

**Valencia College**  
**Radiography Program**

<b>PRINCIPLES OF RADIOGRAPHY 2</b>	<b>25269</b>	<b>YEAR I, SESSION 3, 2016</b>
RTE 1458    3 Credits	West Campus, AHS, Room 239	Mondays 12:30 pm - 3:30 pm

**COURSE DESCRIPTION:**

An overall survey of factors affecting the production of high quality radiographs. Manipulation of technical factors and use of accessory devices to produce quality radiographic images will be explored. Quality assurance evaluation methods for radiographic systems will be presented, performed, and orally reported.

**COURSE OBJECTIVES:**

1. Define the purpose and parameters of quality management and a quality assurance program as it applies to the hospital, in general, and to the radiology department specifically.
2. Develop an understanding of quality control testing required for all areas of medical imaging.
3. Know the federal recommendations and the DOH requirements regarding quality assurance.
4. Perform quality control tests on specific radiographic, film processing, and accessory equipment.
5. Define, select and manipulate technical factors that control radiographic quality (density, contrast, detail, distortion).
6. Develop an understanding of the function and effects of various accessory devices on radiographic quality.
7. Demonstrate radiographically how prime factors and accessory equipment affect radiographic quality.
8. Describe the rationale for the different types of technique exposure systems.

**PREREQUISITES:** Principles of Radiography 1 (RTE 1418)

**INSTRUCTOR:**

Julie Kloft, MSRS, RT (R), Clinical Coordinator  
Office: West Campus, AHS 244  
Phone: 407-582-1868  
Email: [jkloft@valenciacollege.edu](mailto:jkloft@valenciacollege.edu)  
Office Hours: By appointment, posted on office door

**REQUIRED TEXTBOOKS:**

Bushong, S. C. (10<sup>th</sup> Ed.). (2012). *Radiologic Science for Technologists: Physics, Biology, and Protection*. Missouri: Elsevier. [ISBN 978-0-323-08135-1].  
Bushong, S. C. (10<sup>th</sup> Ed.). (2012). *Workbook and Laboratory Manual for Radiologic Science for Technologists: Physics, Biology, and Protection*. Missouri: Elsevier. [ISBN 978-0-323-08137-5]

**OPTIONAL TEXTBOOKS:**

Papp, J. (4<sup>th</sup> Ed.). (2010). *Quality Management in Imaging Sciences*. Missouri: Elsevier. [ISBN 978-0-323-05761-5]

**EVALUATION:** The grade for the course will be determined by the sum of the following percentages:

Reaction Report	5%	<u>Grading Scale:</u>	
Project	5%	93-100	A
Homework	15%	85-92	B
Tests	35%	76-84	C
Final Exam	40%	70-75	D
	100%	Below 69	F

## **CLASSROOM POLICIES:**

### **Attendance**

Regular attendance is necessary for success. The student is expected to attend all classes unless prevented by illness or emergency. Please contact me via email if you are unable to attend.

It is the responsibility of the student to gather make-up work from a fellow student in case of absence or tardy. Homework is due at the beginning of class; late homework will **NOT** be accepted. In the event of an absence, homework must be emailed prior to the start of class.

All makeup quizzes and/or tests must be completed in Valencia's Testing Center before the day of the next regularly scheduled class, or you will receive a grade of 0 (zero) for the missed quiz/test. **Only ONE makeup quiz or test will be permitted per semester.**

- A combined total of **3 (three)** absences and/or tardies will lower final grade by one letter grade.
- A combined total of **4 (four)** absences and/or tardies will result in class failure and program dismissal.

A tardy is recorded if the student arrives after the start of class time and/or misses less than 25% of class time (between 1 and 45 minutes). An absence is recorded if the student does not attend at least 75% of class time (2 hours, 15 minutes).

### **Honor Code**

We believe in a person's honesty, self-discipline, and sense of responsibility. Cheating, lying, and stealing are subject to disciplinary action and/or dismissal as outlined in the student handbook. This class will adhere to the Valencia honor code as presented in the catalog.

1. Cheating (representing someone else's work as being your own) includes:
  - a. Copying
  - b. Collaboration - working with another person or persons in the execution of a test, report, or paper without authorization to do so.
  - c. Plagiarism - the intentional or unintentional use of someone else's words or thoughts without giving proper credit. All un-cited work will be assumed to be the sole product of the author. When using a source for material, it must be cited, footnoted, or referenced.
  - d. Use of crib notes - referring to notes brought to class for use during an examination.
  - e. Acquiring tests or other academic materials belonging to faculty or other students.
  - f. Use of textbooks and/or class notes during an examination without authorization to do so.
  - g. Falsifying documentation in a clinical area.

2. Lying (deliberate misrepresentation of the truth) includes:
  - a. Deliberate misrepresentation of the truth to persons acting in an official capacity (technologists, instructors, school faculty, medical director, etc.)
3. Stealing (taking possession of another's property without permission to do so) includes:
  - a. Taking any books (or other items) from someone else without permission or from the library without properly signing them out.
  - b. Taking any hospital or personal property from another individual.

### **Electronic Devices**

Portable electronic devices must be on silent mode and **put away** during classroom or lab time. Students may NOT use electronic devices during class time. A warning will be issued during the first occasion of electronic device use during class time; however, subsequent occasions will result in the student being asked to leave the classroom. (Attendance consequences will apply.) All electronic communication devices must be **turned off** during quizzes/tests (vibrate mode still disrupts class and will not be tolerated). If a cell phone rings (or makes any noise including vibrations) during testing, the student will lose 10 points off the grade earned.

Audio and video recording (including photography) is strictly prohibited without the consent of the instructor. Permission may be granted on a case-by-case basis, but covert recording is unethical and will incur disciplinary action up to and including dismissal.

Valencia's classroom laptops may be provided as a privilege for students to access Blackboard and take notes during class. Wireless internet use is provided, but should not be used during class time. Abuse of internet access or laptops will result in lost privileges. Students are required to use the laptop number which coordinates with their seat number. Please remember, these are Valencia computers and personal files should never be saved on the laptops. You may save your data to an external USB storage device (flash or jump drive) or email the file to yourself. Background images, desktop styles, and laptops settings should never be adjusted.

Quizzes and tests will be administered via Respondus LockDown in Blackboard. Please review the Honor Code discussed previously.

Valencia provides a classroom set of Classroom Performance System (CPS) "clickers" known as a personal response system. Students are required to use the clicker that corresponds to their name/number on the attendance roster, unless directed otherwise.

### **Grievance**

Situations of academic probation, suspension, and dismissal will be handled according to the policies of Valencia College. Issues of discipline, grievance or appeal will be handled in compliance with policies listed in the Valencia Catalog.

If a student feels he or she has a justifiable grievance in the program, the student has recourse through the grievance process. Students are more likely to receive satisfaction if they follow proper procedure:

1. Meet with the instructor involved (Julie Kloft) and discuss your concern(s).
2. If you still feel you have not received a satisfactory resolution, meet with your program director (Beverly Bond).
3. If the matter cannot be resolved, you may then meet with the dean of the Allied Health Programs (Penny Conners).
4. Finally, if you still feel you are justified in your concern, you should meet with the president of West Campus (Dr. Felicia Williams), who will resolve the conflict.

## **Valencia Student Core Competencies**

The Valencia core competencies, **Think, Value, Communicate, and Act** are designed for student success and are outlined in the College Catalog. All aspects of this course will involve the use of these competencies for proper success in the radiography program and in your chosen occupational field.

### **Disability Statement**

Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, *preferably during the first 2 weeks of EACH class*. The OSD determines accommodations based on appropriate documentation of disabilities. The West Campus OSD is located in the SSB in Room 102. Phone: 407-582-1523, Fax: 407-582-1326, TTY: 407-582-1222

### **Communication**

Communication with the instructor of this course should be sent via an email through Atlas, or by direct contact (phone and email address are provided at the top of this syllabus). Students should check Blackboard at least once a week for announcements and Atlas at least once a week for email.

### **Release of Student Information**

Throughout the Radiography Program and at the completion of the program, information necessary for clinical affiliation and licensure will be sent to the appropriate agency.

### **Withdrawal Deadline**

**To obtain a “W”, you must withdraw by April 1, 2016.**

Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the established deadline for a particular term will receive a grade of “W.” A student is not permitted to withdraw after the withdrawal deadline. A faculty member MAY withdraw a student up to the beginning of the final exam period for violation of the class attendance policy. A student who is withdrawn by faculty for violation of the class attendance policy will receive a grade of “W.” Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of “F.” For the complete policy and procedure overview on Valencia Policy 4-07 please go to:

<http://valenciacollege.edu/generalcounsel/policydetail.cfm?RecordID=75>.

### **Assignments**

**Reaction Report (5%):** A reaction report is a one page, double-spaced typed, personal review of a peer-reviewed journal article related to the field of radiology (you may not use RT Image, Radiology Today, Advance, ASRT Scanner, or any newspaper, magazine, or other internet source). A copy of the article must accompany the report. You may briefly summarize the article, but the “point” of this assignment is **your opinion or reaction** to the article. You may use personal pronouns (I think, my opinion, etc.).

The articles should be retrieved from the **Radiologic Technology** Journal and must say “Peer Reviewed” or “Directed Reading.” Other journals MAY be permitted on a case-by-case basis. You should submit your article for approval to ensure you meet the requirements for this assignment.

**\*\*Grade will be reduced if the report is not typed, there is no copy of article, or if it is not from a peer-reviewed journal article.**

Grading Rubric for Reaction Report:

Evidence of individual effort	Outstanding (11-15) Above Average (7-10) Average (3-6) Below Average (0-2)	/15
Organization of paper (logical/orderly)	Outstanding (11-15) Above Average (7-10) Average (3-6) Below Average (0-2)	/15
Technical level of paper (too technical/too simple)	Outstanding (11-15) Above Average (7-10) Average (3-6) Below Average (0-2)	/15
Grammar/spelling/punctuation	Outstanding (11-15) Above Average (7-10) Average (3-6) Poor (0-2)	/15
Educational value/applicable to Radiology field	Outstanding (11-15) Above Average (7-10) Average (3-6) Poor (0-2)	/15
Applicable article/source	Yes (10) No (0)	/10
Paper typed	Yes (5) No (0)	/5
Copy of article included	Yes (5) No (0)	/5
<b>Obvious</b> you “got” something from the article	Yes (5) No (0)	/5

**Project/Presentation (5%):** Each student will be assigned a lab project/experiment. You must save your images on a storage device and present your images (along with an oral presentation) to your classmates. A PowerPoint presentation is suggested, but not required.

Grading Rubric for Project/Presentation:

Evidence of individual effort/ingenuity	Above Average (7-10) Average (3-6) Little to none (0-3)	
Educational value/related to Radiology field	Above Average (7-10) Average (3-6) Little to none (0-3)	
Technical level of project	Above Average (7-10) Average (3-6) Poor (0-3)	
Quality of finished project	Above Average (7-10) Average (3-6) Poor (0-3)	
Images submitted and discussed	Yes (5) No (0)	
Paperwork complete	Yes (5) No (0)	

**Homework (15%):** Students are expected to have read and completed homework assignments before they arrive for class. The class schedule at the end of this syllabus provides the reading assignments and homework assignments (from the Bushong 10<sup>th</sup> edition text and workbook) and associated due dates. Homework will be collected at the **beginning** of class. Late assignments will **NOT** be accepted and a grade of 0 (zero) will be recorded. You will find the best way to ensure you understand the concepts presented during this course is to read the assigned material (the schedule at the end of the syllabus tells you which chapter to read) and complete the assignments prior to participating in class. Classroom and lab participation is required. Students should be prepared for quizzes at the beginning and/or end of class. **Quizzes** will be calculated as part of the homework grade. Please review the attendance policy regarding make-up quizzes.

**Tests (35%):** During class, three tests will be administered using Respondus LockDown within Blackboard. These tests will cover all preceding sections of material. Please review the attendance policy regarding make-up tests.

**Final Exam (40%):** During finals week, a comprehensive final exam will be administered using Respondus LockDown within Blackboard. This exam will include material presented in **BOTH** Principles of Radiography 1 and 2.

**Class Schedule, Reading Assignments, and Homework**

<b>Date</b>	<b>Lecture Topic</b>	<b>Bushong</b>	<b>Homework</b>
Jan 11	Syllabus/Review/Scatter & Grids	Chapter 11	11-1 thru 11-5
Jan 18	MLK Day		
Jan 25	Technique & Charts	Chapter 13	13-1 thru 13-4
Feb 1	Review		Worksheet
Feb 8	<b>Test</b> & Presentations		Reaction Report
Feb 15	Image Quality	Chapter 10	10-1 thru 10-8
Feb 22	Image Artifacts & Review	Chapter 19 & 21	19-1 and 21-1
Feb 29	<b>Test</b> & Presentations (mid-terms)		
Mar 7	Spring Break		
Mar 14	Quality Control	Chapter 20	20-1
Mar 21	Digital Quality Control & Review	Chapter 22	22-1
Mar 28	<b>Test</b> & Presentations		
Apr 4	CR & DR	Chapter 15 & 16	15-1, 15-2, 16-1
Apr 11	Digital Images	Chapter 17 & 18	17-1, 17-2, 18-1
Apr 18	Review		
Apr 25	<b>Final Exam</b>		

✓ This syllabus may be revised at any time at the discretion of the instructor.

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