

**SALT LAKE COMMUNITY COLLEGE  
Radiologic Technology Program**

**Course Syllabus**

**Course and Credit Hours:** RADS 2110, 2 credits

**Name of Course:** Radiographic Pathology

**Semester and Term:**

**Class Location and Time:**

**Instructor and Phone:**

**Office Location:**

**Mailbox Location:**

**Email Address:**

**Consultation Hours:**

**Textbook:** None required, all material is online. Students will not be able to print any module pathology material except for reviews. I can recommend several good textbooks for students who are interested.

**Required Equipment:** Computer access

**Link or Instructions for Accessing Online Course Materials:**

Students can access this course in Canvas through their MyPage login.

**Library Link:** For a list of resources that support the program go to:  
<http://libguides.slcc.edu/content.php?pid=16754>

**Prerequisite:** Completion of prior semester courses per established curriculum plan.

**Course Description:** Students learn causes, signs and symptoms of diseases. Students will identify pathology on radiographs. Course includes how diseases impact performance of exams. Technical factors and patient care issues are discussed.

**Student learning Outcomes:**

**1. Module 1**

- Define the following terms related to the study of disease:
  - pathology, etiology, disease, pathogenesis, diagnosis, prognosis, procedure, test, manifestation, symptom, sign, syndrome, frequency, incidence, prevalence, morbidity rate and mortality rate
- Distinguish between a structural disease and a functional disease and give examples of each.
- For structural diseases, describe the following:
  - lesion, congenital abnormality, hereditary disease, acquired injuries, inflammatory diseases, necrosis, sublethal degeneration, hyperplasia, and neoplasia
- Describe the following causes of diseases:
  - physical, chemical, microbial, endogenous, valvular disease, anoxia, hypoxia, ischemia, infarct, idiopathic, iatrogenic, and nosocomial.
- Define each of the following terms as they relate to injury:
  - acute injury, hypoxia, anoxia, thrombus, embolus, chronic injury, and atrophy
- Describe the sequence of event in inflammation.
- List the 4 cardinal symptoms of inflammation.
- Describe the following types of fluid:
  - transudate, exudates, purulent exudates, suppurative inflammation, abscess and empyema.
- Describe the following as they relate to wound repair:
  - regeneration, granulation tissue, primary union, secondary union.
- Define each of the following fundamental tissues:
  - epithelial, connective, muscle, nervous
- Describe all the following terms as they relate to altered tissue growth:
  - hyperplasia, hypertrophy, metaplasia, neoplasms, benign, malignant, invasion, metastasis, carcinoma, sarcoma, lymphoma, leukemia
- Explain what it means when we say a disease is additive or subtractive.
- Describe what specific radiographic technique changes are needed for both additive and subtractive diseases.
- Identify what specific diseases are additive and subtractive.
- List type of fractures.
- Identify types of fractures on radiographs.

**2. Modules 2 through 10 will cover pathology specific to individual body systems. Objectives include:**

- Provide a description of each pathology covered in that section.
- Describe the etiology of each pathology covered in that section.
- List symptoms of each pathology covered in that section.
- Explain what tests and/or imaging procedures are used to diagnose each pathology covered in that section.
- Describe how each pathology covered in that section is treated.
- Identify each pathology covered in that section on medical images and/or radiographs.

**3. Module 2, Skeletal System**

Pathology covered includes:

|                        |                      |
|------------------------|----------------------|
| Ankylosing spondylitis | Bursitis             |
| Chondrosarcoma         | Gout                 |
| Osteoarthritis         | Osteomyelitis        |
| Osteosarcoma           | Rheumatoid arthritis |
| Scoliosis              | Spina bifida         |
| Spondylolysis          | Spondylolisthesis    |

**4. Module 3, Respiratory System**

Pathology covered includes:

|                             |                                       |
|-----------------------------|---------------------------------------|
| Asbestosis                  | Atelectasis                           |
| Congestive heart failure    | Chronic Obstructive Pulmonary Disease |
| Cystic Fibrosis             | Emphysema                             |
| Hyaline membrane disease    | Pleural effusion                      |
| Pneumonia                   | Pneumothorax                          |
| Respiratory syncytial virus | Tuberculosis                          |

**5. Module 4, Digestive System**

Pathology covered includes:

|                    |                        |
|--------------------|------------------------|
| Achalasia          | Bowel obstruction      |
| Celiac disease     | Crohn's disease        |
| Diverticulosis     | Esophageal varices     |
| Hiatal hernia      | Hirschsprung's disease |
| Intussusception    | Pyloric stenosis       |
| Ulcerative colitis | Volvulus               |

**6. Module 5, Biliary System**

Pathology covered includes:

|              |               |
|--------------|---------------|
| Ascites      | Cholecystitis |
| Cirrhosis    | Hepatitis     |
| Pancreatitis |               |

## **7. Module 6, Urinary System**

Pathology covered includes:

|                    |                           |
|--------------------|---------------------------|
| Bladder cancer     | Ectopic kidney            |
| Glomerulonephritis | Horseshoe kidney          |
| Hydronephrosis     | Polycystic kidney disease |
| Renal calculi      | Ureterocele               |
| Urinary reflux     |                           |

## **8. Module 7, Nervous System**

Pathology covered includes:

|                    |                            |
|--------------------|----------------------------|
| Acoustic neuroma   | Encephalitis               |
| Glioma             | Herniated nucleus pulposus |
| Hydrocephalus      | Meningitis                 |
| Multiple sclerosis |                            |

## **9. Module 8, Circulatory System**

Pathology covered includes:

|                           |                    |
|---------------------------|--------------------|
| Abdominal aortic aneurysm | Atherosclerosis    |
| Cardiomegaly              | Cerebral aneurysm  |
| Coronary artery disease   | Leukemia           |
| Multiple myeloma          | Pulmonary embolism |
| Tetralogy of Fallot       |                    |

## **10. Module 9, Reproductive System**

Pathology covered includes:

|                              |                   |
|------------------------------|-------------------|
| Benign prostatic hypertrophy | Dermoid cyst      |
| Ectopic pregnancy            | Testicular cancer |
| Uterine fibroid              |                   |

## **11. Module 10, Endocrine System**

Pathology covered includes:

|              |                 |
|--------------|-----------------|
| Acromegaly   | Diabetes        |
| Osteoporosis | Paget's disease |
| Rickets      |                 |

### **SLCC Student Learning Outcomes:**

SLCC is committed to fostering and assessing the following student learning outcomes in its programs and courses:

1. Acquire substantive knowledge
2. Communicate effectively
3. Develop quantitative literacies
4. Think critically & creatively
5. Become a community engaged learner
6. Work in professional & constructive manner
7. Develop computer & information literacy
8. Develop lifelong wellness

### **Course Requirements:**

**Exams.** All exams in this online course must be taken by their due dates as listed in the course schedule below by 11:30 pm to receive credit.

**Student Responsibilities.** Students should access this course regularly. Students are expected to be knowledgeable of the requirements of this course and all deadlines. If the student is having difficulty in the course, it is the student's responsibility to make arrangements to take with the instructor. Students are expected to be self-directed and motivated in identifying their learning needs associated with the course content.

**Assignments.** Each assignment has a specific due date as noted on the course schedule.

#### 1. JOURNAL

Students will be required to keep a journal of the pathologies they see on the patients that they radiograph in their hospital. The journals must be posted by the dates required to receive points. A template of information that must be covered for each patient is included in the journal assignment section, and it must be used for submissions. A sample journal is also posted. Journals include:

- a. **Patient history**
- b. **Imaging study done and/or prior imaging studies done**
- c. **Physical description and effect of pathology on the patient**
- d. **Technical adjustments considered for pathology**

e. **Effect of pathology on patient care.**

f. **Effect of pathology on the radiograph.**

Journal Grading Criteria: Students must submit information on 2 patients each time a journal submission is required. Each posting on an individual patient is worth 10 points, for a total of 20 points possible each time a journal entry is required. There are 3 journal assignments due this semester.

**If you do not include pathologies on 2 patients, you get 0 points.**

10 points = Excellent  
All criteria were covered thoroughly.

8 points = Above average  
Most criteria were covered, but one or two were not thorough enough.

6 points = Average.  
Several criteria were not covered or were incomplete

4 points = Below average  
Most criteria were not covered or were incomplete

2 points = Poor  
Very little effort went into the posting

0 points =The student did not contribute in the specified time or not all 2 patients were included.

## 2. DISCUSSION QUESTIONS

Students must also participate in discussion questions. During the course of the semester, 5 discussion questions will be posted to which students must provide a thoughtful answer by the due date. Students are also required to respond to another student.

The initial post must be 200 words  
The response to another student must be 100 words.

**Both posts together are worth 10 points and will be graded as follows.**

10 points = Excellent  
The topic was covered thoroughly.

8 points = Above average  
The topic was covered, but could have been more thorough.  
Some writing corrections are needed.

6 points = Average.  
Parts of the topic were not covered or were incomplete.  
Several writing corrections are needed.

4 points = Below average  
Many parts of the topic were not covered or were incomplete.  
Many writing corrections are needed.

2 point = Poor  
Very little effort went into the posting

0 points =The student did not contribute in the specified time.

**Assessments:**

|    |  |                  |
|----|--|------------------|
| 1. | Module Tests                                       |                  |
|    | Module 1   | 50 points        |
|    | Module 2   | 36 points        |
|    | Module 3   | 33 points        |
|    | Module 4   | 40 points        |
|    | Module 5   | 24 points        |
|    | Module 6   | 31 points        |
|    | Module 7   | 30 points        |
|    | Module 8   | 32 points        |
|    | Module 9   | 18 points        |
|    | Module 10  | 28 points        |
|    |  | <hr/>            |
|    |  | 322 points       |
| 2. | Journal of pathology                               |                  |
|    | 20 points each for a total of 3 postings           | 60 points        |
| 3. | Discussion topics                                  |                  |
|    | <u>10 points each for a total of 5 discussions</u> | <u>50 points</u> |

TOTAL POINTS POSSIBLE FOR THE COURSE 432

Each assignment has a specific due date as noted on the course schedule.  
No late assignments will be accepted.

**Incomplete.** Students must complete all requirements to remain in the program.

**Extra Credit**

No extra credit work.

**Grading:**

|        |           |          |           |
|--------|-----------|----------|-----------|
| 95-100 | <b>A</b>  | 75-77    | <b>C</b>  |
| 90-94  | <b>A-</b> | 71-74    | <b>C-</b> |
| 87-89  | <b>B+</b> | 67-70    | <b>D+</b> |
| 83-86  | <b>B</b>  | 64-66    | <b>D</b>  |
| 80-82  | <b>B-</b> | Below 64 | <b>E</b>  |
| 78-79  | <b>C+</b> |          |           |

**Student Handbook:**

Students must adhere to all policies and procedures of the Radiologic Technology Program as documented in the Student Handbook. It is the student's responsibility to be aware of, and follow, all requirements as listed in the Handbook.

**Emergency Evacuation Procedures**

In case of an emergency situation, elevators should not be used as emergency exits. All class members should exit through the nearest doors on the west side of the building, then proceed toward the round-about on the northeast side of the building. We will then verify that all students are accounted for and unharmed. Please inform your instructor if you require assistance or accommodation during an evacuation. The instructor will identify several students in the class that are willing to provide assistance. If you have a disability, please notify your instructor and fill out an Evacuation Information Form

The SLCC Department of Public Safety is using an app called the Crisis Manager to inform students and staff about Emergency Procedures. The app allows SLCC to instantly update these procedures. To download this app go to the App Store or Google Play Store, type **SchoolDude CrisisManager** in the search box and click "Get" or "Install. For questions regarding the Emergency Procedures or downloading the app to your device, please contact [REDACTED]

**SLCC Institutional Resources:**

For information on SLCC Institutional Resources, please refer to the link on Canvas under Institutional Syllabus



## ACADEMIC GRIEVANCE POLICY

In accordance with the Salt Lake Community College Student Code of Conduct, [http://www.slcc.edu/policies/docs/Student\\_Code\\_of\\_Conduct.pdf](http://www.slcc.edu/policies/docs/Student_Code_of_Conduct.pdf), the grievance policy for students with reference to academics can be found in Section III. Students are encouraged to seek resolution with the instructor(s) whenever possible.

It is the goal of the School of Health Sciences to be forthright and consistent with specific academic policies throughout divisions and programs. This policy singularly addresses academic issues and the general principles for disciplinary actions as noted in the Student Code of Conduct Section III. It should be noted it is up to the faculty's discretion to provide warning (verbal or written), suspension, or dismissal based upon program policy and severity of the issue at hand. It is realized in some health sciences programs a failing grade, as stated in the syllabus and/or policy manual, may result in program dismissal.

**STEP ONE:** A student has the right, as per college policy, to grieve a grade, warning (verbal or written), suspension, or dismissal received within a program of study. A student, as per policy, must make an appointment to meet with the instructor of the class. A meeting, for anything other than a final grade, should be made within ten (10) days of the incident. Final grade disputes require a meeting within 30 days of the student receiving the grade. Every effort should be made to find resolution and provide evidence from both parties with respect to the grade issued.

**STEP TWO:** If a resolution cannot be made, the student must request in writing five (5) business days from the date of meeting with the faculty, a committee review of the grievance to the Associate Dean of the specific division. The grievance will be reviewed by a committee consisting of three (3) to five (5) faculty outside the program in which the student is enrolled. This will include the following members, the Associate Dean and two to four faculty members outside the discipline. The Associate Dean will serve as committee chair. One faculty and the program coordinator of the program involved in the grievance can attend the procedure, as can the student with one representative. Each of these parties will only be allowed to present evidence to the committee and not vote on the issue in question. Legal representation is allowed by either party. The proceedings will be recorded for accuracy. Upon completion of the proceedings, the committee ONLY will vote on the issue(s) noted in the student's grievance. A formal letter will be provided by the committee chair within ten (10) business days of the end of the proceeding with the committee's decision regarding the issue.

**STEP THREE:** If the student is not satisfied with the outcome, they may appeal to the Academic Dean of the School of Health Sciences. This must be done in writing within five

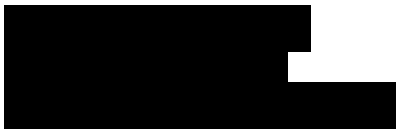
days of receiving the formal letter from the grievance committee chair. The Dean will review the appeal, all evidence, and render a decision to the student within ten (10) days of receiving the formal letter from the student. The decision of the Dean of the School of Health Sciences is final and cannot be appealed.

### *The Disability Resource Center*

SLCC values inclusive learning environments and strives to make all aspects of the College accessible to our students. If you have a disability and believe you need accommodations to improve access to learning materials or the learning environment, please contact the Disability Resource Center:

Although pregnancy is not a disability, our DRC advisors are trained to assist with pregnancy related accommodations in addition to disability related accommodations. We strongly recommend any student who is pregnant or becomes pregnant while in the course notify the DRC. This will allow preventative measures to be taken, safety process in place to protect the student and the unborn child and allow for accommodations.

**Due to risk of fetal exposure to radiation and chemicals while in the course it is strongly recommended that all pregnant students work closely with the DRC.**



Watch the following video to learn more about the DRC: [DRC Accessibility](#)