

RAD 112 - RADIOGRAPHIC ANATOMY & POSITIONING

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Hours: MW 9-11am
TTH 1-2pm

COURSE DESCRIPTION:

This course is designed to instruct the student radiographer with didactic instruction leading to the development of clinical competencies. It serves as a foundation for the development of advanced clinical knowledge. The topics developed are chest, abdomen, upper and lower extremities, pelvic girdle, spine and digestive system. The bony anatomy of these areas will be stressed. Also, emphasis is placed on the soft-tissue structures demonstrated by radiographs of these areas. Routine positioning common to most health facilities will be described, demonstrated, and practiced on each other and on phantoms in energized X-ray labs.

This class must be taken concurrently with RAD 112L. If RAD 112L is dropped then RAD 112 must be dropped.

***Please note:** This course requires student to student, or instructor to student physical contact appropriate and necessary to demonstrate, teach, or learn the principles of radiographic positioning. Any student who is unable or unwilling to participate in such contact should discuss this concern with the course instructor immediately.*

Principles of radiation protection for the patient and for the radiographer are emphasized as well. Therefore, each student is required to wear a personal radiation exposure monitoring badge (dosimeter) during each lab session. The University will supply this film badge. If the student's film badge is lost, stolen or damaged, the student is charged \$10.00 to replace it.

This is a three credit hour course that meets for the full fall semester. Students are required to attend 3 hours of lecture each week. The skills learned in this course will be further refined on human patients in the clinical environment, in the subsequent semesters.

At this point in the Radiologic Science Program, the student is limited to the Clinical Sites already affiliated with the radiography portion SIUC Radiologic Sciences program.

***Please note:** All our clinical sites are now requiring that all internship students undergo drug screening and criminal background checking prior to beginning the clinical semester. Details regarding these screenings are discussed at mid-term and during the Clinical Orientation meeting at the end of the semester. Any student who is unwilling to participate in such screenings should discuss this concern with the course instructor immediately.*

Course requirements are admission to the program and consent of the Program Director. Lab fee: \$75.00.

PREREQUISITES: Acceptance into RADS Program and completion of HCP 241 Human Anatomy and Physiology or its equivalent.

Co-requisite to: RAD 102, RAD 122a, & RAD 202

Prerequisite to: RAD 222 & RAD 122b

TEXTBOOKS:

Required:

Frank, E.D., Long, B.W. & Smith, B.J. (Ed.). (2016). Merrill's Atlas of Radiographic Positions and Radiologic Procedures, 13th edition. 3 Volume Set. St. Louis, MO: Elsevier Science/Mosby, Inc.

Frank, E.D., Long, B.W. & Smith, B.J. (Ed.). (2016). Workbook for Merrill's Atlas of Radiographic Positions and Radiologic Procedures, 13th edition. Publisher: St. Louis, MO: Elsevier Science/Mosby, Inc.

Frank, E.D., Long, B.W. & Smith, B.J. (Ed.). (2016). Merrill's Pocket Guide to Radiography, 13th edition. Publisher: St. Louis, MO: Elsevier Science/Mosby, Inc.

OPTIONAL for RAD 112 students desiring to increase their comprehension of medical terminology:

Chabner, D. (2007). The Language of Medicine, 8th edition. Publisher: Elsevier Science/W.B. Saunders.

Netter, F.H. & Dorland. (2007). Netter Atlas of Human Anatomy and Dorland's Illustrated Medical Dictionary Package. Publisher: Elsevier Science/W.B. Saunders.

Chabner, D. (2006). The Language of Medicine with Animation CD-ROM-Text and Miller-Keane Encyclopedia & Dictionary of Medicine, Nursing and Allied Health (Revised) Package, 7th edition. Publisher: Elsevier Science/W.B. Saunders.

GENERAL COURSE OBJECTIVES:

Upon completion of this course, and with 100% accuracy, the student shall be able to:

1. Describe and demonstrate the body planes and associated medical terminology.
2. Given a diagram and/or radiograph of the following anatomical structures, locate the anatomy specific to each part.

a. finger	f. humerus	k. sternum
b. hand	g. shoulder	l. abdomen
c. wrist	h. clavicle	m. chest
d. forearm	i. scapula	n. acromioclavicular joints
e. elbow	j. ribs	
3. Given a diagram and/or radiograph of the following anatomical structures, locate the anatomy specific to each part.

a. toes	g. hip	m. colon
b. foot	h. pelvis/S-Ijts.	n. stomach
c. ankle	i. sacrum/coccyx	o. esophagus
d. lower leg	j. lumbar spine	p. urinary system
e. knee	k. cervical spine	q. gallbladder
f. femur	l. thoracic spine	
4. For each body part listed in objectives #2 & #3, demonstrate the following:
 - a. proper patient care during the procedure
 - b. proper positioning routine for that body part
 - c. proper central ray (CR) placement, including source-image-distance
 - d. proper use of radiation protection devices
 - e. proper use of film/cassette size(s) and image development

5. Demonstrate competency in operating all functioning locks on the x-ray tube, table, control panel, and darkroom, for each body part listed in objectives #2 #3.
6. Given the exposure factors for a specific body part, calculate the appropriate mAs and kVp values, to produce a desirable radiograph containing an image quality that is equal to, or better than the image quality displayed in the Merrill's positioning atlases.
7. Apply the principles and concepts of radiographic positioning in the lab and in the clinical settings.
8. Identify the anatomy visualized on radiographs produced in the lab and in the clinical settings.
9. Apply the principles of radiation protection in the lab and clinical settings.
10. Apply the terminology associated with diagnostic radiography.
11. Identify the patient preparation and the room readiness procedures required for the following exams:

a. IVP	d. Upper GI with Small Bowel series
b. Upper GI	e. Air Contrast Lower GI
c. Lower GI	f. Small Bowel series, alone

GENERAL TOPICAL OUTLINE:

- I. Introduce Course & Lab Orientation
- II. Positioning Terminology (Nomenclature)
 - A. Body planes
 - B. Body positions
 - C. Related terminology
- III. Exposure Factors & Radiation Protection
 - A. Sources of radiation
 - B. Measuring radiation
 - C. Exposure factors
 1. Milliampere-seconds calculations (mAs)
 2. Kilovoltage peak (kVp)
 - D. Cardinal Principles of radiation exposure
 - E. Radiation dose limits
 1. Annual limit
 2. Cumulative limit
 3. Embryo-Fetus limit
- IV. Upper Extremity
 - A. Hand
 - B. Wrist
 - C. Forearm
 - D. Elbow
 - E. Humerus
 - F. Shoulder girdle
 1. Scapula
 2. Clavicle
 3. Shoulder joint
 4. A-C Joints

- V. Thoracic Cavity
 - A. Ribs
 - B. Chest/Lungs
 - C. Sternum

- VI. Abdomen
 - A. Bony structures
 - B. Soft tissue structures
 - C. Contrast exams

- VII. Lower Extremity
 - A. Foot
 - B. Ankle
 - C. Knee and Patella
 - D. Femur
 - E. Pelvic girdle
 - 1. Hip
 - 2. Pelvis
 - 3. Sacroiliac joints (S-I Joints.)

- VIII. Vertebral Column
 - A. Sacrum and Coccyx
 - B. Lumbar spine
 - C. Thoracic spine
 - D. Cervical spine

- IX. Body Systems and Contrast Exams
 - A. Gastrointestinal system (Digestive system)
 - 1. Esophagus
 - 2. Stomach
 - 3. Small intestine
 - 4. Colon
 - B. Genitourinary system
 - C. Biliary system

ACADEMIC HONESTY:

All students are expected to adhere to a strict code of academic honesty. Academic honesty is addressed according to the “Policies and Procedures Applicable to Academic Dishonesty” as stated in the “2012-2013 Guide to Important Information for Students, Faculty and Staff” pdf www.studentlife.siu.edu/Documents/Info%20Booklet%20FINAL%20for%202012-2013.pdf .

ACTS OF ACADEMIC DISHONESTY, from the “SIUC Student Conduct Code”, section II Violations, article A (www.policies.siu.edu/documents/StudentConductCodeFINALMAY32012.pdf):

- A. Plagiarism, representing the work of another as one’s own work;
- B. Preparing work for another that is to be used as that person’s own work;
- C. Cheating by any method or means;
- D. Knowingly furnishing false information to a University official relative to academic matters;

- E. Soliciting, aiding, abetting, concealing, or attempting conduct in violation of this code.

Penalties will be imposed for violations of this policy in accordance with the SIUC Student Conduct Code. These penalties may include one or more of the following disciplinary measures for a case of academic dishonesty:

- A grade of zero (0) for the assignment, lab, quiz or test.
- An “F” for the entire course.
- Recommendation of dismissal from the Program.

METHODOLOGY:

Students are required to keep current on the daily reading assignments and to complete the learning activities/review exercises for each area of the body. Student use of class positioning notes is permitted and strongly encouraged in lab on Monday and Wednesday.

On specific Fridays, there will be a written test during class lecture time. These tests are based on the class/lab work covered on Monday and Wednesday.

Each test (written) will be based on the following materials:

- | | |
|-----------------------|---------------------------------|
| 1. Topical objectives | 3. Class notes |
| 2. Textbook readings | 4. Workbook activities/Handouts |

STUDENT EVALUATION & GRADING:

Each test score will be converted into an appropriate percentage. I reserve the right to add a quiz at any time. This quiz may be known or may be a “pop” quiz. For the final course grade, an average percentage will be calculated, and weighted according to the following criteria:

Five (5) Written Tests (and quizzes if any)	75%
<u>Mid-Term Exams & Final Exams (Written Exams)</u>	<u>25%</u>
Total	100%

Tests are normally given as “multiple choice”. Partial credit is NOT given for incorrect answers. Students are **NOT permitted to use the restroom during a TEST. If you leave the classroom for any reason during a test, you will forfeit the test and receive a score from the questions you have answered **only**, with that number divided by the TOTAL number of questions on the test.

During the summer between the junior and senior years, each radiography student will take the National Board Exam in Radiography, administered by the American Registry of Radiologic Technologists (ARRT). This 200 question test has a minimum passing score of 75%. Therefore, to better prepare our students to take and pass this National Board Exam, the Radiologic Sciences Program uses a grading scale that is more stringent than the rest of the University.

Grading Scale:

- 93 - 100 - A -- exceptionally high achievement
- 85 - 92 - B -- high achievement
- 75 - 84 - C -- satisfactory achievement
- 0 - 74 - F -- unsatisfactory achievement

All Radiography students must pass each of their Radiologic Sciences prefix courses (RAD) with a grade of “C” or better in order to satisfy Program requirements, to graduate, and to pass the National Board Exam in Radiography. This grade of “C” or better is based upon the Radiologic Sciences grading scale.

Any Radiography student that fails a Radiologic Sciences course will not continue in our Program. When course failure occurs, the student will meet with the appropriate faculty member and academic advisor to discuss the student's future educational plans/goals. This discussion may include referring the student to the University Career Services office www.siu.edu/~ucs; Woody Hall B204; Ph: 618-453-2391) for testing via the “Strong Interest Inventory” to identify the academic majors that best fit the student’s personality, values, interests, and skills.

PASSING THE ARRT BOARDS:

****Students have to take and pass the ARRT Board exam by July 1st before they begin their fall semester of specialization classes (CT/MRI and Radiation Therapy).****

ADA Accommodations:

Under the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act, educators and students have both rights and responsibilities. It should be the mutual goal of the student and the university to maximize the likelihood that students with disabilities succeed. Accommodation sometimes is necessary.

If you think you have a learning disability or know you have a disability but have not been tested, then please contact SIUC Disability Support Services at 453-5738 for an appointment for the evaluation of your learning disability.

Once you have been diagnosed as having a learning disability, we, the faculty of the Radiologic Sciences Program, strongly encourage you to tell us what type of learning disability and what type of accommodation is needed to help you succeed in our Program. If you do not notify us (prior to the end of the first week of the semester) that you have a disability, **and** you do not request accommodation during this course, then you accept full responsibility for your own success or failure in this course.

Ultimately, YOU are responsible for your own success or failure and the resulting consequences.

ATTENDANCE:

Please note:

- 1. Due to the frequently graphic content presented in this course, bringing infants and/or children to class/lab is strongly discouraged!**
- 2. Please turn off all cell phones, MP3 players, PDAs, iPods, headsets, pagers, beepers, all other personal communication devices, and remove all types of earphones/earbuds!!** If it's necessary to be in constant communication with your children, their schools, business associates, spouse, friends, etc., then, now is not the right time for you to be pursuing our Radiologic Sciences Program.

A record of daily attendance is kept. **Attendance is mandatory for this course.** Habitual tardiness to lecture and/or lab will result in points being deducted from each final grade. **Each late arrival or absence will result in 0.5 point, daily, deducted from the student’s final grade.**

Any student that misses class is responsible for the material covered. He or she should get notes from other students and contact the course instructor for the missing material.

During the semester, if a student chooses to drop out of the Radiologic Sciences program, or this course, that student must meet with the course instructor to discuss the student's reasons for leaving the course.

Keep in mind that dropping below "full-time" status will jeopardize the student's bank loans, financial aid, scholarships, Veterans benefits, housing, academic standing, time to degree, athletic status and/or international student visa. Since thoughts and feelings often influence a student's behavior and academic performance, any student having doubts or second thoughts about continuing in this Program should talk to any of the Radiologic Sciences faculty.

Building Emergency Response Protocols

University's Emergency Procedure Clause:

Southern Illinois University Carbondale is committed to providing a safe and health environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on Campus, available on the BERT website, www.bert.siu.edu, the Department of Public Safety's website, www.dps.siu.edu (disaster drop down) and in the Emergency Response Guidelines pamphlet, "Know how to respond to each type of emergency".

Instructors will provide guidance and direction to students in the classroom and X-ray labs in the event of an emergency affecting your location. ***It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.*** The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

Disabled Students:

Instructors and students in the class will work together as a team to assist disabled students out of the building safely. Disabled students will stay with the instructor and communicate with the instructor what is the safest way to assist them.

Earthquake:

In the event of an earthquake you are advised to take cover quickly under heavy furniture or near an interior wall, a corner, to avoid falling debris. Outside the building are trees and power lines and debris from the building itself that you will need to stay away from. In the building, large open areas like auditoriums are the most dangerous. Do not try to escape on a stairway or elevator. Do not hide under a stairway. We do not recommend that you stand in a doorway because the door could shut from the vibrations and crush your fingers trapping you there.

Fire:

During the fall semester we have a Fire Drill.

Pick up your belongings and your instructor will lead you to either the North or South parking lot depending on what part of the building your class is in. You must stay with your instructor so he/she can take roll calls. As soon as the building is all clear, you will be allowed to return to class.

These drills are to train instructors and the Building Emergency Response Team to get everyone to a safe place during an emergency.

Tornado:

During the spring semester we have a Storm Drill.

Pick up your belongings and your instructor will lead you to a safe area of the basement. No one will be allowed to stay upstairs. Stay away from windows. The drill should not last more than 10 minutes. You must stay with your instructor so he/she can take roll calls. **Students need to be quiet in the basement** as the BERT members are listening to emergency instructions on handheld radios and cannot hear well in the basement.

Bomb Threat:

If someone calls in a bomb threat, class is suspended and students will be asked to pick up their belongings, evacuate the building and leave the premises. Do not leave anything that is yours behind. We will not allow anyone back into the building until the police and bomb squad give us an all clear. **DO NOT USE YOUR CELL PHONES.** Some bombs are triggered by a cell phone signal.

Shooter in the Building:

When it is safe to leave, move to a safe area far from the building where the shooter is located. If you have any information about the shooter, please contact the police after you return home. If you cannot leave, go into a room, lock the door, turn out the lights, and if possible, cover the glass on the door. Silence all cell phones after one person in the room you are in calls the police and informs them of your location and how many are in the room. Be quiet and wait for the police to arrive. The police are looking for one or more shooters, and they have no way of knowing if the shooter is in the room with you. For that reason, when the police enter the room, no one should have anything in his/her hands and each person **MUST** raise his/her hands above his/her head.

Women's Self-Defense Class:

For interested female students and female faculty and staff, the SIU Public Safety Department sets up free self-defense classes. The SIU Public Safety Department will be teaching this class. They teach a free class in the fall and spring at the Rec Center. In the fall you would register at the Rec Center for the Women's Self-Defense Class or RAD (Rape Aggression Defense) as it is sometimes called. If you have questions about registering for the class, you can send an email to lavong@siu.edu. LaVon is the contact in the Dean's Office in the Communications building that will assist you to try to find the class you need.

TIME FRAMES & WORK RESPONSIBILITIES

August 24 – December 18, 2015

BOLD font indicates Lab activity

DATE	LECTURE	ASSIGNMENT
Aug. 24, 2015	<u>1st Week</u> Introduce course & syllabus; Introduce Educational Survival Skills. Sign-Up for 1 X-ray Lab Orientation Meet in ASA room C011B—the larger X-ray Lab—for this Orientation, at the specified time.	First Week Survival HO
<i>The official X-ray Labs begin the 2nd week of the semester: the week of August 31, 2015.</i>		
Aug. 26	Radiation Protection Video Introduce Vocabulary Terms	Topical Obj.; Merrill's 13th ed. Vol. 1, Chapt. 3.
Aug. 28	Dosimeter Application forms to complete Finish Educ. Survival, as needed.	
Aug. 31	<u>2nd Week</u> Hand & Wrist Positioning; Position Hand & Wrist	Merrill's Vol. 1, Chapt. 4; Frank et al, Vol. 1, Chapt. 4.
Sept. 2, 2015	Continue Hand & Wrist Positioning Hand & Wrist continued.	Course Outline & Topical Objectives.
Sept. 4	<i>*TEST #1* on Education Survival Skills, Vocabulary Terms, Hand & Wrist Positioning & Anatomy.</i> Test Hand & Wrist	
Sept. 7, 2014	<u>3rd Week</u> LABOR DAY – NO SCHOOL	Topical Objectives & Course Outline.
Sept. 8 (Tuesday)	Labor Day Make-Up Labs in Afternoon for: Position Forearm & Elbow	
Sept. 9 (Wednesday)	Forearm & Elbow lecture; Position Forearm & Elbow	Merrill's Vol. 1, Chapt. 4; Frank et al, Vol. 1, Chapt. 4.
Sept. 10 (Thursday)	Labor Day Make-Up Labs in Afternoon (if needed) for: Position Forearm & Elbow	
Sept. 11	Finish Forearm & Elbow; Start Humerus lecture. Test Forearm & Elbow	See Course Outline & Topical Outline.
Sept. 14	<u>4th Week</u> Finish Humerus; Start Shoulder Girdle & Joints of Upper Extremity. Position Humerus & Shoulder	Merrill's Vol. 1, Chapt. 3–5. Frank et al, Vol. 1, Chapt. 4-5.
Sept. 16	Shoulder & Scapula positioning; Position Humerus & Shoulder	Course outline & Topical Objectives.

DATE	LECTURE	ASSIGNMENT
Sept. 18	<i>*TEST #2* on Positioning & Anatomy of Forearm, Elbow, Humerus & Joints of Upper Extremity.</i> Test Humerus & Shoulder	
Sept. 21	<u>5th Week</u> Start Clavicle, A-C Joints & Rib lecture. Position Scapula & Clavicle	Merrill's Vol. 1, Ch. 5 & 9. Frank et al, Vol. 1, Ch. 5 & 9.
Sept. 23	Finish Clavicle & A-C joints lecture; Position Scapula & Clavicle	Same as above.
Sept. 25	Finish Rib lecture; Review Shoulder Girdle, Review Exposure Factors (mA, kVp, Time & SID). Test Scapula & Clavicle	Same as above.
Sept. 28	<u>6th Week</u> Start Chest lecture; Position Ribs	Merrill's Vol. 1, Ch. 9-10. Frank et al, Vol. 1, Ch. 3, 9-10.
Sept. 30	Finish Chest lecture; Position Ribs	See Course Outline & Topical Objectives.
Oct. 2, 2015	<i>*TEST #3* on Positioning & Anatomy of Shoulder Girdle, & Ribs</i> Test Ribs	
Oct. 5	<u>7th Week</u> Start Abdomen lecture; Position Chest & Abdomen	Merrill's Vol. 1, Ch. 10 Merrill's Vol. 2, Ch. 16-18. Frank et al, Ch. 16-18.
Oct. 7	Continue Abdomen Position Chest & Abdomen	Topical Objectives.
Oct. 9	Finish Abdomen Test Chest & Abdomen	Same as above.
Oct. 12 – 13	FALL BREAK –NO SCHOOL	
Oct. 14 (Wednesday)	<u>8th Week</u> Start Rad. Protection Start Mid-Term Lab Practical Exams	
Oct. 16 (Friday)	Finish Rad. Protection Continue Mid-Term Lab Practical Exams	
Oct. 19	<u>9th Week</u> <i>*Written Mid-term Exam*</i> Finish Mid-Term Lab Practical Exams	
Oct. 21	Start Toes, Foot & Ankle lecture Position Foot & Ankle	Merrill's Vol. 1, Chapt. 6.

DATE	LECTURE	ASSIGNMENT
Oct. 22 (Thursday)	Make-Up Labs in Afternoon for: Position Foot & Ankle	
Oct. 23	Finish Ankle. Rad Measuring Units; Start Lower Leg & Knee lecture; Test Foot & Ankle	Topical Objectives Course Outline.
Oct. 26	<u>10th Week</u> Finish Lower Leg & Knee lecture; Patella lecture. Position Lower Leg & Knee	Merrill's Vol. 1, Chapt. 6; Frank et al, Vol. 1, Chapt. 6.
Oct. 28	Start Femur lecture. Position Lower Leg & Knee	Topical Objectives & Course Outline
Oct. 30	<i>*TEST #4* on Positioning & Anatomy of Foot, Ankle, Lower Leg & Knee</i> Test Lower Leg & Knee	
Nov. 2, 2015	<u>11th Week</u> Finish Femur lecture: Start Hip, Pelvis, & S-I Joints. Position Femur & Hip	Merrill's Vol. 1, Chapt. 7-8. Frank et al, Vol. 1, Chapt. 7-8.
Nov. 4	Finish Pelvis & S-I Joints; Start Sacrum & Coccyx. Position Femur & Hip	Same as above.
Nov. 6	Finish Sacrum & Coccyx; Test Femur & Hip	Merrill's Vol. 1, Chapt. 7-8. Frank et al, Vol. 1, Chapt. 7-8.
Nov. 9	<u>12th Week</u> Lumbar Spine lecture; Position Pelvis & S-I Joints	Topical Objectives & Course Outline
Nov. 11	Veterans Day – NO SCHOOL	
Nov. 12 (Thursday)	Make-up lab if needed Position Pelvis & S-I Joints	Topical Objectives & Course Outline
Nov. 13	<i>*TEST #5* on Positioning & Anatomy of Patella, Femur, Hip, Pelvis.</i> Test Pelvis & S-I Joints.	
Nov. 16	<u>13th Week</u> Lumbar Spine, cont. Start Thoracic Spine Position Sacrum & Coccyx	Topical Objectives on the Bony Vertebral Column.
Nov. 18	Continue Thoracic Spine; Position Sacrum & Coccyx	Topical Objectives on the Bony Vertebral Column.
Nov. 20	Finish T- Spine; Start C-Spine Test Sacrum & Coccyx	Topical Objectives on the Bony Vertebral Column

DATE	LECTURE	ASSIGNMENT
Nov. 23	<u>14th Week</u> Begin Positioning Lumbar Spine	
Nov. 25-27	NO SCHOOL THANKSGIVING BREAK	
Nov. 30	<u>15th Week</u> Continue Cervical Spine. Position Lumbar Spine	Topical Objectives on the Bony Vertebral Column.
Dec. 2, 2015	Finish Cervical Spine Position Lumbar Spine	Same as above.
Dec. 4	Begin Contrast Exams Test Lumbar Spine	
Dec. 7, 2015	<u>16th Week</u> Continue Contrast Exams Position Thoracic & Cervical Spines	Course Outline & Topical Objectives.
Dec. 9	Continue Contrast Exams Position Thoracic & Cervical Spines	Same as above.
Dec. 11	Finish Contrast Exams. Test Thoracic & Cervical Spines	Same as above.
??Open Labs late Friday afternoon for students having Lab Final on Mon., Dec. 8 th ??		
Dec. 14 (Monday)	<u>17th Week</u> : 7:50-9:50am, ASA room C0014 Comprehensive Written exam covering the past 8 weeks. Begin Lab Practical exam covering the past 8 weeks.	
Dec. 15 (Tuesday)	??Open Labs for students having Lab Final, Wed., Dec. 16 th ??.	
Dec. 16 (Wednesday)	Finish Lab Practical exam.	
Dec. 17 (Thursday)	This mandatory clinic review date “MAY” change Clinical Handbook Review, 10am-12noon, ASA room C0014. Introduction to the Clinical Environment. RADS Clinic Handbook ATTENDANCE IS MANDATORY FOR ALL RADIOLOGIC SCIENCES STUDENTS.	
January 19, 2016	Begin RAD 222 Radiography Clinic 1.	

Faculty Expectations of RAD 112 students

1. **Retain knowledge and principles of:**
 - Basic algebra for exposure factor calculations;
 - Anatomy & physiology—RAD 112 takes anatomy to a deeper level;
 - Medical terminology & directional terminology;
 - X-ray physics (RAD 202)—some principles have direct application to Lab work; and,
 - X-ray techniques (RAD 102)—some principles have direct application to Lab work.
2. **Retain current passwords AND access to your siu.edu E-mail account, AND to any other E-mail account you use most frequently.**
 - ✚ SIUC administration & faculty expect you to check your siu.edu E-mail & any other E-mail account at least 2x per week, if not daily.
 - ✚ Make sure your all your RADS faculty E-mail addresses, including Mr. Broomfield, are identified as 'safe' addresses by all your E-mail providers.
 - ✚ Make sure all RADS faculty have the E-mail addresses that you use/check most frequently.
3. **Pay attention to and keep up with ALL deadlines & due dates for paperwork.**
4. **Keep your RAD 122a/b Ehrlich & Daley Patient Care book. You'll need it for RAD 112 Lab Orientation AND for both of your clinical semesters: RAD 222 & RAD 332.**
5. **Punctuality vs. Tardiness**
 - ✓ All RADS students are expected to report to class, to Lab and to the clinical facility at the designated time.
 - ✓ Punctuality is a simple way to prove that you are dependable and reliable, two desirable character qualities that are priceless to your Clinical faculty.
 - ✓ Tardiness is not responsible professional behavior. Habitual tardiness demonstrates:
 - Lack of respect. Lateness cheats classmates of their time.
 - It implies that you are selfish with your time.
 - Lack of organization.
 - ✓ Each late arrival will be considered the equivalent of one absence for grade determination.
A record of daily attendance will be kept. Attendance is mandatory for this course.
 - ✓ Each late arrival or absence will result in 0.5 point, daily, deducted from the student's final grade.
 - ✓ During the clinical semesters, all absences must be made up prior to the end of Final Exam Week.
 - It is the student's responsibility to call the Clinical Instructor within 15-30 minutes of the beginning of the clinical time period if you are not going to be present or if you are going to be late.
 - Failure to do this will be noted on your Behavior Evaluation and will jeopardize your clinical grade.

7. TECHNICAL COMPETENCIES

During the course of the clinical semester, the student shall be able to:

- a. Use oral and written medical communication;
- b. Demonstrate knowledge of human structure, function and pathology;
- c. Anticipate and provide basic patient care and comfort;
- d. Apply the principles of body mechanics;
- e. Perform basic mathematical functions;
- f. Operate radiographic imaging equipment and accessory devices;
- g. Position the patient and imaging system to perform radiographic exams and procedures;
- h. Modify standard procedures to accommodate for patient condition and other variables;
- i. Correctly process radiographs to obtain diagnostic quality radiographs;
- j. Determine exposure factors to obtain diagnostic quality radiographs with minimum radiation exposure;
- k. Adapt exposure factors for various patient conditions, equipment, accessories, and contrast media to maintain appropriate radiographic quality;
- l. Practice radiation protection for the patient, self and others;
- m. Recognize emergency patient conditions and initiate first-aid and basic life-support procedures;
- n. Evaluate radiographic images for appropriate positioning and image quality; and,
- o. Evaluate the performance of radiographic systems, know the safe limits of equipment operation, and report malfunctions to the proper authority.