low as reasonably achievable (ALARA) concept with digital systems.	Cognitive	Synthesis

5.0 Imaging Systems

	Description	Learning Domain	Level of Learning
5.1	Describe the components of Picture Archival and Communications System (PACS) and its function.	Cognitive	Knowledge

	Description	Learning Domain	Level of Learning
5.2	Identify modality types that may be incorporated into a PACS.	Cognitive	Knowledge
5.3	Describe the components of the PACS, RIS, HIS, and the DICOM standard.	Cognitive	Knowledge
5.4	Describe data flow for a DICOM image from an imaging modality to a PACS.	Cognitive	Knowledge
5.5	Identify common problems associated with retrieving/viewing images within a PACS.	Cognitive	Knowledge
5.6	Identify the primary uses of the diagnostic display workstation and clinical display workstation.	Cognitive	Knowledge
5.7	Describe patient benefits gained through the use of teleradiology.	Cognitive	Knowledge
5.8	Describe HIPAA concerns with electronic information.	Cognitive	Knowledge
5.9	Discuss and define digital image processing, to include equalization, smoothing, electronic masking, edge enhancement, grayscale (bit depth, look up table - LUT) quantization, image stitching, VOI and ROI.	Cognitive	Comprehension

GENERAL EDUCATION CORE COMPETENCIES

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

STUDENT REQUIREMENTS (HYBRID)

Prior to the discussion of each chapter in class, the student is expected to complete the following:

1. Read the assigned chapter.
2. Know the answers to the review questions at the end of each chapter.
3. Know the definitions of the key terms listed at the beginning of each chapter.
4. Complete all Rad Tech Boot Camp activities for assigned chapter.

The course is comprised of lecture of the course information, laboratory activities, and Rad Tech Boot Camp online activities. Rad Tech Boot Camp Modules and Rad Math Boot Camp online activities will be given to assist in reviewing course materials. Students are expected to perform any additional preparation for tests on their own. Completed Laboratory activities and/or Rad Tech Boot Camp online are due when the corresponding chapter test is given. No study guides will be given, and no grades will be dropped in this course.

The Rad Tech Boot Camp and Rad Math Boot Camp will be the students "ticket to test". All Rad Tech Boot Camp and Rad Math Boot Camp assignments must be completed by each Monday evening by midnight with a minimum score of 80% on all quizzes and/or module assessments before taking the test on the material the following Tuesday. If the student does not complete the assignments with the minimum score of 80% prior to the test the student, will not be eligible to take the test and will be given a zero for the corresponding chapter test.

SPECIAL NOTE: During this class, occurrences may be issued for failure to meet classroom/lab requirements (tardiness, uncompleted/late work, etc.).

Regardless of vaccination status, masks or face coverings must be worn at all times while in a classroom or lab of Southeastern Technical College. This measure is being implemented to reduce COVID-19 related health risks for everyone engaged in the educational process. Masks or face coverings must be worn over the nose and mouth, in accordance with the Centers for Disease Control and Prevention (CDC). A student's refusal to wear a mask or face covering will be considered a classroom disruption and the student may be asked to leave campus and/or receive further discipline.

COVID-19 SIGNS AND SYMPTOMS

We encourage individuals to monitor for the signs and symptoms of COVID-19 prior to coming on campus.

If you have experienced the symptoms listed below or have a body temperature 100.4°F or higher, we encourage you to self-quarantine at home and contact a primary care physician's office, local urgent care facility, or health department for further direction. Please notify your instructor(s) by email and do not come on campus for any reason.

COVID-19 Key Symptoms
Fever or felt feverish
Chills
Shortness of breath or difficulty breathing (not attributed to any other health condition)
Cough: new or worsening, not attributed to another health condition
Fatigue
Muscle or body aches
Headache
New loss of taste or smell
Sore throat (not attributed to any other health condition)
Congestion or runny nose (not attributed to any other health condition)
Nausea or vomiting
Diarrhea
In the past 14 days, if you:
Have had close contact with or are caring for an individual diagnosed with COVID-19 at home (not in healthcare setting), please do not come on campus and contact your instructor (s).

COVID-19 SELF-REPORTING REQUIREMENT

Students, regardless of vaccination status, who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using <https://www.southeasterntech.edu/covid-19/>. Report all positive cases of COVID-19 to your instructor and [Stephannie Waters](#), Exposure Control Coordinator,

swaters@southeasterntech.edu, 912-538-3195.

TESTING POLICY

Tests/exams will be given for chapter(s) assigned and will be timed allowing 1.5 minute per question. In addition, quizzes are subject to be given on any given day over any assigned material (i.e., reading, worksheets, Rad Tech Boot Camp, etc.). Any quizzes missed due to student absence will not be made up. A Chapter(s) test average of 70% or above is required to take the final exam.

No assignment opportunities will be given for extra credit. Any chapter(s) test/exam grade will be entered as is to the nearest 10th. No scores will be rounded (up or down). *For example: exam has 60 questions, and each question will be worth 1.66 pts.* The student correctly answers 52 questions out of 60 total questions. 52 correct answers x 1.66 = 86.32. The grade will be recorded as 86.3. This rule applies to every grade issued during the semester. All final averages will be recorded as is (i.e., a 69.9 is a 69.9).

Prior to beginning any test, all students are required to place all textbooks and personal property underneath the desk. Students may be separated in different classrooms, assigned different seats, and/or provided desk dividers during testing as directed by the instructor. Talking is not allowed once the test/exam begins. Once the test/exam begins, students will not be allowed to exit the classroom until the exam is completed and/or turned into the instructor.

Smart watches, cell phones, or any other electronic devices will not be allowed during exams. Students found with their cell phone or any other personal communication device during the exam will be considered cheating and given a zero for the test/exam.

Once a student completes his/her exam, he/she will turn the exam paper over and remain at his/her desk quietly until everyone has finished with the exam. This will prevent other students from being distracted as students exit. Then, the instructor will take up all test/exam papers.

Testing for the course is scheduled to be done on-campus, in-person but may be moved to an online format as needed for Covid-19. See below for specific testing guidelines.

Respondus Online Testing Guidelines (if necessary to go to an online testing format)

Due to possible campus closure in response to the COVID 19 pandemic the Radiologic Technology program is making an exception in offering online/offsite testing through Blackboard. The programs will use Respondus Monitor through Blackboard to administer and proctor the examinations.

The following are faculty expectations of the student during the online/offsite testing process.

1. The student will download Respondus to their devices from the STC website.
2. The student will log in at least 15 minutes before the exam is scheduled to begin. Exams times will be found on the lesson plan of the course syllabus.
3. The student will secure an area with a minimum internet speed of 5 Mbps. Test your internet speed using speed test (<http://www.speedtest.net/>)
4. Mobile Hotspots are **not** to be used since as they are not considered a reliable internet source.

5. The student will perform all required Respondus checks prior to being allowed to test. (Examples- Webcam Check and Facial Recognition Check)
6. The student will have in place a monitoring camera as Respondus Monitor will be used to ensure test integrity. The student will take a complete, 360-degree scan of the testing environment, showing floor, desk, and walls.
7. During the exam, students will be both audio and visually recorded.
8. The student exams will be timed, just like in the face-to-face setting.
9. The student will not use any books, notes, or third-party supplies during the test. The desk/table will be cleared of additional items. There will be no paper or writing materials allowed out.
10. The student has reviewed the Dishonesty Policy and Procedure for Academic Dishonesty as noted on the course syllabus.
11. The student will not be allowed to use smart watches, cell phones, tablets, calculators, earphones, or other electronic devices during the exam.
12. The student will not wear a hat or any items that obscures the face or eyes while testing.
13. The student will keep the face in clear view of the camera while testing.
14. The student will have all background noise silenced while testing.
15. The student will have no other operating functions open on the computer during testing. (i.e.: Word, Excel, PowerPoint)
16. The student will be prohibited from taking Screen shots or recording of the exam in anyway.
17. The exam will not have any calculation problems so no extra paper, pencil or calculator will be needed.
18. Question rationales will not be available at this time for test security. Instructors will be available later for missed content review. Students are encouraged to set up individualized meetings with their faculty to discuss specific content areas which were missed.
19. After the exam, the final grade will not be issued or posted to the Blackboard gradebook until the validity of the test is reviewed and approved by the instructor(s). This includes reviewing the Respondus Monitor report and the video recording of the testing session. At any time, the validity is questionable, the student may be required to take a different version of the examination.
20. If a student believes a test question needs to be challenged, the student must email their instructor the evidence-based rationale for consideration. This request must be received via email within 24 hours of the examination.

ONLINE TESTING INSTRUCTIONS WITH RESPONDUS LOCKDOWN BROWSER WITH MONITOR

Before you can take a test/exam online for this class, you will need to install the Respondus Lockdown Browser with Monitor. You will go to your MySTC, click the Respondus Lockdown Browser with Monitor. Click to download and then install. This takes less than 5 minutes.

Accessing the LockDown Browser with Monitor Using non-STC Computers

Students using laptops or not on campus who are taking an online exam using the Respondus LockDown Browser with Monitor can still access the browser icon on the desktop if they log in to mySTC. Follow these steps to access mySTC:

1. Access the STC website.

2. Click mySTC at the top of the screen.
3. Double click the Respondus LockDown Browser with Monitor icon to download the product to their pc/laptop. Once downloaded, double click to install the Respondus LockDown Browser with Monitor and following the onscreen prompts: **Note:** this link is unique to STC and should be used to access the lockdown browser install screen. You only need to install one time per computer.
4. On the install screen, click the *Do you need the Mac version?* link if you are using a Mac computer.
5. Click the Install Now button and follow the onscreen prompts.
6. Once installed, double click the Lockdown browser icon on the desktop of your PC/laptop to begin the test in Blackboard.
7. Key Blackboard username and password as usual.
8. Access course as usual by clicking the course title. Access exam from the Exam Folder on the left menu.
 - a. Students - click the test link and begin the exam.
 - b. The Browser security will be enabled, you will not be able to print, move away from the test, copy the test, or print screen.
9. To resume operations using a standard browser (Chrome, Firefox, etc.), students should click the X on the Respondus LockDown Browser tab.

Accessing the LockDown Browser Using Southeastern Technical College (STC) Computers

1. Login to the STC computer.
2. Double click the Respondus LockDown Browser icon (see picture above for example) on the desktop. (This icon appears on the student side only.) The lockdown browser will automatically connect to Blackboard.
3. Key Blackboard username and password as usual.
4. Access course as usual.
5. Access exam from content area as usual. Students can then take the exam as usual but with the Respondus LockDown Browser security enabled.
6. To resume operations using a standard browser (Chrome, Firefox, etc.), students should click the X on the Respondus LockDown Browser tab.

FINAL EXAM: A Chapter(s) test average of 70% or above is required to take the final exam. A final exam will be given to students and will be a 50-question comprehensive exam.

MAKEUP POLICY

(Tests, quizzes, homework, Rad Tech Boot Camp assignments, laboratories):

A grade of zero will be assigned for any missed assignment regardless of the reason. No quizzes or online assignments will be made up. No late homework/online assignments will be accepted. Additionally, there is no makeup for any missed laboratories performed in this course.

CELL PHONE POLICY

Cell phones are not to be utilized in the classroom or laboratory unless being used as an academic tool during classroom activities that are approved by the instructor. Students utilizing their cellphone for non-academic purposes during class or laboratory (texting, talking on or, emailing, etc.), will receive a zero on their next

chapter test grade. In the event of an emergency, such as a sick family member or sick child, calls should be directed to the front desk at 912-538-3117 where a message can be left.

HYBRID ATTENDANCE

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of "F" (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Attendance is counted from the first scheduled class meeting of each semester. To receive credit for a course a student must attend at least 90% of the scheduled instructional time. All work missed due to tardiness or absences must be made up at the convenience of the instructor. Any student attending less than the required scheduled instructional time (90%) may be dropped from the course as stated below in the Withdrawal Procedure.

Tardy means arriving after the scheduled time for instruction to begin. Early departure means leaving before the end of the scheduled time. Three (3) tardies or early departures equal one (1) absence for the course.

For this class, which meets 1 day a week for 10 weeks, the maximum number of days a student may miss is 1 day during the semester.

STUDENTS WITH DISABILITIES

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

Swainsboro Campus: [Daphne Scott \(dscott@southeasterntech.edu\)](mailto:dscott@southeasterntech.edu) 478-289-2274, Building 1, Room 1210
Vidalia Campus: [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

SPECIFIC ABSENCES

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

PREGNANCY

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

Swainsboro Campus: [Daphne Scott \(dscott@southeasterntech.edu\)](mailto:dscott@southeasterntech.edu) 478-289-2274, Building 1, Room 1210
Vidalia Campus: [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery MAY NOT be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Students who are dropped from courses due to attendance after drop/add until the 65% point of the semester will receive a "W" for the course.

Important – Student-initiated withdrawals are not allowed after the 65% point. Only instructors can drop students after the 65% point for violating the attendance procedure of the course. Students who are dropped from courses due to attendance after the 65% point will receive either a "WP" (Withdrawn Passing) or "WF" (Withdrawn Failing) for the semester.

Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

ACADEMIC DISHONESTY POLICY

The Southeastern Technical College Academic Dishonesty Policy states that all forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the Southeastern Technical College Catalog and Handbook.

PROCEDURE FOR ACADEMIC MISCONDUCT

The procedure for dealing with academic misconduct and dishonesty is as follows:

1. First Offense

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the

incident into Banner for tracking purposes.

2. Second Offense

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

3. Third Offense

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

STATEMENT OF NON-DISCRIMINATION

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes.

The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer	Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 st Street, Vidalia	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1 st Street, Vidalia

American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer	Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer
Office 165 Phone: 912-538-3126 Email: Helen Thomas hthomas@southeasterntech.edu	Office 138B Phone: 912-538-3230 Email: Lanie Jonas ljonas@southeasterntech.edu

ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on STC’s website.

ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

TCSG GUARANTEE/WARRANTY STATEMENT

The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.

GRADING POLICY

Assessment/Assignment	Percentage of grade
Tests	60%
Laboratory	10%
Final Exam	30%
Total	100%

GRADING SCALE

Letter Grade	Range
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

RADT 1075 Radiographic Imaging

Fall Semester 2021 Lesson Plan

Date/Week	Chapter/Lesson	Content/ Tests (Classroom)	Assignments & Due Dates (Online)	Competency Area/Gen Core
Week 1 August 17	Chapter 1	Syllabus, Review of Policies/Procedures Lecture/Review – Chapter 1 Radiation and It’s Discovery Lab – Getting to know the x-ray room	Read Chapter 1 RAD TECH Boot Camp: View Videos/complete quizzes for each as well as the Module Assessment as assigned X-Ray Production and Safety Radiation Units of Measurement <ul style="list-style-type: none"> - Rad Units Overview - Air KERMA & Exposure - Absorbed Dose - Equivalent Dose - Effective Dose Radiation Units of Measurement – Assessment Radiation Protection <ul style="list-style-type: none"> - Cardinal Rule (ALARA) - Shielding Radiation Protection - Assessment RAD Math Boot Camp: View Video/complete quiz <ul style="list-style-type: none"> - Radiation Units 	1, 4 a,c

<p>WEEK 2 August 24</p>	<p>Chapter 2</p>	<p>Test 1 – Chapter 1 Radiation and It’s Discovery Test review Chapter 2 Lecture – The X-Ray Beam</p>	<p>Rad Tech Boot Camp DUE X-Ray Production and Safety Radiation Units of Measurement Radiation Protection Rad Math Boot Camp DUE Radiation Units Quiz</p> <hr/> <p>RAD TECH Boot Camp: View Videos/complete quizzes for each as well as the Module Assessment as assigned X-Ray Production and Safety X-Ray Production</p> <ul style="list-style-type: none"> - X-Ray Production - Characteristic Radiation - Bremsstrahlung Radiation <p>X-Ray Production - Assessment</p> <p>Radiography Image Production X-Ray Tube and Components</p> <ul style="list-style-type: none"> - Tube & Components - Anode Heel Effect - Line-Focus Principle - Off-Focus Radiation - Tube Loading (Heat Units) - Anode Cooling Chart I - Anode Cooling Chart II <p>X-Ray Tube and Components – Assessment</p> <p>X-Ray Beam</p> <ul style="list-style-type: none"> - Properties of the Beam 	<p>1,3,4 a,b,c</p>
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Date/Week	Chapter/Lesson	Content/ Tests (Classroom)	Assignments & Due Dates (Online)	Competency Area/Gen Core
			<ul style="list-style-type: none"> - Beam Quantity - Beam Quality <p style="margin-left: 40px;">X-Ray Beam - Assessment</p> <p>Rad Math Boot Camp: View video/complete quiz for each</p> <ul style="list-style-type: none"> - Heat Units - Anode Cooling Chart 	
<p>WEEK 3 August 31</p>	<p>Chapter 3</p>	<p>Test 2 – Chapter 2 The X-Ray Beam</p> <p>Test review</p> <p>Chapter 3 Lecture Image Formation and Radiographic Quality</p>	<p>Read Chapter 3</p> <p>RAD TECH Boot Camp - DUE</p> <p>X-Ray Production and Safety</p> <ul style="list-style-type: none"> - X-Ray Production <p>Radiography Image Production</p> <ul style="list-style-type: none"> -X-Ray Tube and Components -X-Ray Beam <p>Rad Math Boot Camp - DUE</p> <p>View video/complete quiz for each</p> <ul style="list-style-type: none"> - Heat Units - Anode Cooling Chart <hr/> <p>RAD TECH Boot Camp: View Videos/complete quizzes for each as well as the Module Assessment as assigned</p> <p>X-Ray Production and Safety</p> <p>X-Ray Interactions with Matter</p> <ul style="list-style-type: none"> - Attenuation - Coherent Scatter - Photoelectric Effect - Compton Scatter <p>X-Ray Interactions with Matter - Assessment</p>	<p>1,3 a,b,c</p>

Date/Week	Chapter/Lesson	Content/ Tests (Classroom)	Assignments & Due Dates (Online)	Competency Area/Gen Core
WEEK 4 September 7	Chapter 4	<p>TEST 3 – Chapter 3 Image Formation and Radiographic Quality</p> <p>Test review and begin chapter 4</p> <p>Lecture - Digital Image Characteristics, Receptors, and Image Acquisition</p> <p>Lab Digital Imaging</p>	<p>RAD TECH Boot Camp DUE</p> <p>X-Ray Production and Safety</p> <p>X-Ray Interactions with Matter</p> <hr/> <p>Read Chapter 4</p> <p>RAD TECH Boot Camp: View Videos/complete quizzes for each as well as the Module Assessment as assigned</p> <p>Fundamentals of Digital Radiography</p> <p>Digital Radiography</p> <ul style="list-style-type: none"> - Computer Radiography I - Computer Radiography II - Direct Capture Radiography - Digital Matrix & Pixels - Dynamic Range & Exposure - Bit Depth & Quantization - Histogram - PACS Introduction - PACS (Networking) <p>Digital Radiography - Assessment</p>	3,4,5 a,b,c

Date/Week	Chapter/Lesson	Content/ Tests (Classroom)	Assignments & Due Dates (Online)	Competency Area/Gen Core
WEEK 5 September 14	Chapter 5	Test 4 - Chapter 4 Digital Image Characteristics, Receptors, and Image Acquisition Test review Lecture chapter 5 Digital Image Processing, Display, and Data Management lab – Exposure Technique Selection	Chapter 4 Laboratory Due RAD TECH Boot Camp DUE Fundamentals of Digital Radiography Digital Radiography <hr/> Read Chapter 5	1,3,4,5 a, b,c

Date/Week	Chapter/Lesson	Content/ Tests (Classroom)	Assignments & Due Dates (Online)	Competency Area/Gen Core
WEEK 6 September 21	Chapter 6	<p>TEST 5 – Chapter 5 Digital Image Processing, Display, and Data Management</p> <p>Test review</p> <p>Lecture Exposure Technique Factors - Chapter 6</p> <p>Lab Exposure Technique Factors</p>	<p>Chapter 5 Laboratory Due</p> <hr/> <p>Read Chapter 6</p> <p>RAD TECH Boot Camp: View Videos/complete quizzes for each as well as the Module Assessment as assigned</p> <p>Radiography Image Production</p> <p>Primary Exposure Factors</p> <ul style="list-style-type: none"> - mA - time - Kilo-volt Peak (kVp) - Distance (SID) <p>Primary Exposure Factors</p> <ul style="list-style-type: none"> - Assessment <p>Advanced Exposure Factors</p> <ul style="list-style-type: none"> - Inverse Square Law - Inverse Square Law – Math - Grids (Intro) <p>Rad Math Boot Camp: View video/complete quiz for each</p> <ul style="list-style-type: none"> - Direct Square Law - Inverse Square Law - 15% Rule - Magnification - Focal Spot 	1,3,4,5 a, b, c

Date/Week	Chapter/Lesson	Content/ Tests (Classroom)	Assignments & Due Dates (Online)	Competency Area/Gen Core
WEEK 7 September 28	Chapter 7	Test 6 – Chapter 6 Exposure Technique Factors Test review Chapter 7 Lecture – Scatter Control lab – Scatter Lab	Chapter 6 Laboratory Due Rad Tech Boot Camp DUE Radiography Image Production Primary Exposure Factors - DUE Advanced Exposure Factors - DUE Rad Math Boot Camp: View video/complete quiz for each - DUE <ul style="list-style-type: none"> - Direct Square Law - Inverse Square Law - 15% Rule - Magnification - Focal Spot <hr/> Read Chapter 7 RAD TECH Boot Camp: View Videos/complete quizzes for each as well as the Module Assessment as assigned Radiography Image Production Advanced Exposure Factors <ul style="list-style-type: none"> - Grids (Types) Rad Math Boot Camp: View video/complete worksheet and quiz for each <ul style="list-style-type: none"> - Grid Conversion 	1,3,4 a,b,c

<p>WEEK 8 October 5</p>	<p>Chapter 8</p>	<p>Test 7 – Chapter 7 Scatter Control Test review Chapter 8 Exposure Technique Selection Lab – Image Evaluation</p>	<p>Chapter 7 Laboratory Due Rad Tech Boot Camp DUE Radiography Image Production Advanced Exposure Factors - Grids (Types) Rad Math Boot Camp: View video/complete worksheet and quiz for each - Grid Conversion -</p> <hr/> <p>Read Chapter 8 RAD TECH Boot Camp View Videos/complete quizzes for each as well as the Module Assessment as assigned Radiography Image Evaluation and Quality Control Image Quality Factors - Contrast (Introduction) - Contrast (kVp) - Contrast (Procedural Factors) - Contrast (Subject Contrast) - Contrast (Digital Factors) - Spatial Resolution I - Spatial Resolution II - Receptor Exposure I - Receptor Exposure II - Image Quality (Magnification) - Image Quality (Distortion) - Image Quality Factors - Assessment</p> <p>Image Evaluation - Exposure Errors - Processing Errors</p>	<p>2,3 a,b,c</p>
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Date/Week	Chapter/Lesson	Content/ Tests (Classroom)	Assignments & Due Dates (Online)	Competency Area/Gen Core
			<ul style="list-style-type: none"> - Receptor Errors - Positioning Errors - Identification Errors Image Evaluation - Assessment Radiography Image Production Advanced Exposure Factors <ul style="list-style-type: none"> - Automatic Exposure Control (AEC) - Automatic Exposure Control (AEC) II Rad Math Boot Camp: view video/complete worksheet and quizzes <ul style="list-style-type: none"> - Image Quality 	
WEEK 9 October 12	Chapter 10	Test 8 – Chapter 8 Exposure Technique Selection Test review Lecture Chapter 10 Dynamic Imaging: Fluoroscopy	Read Chapter 10 Chapter 8 Laboratory - DUE Rad Tech Boot Camp DUE Radiography Image Evaluation and Quality Control Image Quality Factors Image Evaluation Radiography Image Production Advanced Exposure Factors Rad Math Boot Camp: <ul style="list-style-type: none"> - Image Quality 	1,2,3,4,5 a,b,c
WEEK 10 October 19		Test 9 – Chapter 10 Dynamic Imaging: Fluoroscopy	Study all Chapters covered for Final Exam	1,2,3,4,5 a,b,c
Final Exam October 25	Chapter 1-10	Final Exam - 8:00 AM		1,2,3,4,5 a,b,c

Competency Areas: Radiographic Imaging

1. Principles of Imaging and Image Quality
2. Criteria for Image Evaluation

3. Image Acquisition and Processing
4. Exposure Indicator Determination
5. Imaging Systems

General Core Educational Competencies

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.



**RADT 1075 Radiographic Imaging
Syllabus Acknowledgement**

I _____ have read and understand the syllabus for RADT 1075. I have been given the opportunity to ask questions to clarify any requirements listed on the syllabi. By signing this agreement, I am acknowledging that I fully understand my requirements and grading criteria that I am responsible for during the course. I agree to follow the guidelines and rules listed on the syllabi.

Print Name

Student Signature

Date