RADIOLOGIC TECHNOLOGY
RADT 1070
COURSE SYLLABUS
Lecture
Spring Semester 2016

Semester: Spring 2016

Course Title: Principles of Imaging I

Course Number: RADT 1070

Credit Hours/ Minutes:6/5250

Class Location: 743

Class Meets: Tuesdays/Thursdays 800am-400pm

CRN: 40250

Instructor: Kerry Dunn, M.Ed., RT(R)(M)

Office Hours: Mondays – By Appointment

Office Location: 708

Email Address: kdunn@southeasterntech.edu

Phone: 912-538-3112

Fax Number: 912-538-3106

Tutoring Hours: By Appointment

REQUIRED TEXT: Carlton, R.C., & Adler, A.M. (2012). Principles of Radiographic Imaging. (5th ed.).

REQUIRED SUPPLIES: Pen, pencil, notebook, paper, highlighters

COURSE DESCRIPTION: Content is designed to establish a basic knowledge of atomic structure and terminology. Also presented are the nature and characteristics of radiation; x-ray production and the fundamentals of photon interactions with matter; factors that govern the image production process, film imaging with related accessories; and a basis for analyzing radiographic images. Included are the importance of minimum imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Actual images will be included for analysis.

MAJOR COURSE COMPETENCIES: Major course competencies include: radiation production and characteristics, film-screen image acquisition and processing, and image analysis.

COURSE OUTLINE:

- Radiation production and characteristics
- Film-screen image acquisition and processing
- Image analysis.

PREREQUISITES: Program Admission, MATH 1111
COREREQUISITES: None

GENERAL EDUCATION CORE COMPETENCIES:

STC 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: Students are expected to complete all reading, tests, and daily assignments (workbooks and handouts) by the specified date. Workbook assignments and handouts are to be completed before the student takes the test on the material assigned.

Students will research and construct a representation of the x-ray circuit. This representation should be unique and creative in nature. All pertinent elements of an x-ray circuit must be demonstrated, labeled, and have a brief description of its purpose.

Students will also be responsible for locating and summarizing scholarly journal articles related to the field of radiologic technology. These articles may be found in the *Radiologic Technology Journal* and may be no more than 5 years old. The article should be adequately summarized and personal comments pertaining to the article and how it relates to class material and the textbook should also be included. All references to the article should be annotated in APA format.

EXAMS*:* NO GRADES WILL BE DROPPED. No study guides or test reviews will be given due to time constraints on the amount of material being introduced. In addition, quizzes are subject to be given on any given day over any assigned material (i.e. reading, workbooks, etc.). Any quizzes missed due to student absence will not be made up.

Any questions regarding a test will need to be submitted by email to the instructor and/or an appointment can be arranged to discuss any questions during the instructor's office hours. No class time will be spent debating test questions.

A final unit test average of 70 or higher is required to sit for the final (grades of 69.9 will not be rounded up). *If you do not have a 70 or higher average, you will be unable to sit for the final exam and subsequently, will be withdrawn from the course with a grade of WP/WF.*

MAKEUP POLICY*: Students will be allowed to makeup one test. Any further missed test will result in a grade zero. All makeup exams will be given at the discretion of the instructor.*

Students are responsible for policies and procedures in student catalog/handbook and Departmental Policies and Procedures. [This could also include safety, academic dishonesty, etc.]

CELLPHONE POLICY: Cell phones are not permitted in the classroom or laboratory. Any student caught with a cell phone in the classroom or laboratory in any capacity (texting, talking on or, emailing), whether the phone is on or off, will have 10 points taken off their next chapter test grade. In the event of an emergency, such as a sick family member or sick child, their calls should be directed to the front desk at 912-538-3117 where a message can be left.

ATTENDANCE GUIDELINES: 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 also 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 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.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an F in a course.

ADDITIONAL PROVISIONS

Health Science Programs

Requirements for instructional hours within Health Science programs reflect the rules of respective licensure boards and/or accrediting agencies. Therefore, these programs have stringent attendance policies. Each program's attendance policy is published in the program's handbook and/or syllabus which specify the number of allowable absences. All provisions for required make-up work in the classroom or clinical experiences are at the discretion of the instructor.

ATTENDANCE FOR RADIOLOGIC TECHNOLOGY: 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 discretion 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 and/or early departures, in any combination, equal one (1) absence for the course.

For this class, which meets 2 days a week for 7 weeks, the maximum number of days a student may miss are 2 days during the semester.

SPECIAL NEEDS: *Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact Jan Brantley, Room 1208 Swainsboro Campus, 478-289-2274, or Helen Thomas, Room 108 Vidalia Campus, 912-538-3126, to coordinate reasonable accommodations.*

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 advise me and make appropriate arrangements with the Special Needs Office. Swainsboro Campus: Jan Brantley, Room 1208, (478) 289-2274 -- Vidalia Campus: Helen Thomas, Room 108, (912) 538-3126.

WITHDRAWAL PROCEDURE: Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% portion of the semester (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" is assigned when the student completes the withdrawal form from the course.

Students who are dropped from courses due to attendance (see your course syllabus for attendance policy) after drop/add until the 65% point of the semester will receive a "W" for the course. Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of 'F' being assigned.

After the 65% portion of the semester, the student will receive a grade for the course. (Please note: A zero will be given for all missed assignments.)

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 accessed due to the withdrawal. All grades, including grades of 'W', will count in attempted hour calculations for the purpose of Financial Aid.

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

ACADEMIC DISHONESTY POLICY: The STC Academic Dishonesty Policy states *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 *STC Catalog and Student Handbook.*

Please note that any conduct/behavior that is in violation of program policies and/or procedures will be addressed and resolved in accordance to the Radiologic Technology Academic and Clinical Manual.

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

--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.

--Second Offense--
Student is given a grade of "WF" 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.

--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 second 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: Southeastern Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, disabled veteran, veteran of Vietnam Era or citizenship status, (except in those special circumstances permitted or mandated by law). This school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

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 STC website at www.southeasterntech.edu.

GRADING POLICY

Chapter exams	35%
Article Summaries	15%
Circuitry Assignment	25%
Final Exam	25%

GRADING SCALE

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

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.*

Circuitry Project Rubric

	Below Average (1)	Average (2)	Above Average (3)	Excellent (4)	Score
Elements of Design Application of knowledge. Project shows evidence that learner understands topic	Did the minimum or the project was never completed	Completed the project, yet it shows lack of planning and little evidence that an overall design was planned	The project shows that the designer applied knowledge of subject when creating	Planned carefully, made several designs, selected the best, and showed an awareness of the principles discussed in class, and used space efficiently	X 5 =
Creativity / Originality Higher level thinking	Little evidence of original thought	Tried an idea, but it lacked originality	Researched several ideas, selected one to follow closely; or set up project in a logical way	Explored several choices before selecting one, made creative changes to personalize project; very unique, demonstrated an understanding of problem solving skills	X 5 =
Effort / Perseverance	The project was completed with minimum effort	Finished the project, but it could have been improved with more effort; adequate interpretation of the assignment, but lacking finishing touches; chose an easy idea	Worked hard and completed the project, but with more time or effort it would have been outstanding	The project was continued until it was as complete as the designer could make it; gave it effort far beyond that required; pride in going well beyond the requirement	X 5 =
Craftsmanship / Consistency Basic skills demonstrated	Shows poor craftsmanship; poor effort contributed to a poor product or poor quality stemmed from a lack of understanding	Showed average craftsmanship	With a little more effort, the work could have been outstanding; lacks the finishing touches	The project is exceptional and appears to have been patiently done; it was as good as hard work could make it	X 5 =
Accuracy Are all components labeled and described?	Most of the major information is present	Important information is present and is correct	All information discussed in class is included	All information discussed in class is included, with additional information researched by the student	X 5 =

Total Score:	

Journal Article Grading Rubric

Name: _____ Date: _____

Total Points Possible_____

Total Points Earned_____

Journal Article Review			
	Good **5 pts**	**Fair** **3 pts**	**Poor** **2 pts**
Summary for Article Summarize the main ideas and facts in the article.	Good All main ideas and facts from the article are included. Summary is written in objective view and referencing to the article is provided. Author and source are named.	Fair Some details from article are missing. Summary is not objective OR minimal referencing to the article is provided. Author OR source are not named.	Poor No summary is provided OR a verbatim of the text is provided. Author and source are not named.
Conclusions Provide personal comments pertaining to the article and how it relates to class material and the textbook.	Good Personal comments are clearly stated. Student clearly demonstrates a strong working knowledge of class material relative to the article. References are made to the textbook and specific chapters or page numbers are provided.	Fair Few personal comments. Student demonstrates some working knowledge of class material relative to the article. Few references are made to the textbook OR no chapter or page number information is provided.	Poor No personal comments are provided. No relationship between article and class material is provided. No references are given.
Grammar and Organization	Good Paper is well organized and easy to follow. There are no spelling, grammar, or punctuation errors.	Fair Paper is not well organized OR there are many grammatical errors.	Poor Paper is not organized and there are many grammatical errors.
Mechanics	Good Paper is the appropriate length, has appropriate margins, and is provided in the correct font.	Fair Paper is not the appropriate length OR has inappropriate margins OR is not in the correct font.	Poor Paper is not the appropriate length, has inapproriate margins, and is not in the correct font.
Reference in APA Format	Good Reference is provided in the correct APA format.	Fair Reference is provided in the correct format with few mistakes.	Poor Reference is not provided in the correct format.

Spring 2016 Lesson Schedule				
Date	**Chapter / Lesson**	**Content/ Laboratory**	**Assignments**	***Learning Outcomes**
Week 1 March 8/10	Carlton Chapters 2-4	Lecture on Radiation Concepts, Electricity, and Electromagnetism	Read assigned chapters Complete homework	1 a-c
Week 2 March 15/17	Carlton Chapters 5-7,12	**Exam 1** Lecture on X-Ray Equipment, X-Ray Tube, X-Ray Production, and X-Ray Interactions	Read assigned chapters Complete homework	1 a-c
Week 3 March 22/24	Carlton Chapters 11,10,15	**Exam 2** Lecture on the Prime Factors, Filtration, and Beam Restriction Article Summary 1 Due	Read assigned chapters Complete homework	1 a-c
March 29/31		Spring Break No Class This Week		
Week 4 April 5/7	Carlton Chapters 16,18,32,33	**Exam 3** Lecture on the Patient as a Beam Emitter, Grids, Exposure Systems, and AECs	Read assigned chapters Complete homework	1 a-c
Week 5 April 12/14	Carlton Chapters 19-22	**Exam 4** Lecture on Radiographic Film, Processing, Sensitometry, and Intensifying Screens	Read assigned chapters Complete homework	2 a-d
Week 6 April 19/21	Carlton Chapters 26-30	**Exam 5** Lecture on Density, Contrast, Recorded Detail, Distortion, and Image Critique		1-2 a-c

Spring 2016 Lesson Schedule				
Date	**Chapter / Lesson**	**Content/ Laboratory**	**Assignments**	***Learning Outcomes**
Week 7 April 26/28		**Exam 6** **Circuitry Projects are Due**		1-2 a-d
May 5 (Thursday)		**Final Exam**		1-3 a-d

Lesson plan is subject to change at the discretion of the instructor

***Radiologic Technology Competency Areas:**

1) Radiation production and characteristics
2) Film-screen image acquisition and processing
3) Image analysis

GENERAL EDUCATION CORE 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.
d) The ability to utilize basic computer skills.

Southeastern Technical College
Radiologic Technology Degree Program

I _____ have read and understand the syllabus for RADT 1070. I have also 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. I agree to follow the guidelines and rules listed on the syllabi.

_____
Print Name

_____ _____
Student Signature Date