

SOUTHERN MAINE COMMUNITY COLLEGE

South Portland, Maine 04106

TITLE: Radiographic Exposure I-Fall 2016

CREDIT HOURS: 3

INSTRUCTOR: Seth Doane BA, RT(R) (CT)

PREREQUISITES: Radiography Majors

LOCATION: HSC 215

CATALOG NUMBER: RADG 115-01

TOTAL CONTACT HOURS: 45

CONTACT: 1-207-741-5596

EMAIL: sdoane@smccme.edu

TIME: MWF 9-9:50

OFFICE HOURS: MWF 11-1:00

COURSE DESCRIPTION Course deals with the production of x-rays, the prime factors of exposure, and the effects of technical factors on image quality. The relationship between x-ray equipment, the prime factors of exposure, the accessories that affect image quality, and patient dose will be emphasized. We will concentrate on image formation in digital radiography, with historical reference to film when appropriate.

Prerequisite(s): Radiography Majors

Corequisite (s): Health Science Students

COURSE OBJECTIVES: At the completion of this course, the student will:

1. Have a foundation in the scientific method, applied mathematics, basic atomic physics, and how they relate to diagnostic imaging
2. Be able to describe the components of the atom, properties of electromagnetic radiation, and relate them to the production of medical images
3. Understand what x-rays are, how they are produced, and how they interact with matter
4. Explain the effects of various exposure factors on the final image
5. Understand and explain the effects of factors within the patient on the final image
6. Explain how to modify exposure factors and patient factors to optimize image quality
7. Explain the effects of collimation, filtration, generators and grids on image quality and patient dose

ATTENDANCE POLICY

1. The student is expected to attend all class sessions.
2. Attendance is expected as follows: Three absences are allowed during the semester. The final grade will drop 5 points for each absence over three.
3. Please keep cell phones on **vibrate** during class.

COURSE REQUIREMENTS: Lecture/discussion are utilized including multi-media resources and group problem-solving. This course is intended to enhance and clarify the student's clinical experience, so students are encouraged to share experiences, questions or comments with the class.

CLASS PARTICIPATION: This is a dynamic, participatory class and students are encouraged to contribute to class discussions by sharing clinical/personal experiences relevant to the topic to the class.

EXAMS:

- *Students will not be allowed into the classroom once an exam has begun. Students who miss an exam due to late arrival will be required to take it later that same day.*
- *Students who are absent for an exam must contact the instructor to make up the exam the next class day.*
- *Exams that are taken after the scheduled exam time will have a 5 point reduction in the overall grade*
- *Students may leave the classroom after their completed exam is turned into the instructor. Entry back into class is not allowed until the end of class.*

STUDENT EVALUATION AND GRADING POLICY: Exams: (90%), Attendance , quizzes, homework assignments + class participation: (10%)= Final Grade.

*The course must be successfully completed with a grade of 75 or better. **GRADING SCALE:** The following is the grading scale utilized in this course.*

<i>A</i>	<i>95-100</i>	<i>B-</i>	<i>82-84</i>
<i>A-</i>	<i>92-94</i>	<i>C+</i>	<i>79-81</i>
<i>B+</i>	<i>89-91</i>	<i>C</i>	<i>75-78</i>
<i>B</i>	<i>85-88</i>	<i>F</i>	<i>Below 75</i>

TEXTBOOK, TOOLS AND SUPPLIES:

Textbooks: *Radiography In The Digital Age, Carroll, Quinn, Second Edition, Charles C. Thomas-Publisher*

References: *Class handouts, keynote/powerpoints*

INSTRUCTIONAL MATERIALS UTILIZED:

- *Keynote/Power Point*
- *Videos*
- *Online Web Sites*
- **Web Enhancement:** *Course syllabus, class schedule, handouts, power point lectures, and study guides will be posted on the Learning Manage System (LMS).*

End-of-Course Evaluation

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The

deadline for submission of evaluations occurs Monday at 5 p.m. following the last day of the class. You will receive an e-mail to your student e-mail account when course evaluations are available.

ADA Services:

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207-741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual's accommodations.

SMCC Pay-for-Print Policy

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, Tutoring Services, Campus Center Lounge and technology labs). Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account. Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the pay-for-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an e-mail to helpdesk@smccme.edu.

Refunds

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student's account.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the Fall and Spring semesters and the second through ninth week of twelve-week Summer courses. This period is pro-rated for shorter-length courses (usually 75 percent of course meeting times; please check with the Registration Office.) To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Registration Office. This process must be completed either in person or by using SMCC e-mail accounts.

Plagiarism Statement

If an instructor suspects that a student has knowingly committed a violation defined in the Maine Community College System Policy on Student Grade Appeals and Academic Misconduct, the instructor has the authority to review the alleged misconduct and determine the grade that the student should receive for the assignment and the course. The instructor may assign a failing grade for the assignment or course and may require the student to complete additional work for the course. The instructor may consult with the department chair and/or the College's chief academic officer prior to making such decisions. If a student seeks to challenge an instructor's determination, the student should submit a grade appeal. Grade appeal forms are available in the Advising Office on the South Portland Campus or in the administrative offices in the Learning Commons on the Midcoast Campus. An instructor may also refer the matter to the College's disciplinary officer for review under the procedures of the MCCS Student Code of Conduct.