WASHTENAW COMMUNITY COLLEGE
COURSE-SYLLABUS APPROVAL FORM (CSAF)

RAD 135

For help screens, select a field and press F1

SECTION I. SUBMISSION INFORMATION

1. Course: (Enter proposed discipline, number & title here.)
Discipline/No: RAD 135 **Title:** Pathology for Radiographers **Start Term** Fall ~~Winter~~ 2003
Banner allows only 29 characters and spaces, for the title. Longer titles will have to be abbreviated.

Division Code: HAT Department Code: RAD Org #: 15600 Don't publish: ☐ in College Catalog ☐ in Time Schedule ☐ on Web Page

2. Type of Approval: (applies to both new courses and changes)
- ☐ Full Approval
- ☐ Conditional Approval
- ☐ This proposal previously received conditional approval for the term: _____

3. Reason for Submission: This Course is being submitted for: (check all that apply)
- ☐ New Course Approval (Skip 4 and go directly to 5.)
- ☐ Five-year Syllabus Review ☐ No changes to course (Submit complete syllabus)
- ☒ Major Change(s) (Submit complete syllabus)
- ☐ Minor Change(s)* (For fully approved courses, submit revised sections only.)
- ☐ Reactivation of Inactive Course
- ☐ Inactivation (Submit this page only.)

*If requesting a change to a course that has conditional approval, please submit a complete syllabus.

4. Change Information: (Check all that apply. Make proposed changes in Section III, Course Syllabus.)

Minor Changes
- ☐ Course Discipline/Number (was _____)
- ☐ Course Title (was _____)
- ☐ Course Description
- ☐ Class Capacity (was: ____)
- ☐ Pre or Co-requisites
- ☐ Course Objectives (minor changes)
- ☐ Distribution of Contact Hours (contact hours were: lect: _____ lab _____ clin _____ other _____)
- ☐ Other _____

Major Changes (will be reviewed by Curriculum Committee.)
- ☒ Credit hours (credits were: 2)
- ☐ Change in Grading Method
- ☒ Total Contact Hours (total contact hours were: 30)
- ☐ Approval for offering an Honors Section (Attach Approval Form.)
- ☐ Approval for offering Distance Learning Sections (Attach Distance Learning Approval Form)
- ☐ General Education Distribution Course: Add ☐ Remove ☐ (Attach General Education Course Approval Form)
- ☐ Pre or Co-requisites (that affect other departments)

5. Rationale: (for new course or course change) Changes are are being made in response to data from Assessment: yes ☐ no ☒
The increase in contact hours is being expanded because of the increase in course content.

SECTION II. SIGNATURES

1. Department Review (To be completed by department chair)
Will any new resources be required? No, none anticipated ☒ Yes ☐ (If yes, attach list with projected costs)
You must consult all departments that may be affected by this course. List departments contacted below and attach relevant documents.

No other departmemts will be affected

Does the department support approval of this course? ☒ yes ☐ no (if no, initial and return to preparer with rationale.)

Print: Jerry Baker Faculty/Preparer Signature Jerry Baker Date: 3-19-03

Print: Connie Foster Department Chair Signature Connie Foster Date: 3/19/03

2. Division Review (To be completed by division dean; if recommendation is no, initial and return to department with rationale.)
Is this a curricular priority for your division? ☒ yes ☐ no (Comment _____)
What is the estimated enrollment? _____
Recommendation ☒ Yes ☐ No _____ Dean's/Administrator's Signature Date 3/19/03

3. Curriculum Committee Review (Attach additional comments if necessary and forward to Executive Vice President.)
Recommendation ☒ Yes ☐ No Ruth A. Hatcher Curriculum Committee Chair's Signature Date 4.17.03

4. Vice President for Instruction and Student Services Approval (Attach additional comments if necessary.)
Approval ☒ Yes ☐ No Roger M. Paley Vice President's Signature Date 4/21/03

ACS Code _____ Entered in Catalog PROCESSED 4/24/03 Entered in Access _____ Log File 4/21 gz
Approved for General Education Area/Group MAY 05 2003 Syllabus Date _____

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SECTION III. COURSE SYLLABUS

A. COURSE DETAILS (Start with #1.)

Discipline & No.: RAD 135 **Title:** Pathology for Radiographers

Course and title will automatically appear above upon saving or previewing

1. **Description:** (Please be brief. Explain acronyms if used.)

This course is a survey of basic pathology and includes a study of disease processes and how various diseases alter the appearance and function of human organisms, including infectious diseases, tumors, chemical injuries, and the conditions of illness involving the systems of the body.

2. Credit Hours: 3

If Variable credit, Give Range: _____ to _____ credits

If repeatable for credit, how many times _____

3. Contact Hours per Semester:

Lecture: 45
Lab: _____
Clinical: _____
Other: _____
Total Contact Hours: 45

4. Class Capacity: 30

(If nonstandard, attach Class Capacity Exception form.)

5. Course Options:

- ☐ Distance learning (Attach DL Form)
- ☐ Honors (Attach Honors Addendum.)
- ☐ P/NP Grading

6. Prerequisite(s)

and/or "("	Course	Min Grade	*Concurrent Enrollment	Test Name	Min. Score	")"	**Level I	**Level II
			☐				☐	☐
☐			☐				☐	☐
☐			☐				☐	☐
☐			☐				☐	☐
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Other Prerequisites

Consent Required ☐

7. Corequisites: (limit of 2)

* Can take prerequisite before or concurrently with this course.
**Level I is enforced in Banner; Level II is enforced by instructor on 1st day of class.

8. Course Purpose:

- ☒ Program Requirement
- ☐ General Education
- ☐ Program Support
- ☐ Basic Skills/Developmental
- ☐ Transfer
- ☐ Industry/Professional Dev
- ☐ Enrichment

If a program requirement, specify the program(s)

Radiography

Please send syllabus for Transfer evaluation to:

- ☐ EMU
- ☐ UM

Accepted for transfer: (attach documentation)

- ☐ EMU
- ☐ UM

9. Terms Course will be offered:

Terms	Session Length (e.g. 15 weeks, 1st 7_ weeks, etc.)	Day	Eve	Even years only	Odd years only
☐ Fall		☐	☐	☐	☐
☒ Winter	15 weeks	☒	☐	☐	☐
☐ Spr/Summer		☐	☐	☐	☐

B. MAJOR INSTRUCTIONAL UNITS

A major instructional unit is a grouping of topics that naturally relate to one another. Add additional numbers as needed. (This section is unprotected so that you can cut and paste from other documents.

1. Understand the general principles of pathology.
2. Understand the use and function of contrast media.
3. List and describe diseases of the skeletal system.
4. List the inflammatory disorders of the hepatobiliary system.
5. Recognize the diseases of the alimentary tract.
6. State the diseases of the genitourinary system.

7. Understand the disorders of the male and female reproductive systems.
8. State the diseases that effect the respiratory system.
9. Understand the function and disorders of the circulatory and lymph systems.
10. Understand the disorders of the central nervous system.
11. Understand the basic functions of the endocrine system.

D. INSTRUCTIONAL METHODS, EVALUATION CRITERIA, AND ASSESSMENT

1. Instructional Methods: (Check the appropriate boxes and describe as needed.)

☒ Lecture/Discussion	☐ Performances
☐ Clinical Instruction	☐ Group Critiques
☐ Laboratory Assignments	☐ Field Trips
☐ Internet Assignments	☐ Telecourse
☐ Computer Simulations	☐ ITV Course
☐ On-Site Work Experience	☐ Self-Paced Instruction
☐ Team Assignments	☐ Other
☐ Demonstrations	☐ Other

2. Evaluation Criteria: (Check the appropriate boxes and describe as needed.)

☒ Attendance	☒ Quizzes
☒ Class Discussion	☒ Tests
☐ Papers	☐ Midterm
☐ Portfolios	☒ Final Exam
☐ Projects	☐ Presentations
☐ Reports	☐ Individual Performance
☐ Clinical Assignments	☐ Group/Team Performance
☐ Home Work	☐ Other

3. Assessment of Student Achievement: (Indicate methods that will be used for NCA mandated assessment of student academic achievement at the course and (if applicable) general education levels)

☐ Departmental Exam	☐ Pre-test/Post-test
☐ Follow-on Tracking	☐ Simulations
☒ Standardized Test	☐ Comprehensive Project
☐ Portfolio Assessment	☐ Other

F. EQUIPMENT, FACILITIES, TEXTS, MATERIALS, AND SUPPLIES

1. Special Equipment/Facilities : (Check the appropriate boxes and describe as needed.)

☐ Lab equipment	☐ ITV Classroom
☐ Computer Lab	☐ Off-Campus Sites
☐ CD ROM's	☐ Testing Center
☐ Data Projector/Screen	☐ Other
☐ VCR	☐ Other
☐ TV Monitor	☐ Other

2. Texts: (Please indicate if no text is required.)

Title: Radiographic Pathology (required)
Author: Watson, T.A. Copyright Yr: 1996
Publisher: Mosby Est. Cost: $50.00

Title: Medical Dictionary (recommended)
Author: Copyright Yr:
Publisher: Est. Cost:

Title:
Author: Copyright Yr:
Publisher: Est. Cost:

Title:
Author: Copyright Yr:
Publisher: Est. Cost:

Additional Texts:

3. Supplies and/or Uniforms students will have to Acquire: (e.g. calculators, uniforms, tools, etc.)

Descriptions	**Cost Estimates**

4. Reference Materials that will be used: (e.g. journals, books, manuals, maps, LRC reserves, etc.)

Title/Name	**Location**

C. INSTRUCTIONAL OBJECTIVES

DIRECTIONS: Use student outcomes-based language. (Example: Upon visiting a gravel pit students will observe, analyze and describe in one page the weathering processes.) Units should match those listed in Section B.

(This section is unprotected. You may cut and paste from other documents as needed.)

Pathology Principles
Learning Outline

Goal: 1. To review the basic terminology related to general principles of pathology.

2. To learn the difference between structural and functional diseases.

3. To learn the causes of diseases.

4. To become familiar with the different types of injury and inflammation.

5. To recognize the different types of growth disturbances.

6. To review the types of tissue and how tissue repairs itself.

P.O. 1-1 Define the various terms used in general pathology.

1-2 Define structural disease and explain its formation.

1-3 Define functional disease and give examples.

1-4 List and define the causes of disease.

1-5 Describe acute and chronic injury.

1-6 Explain the various aspects of inflammation and how inflammation heals.

1-7 List the different types of fundamental tissue and give examples.

1-8 Explain growth disturbances and give examples of benign and malignant types.

Reference & Evaluation

Reference: Text, Chapter One Evaluation: Test on Chapter One

Contrast Media
Learning Outline

Goal: 1. To learn the three classifications of contrast media.

2. To be able to list the characteristics of the contrast media used in radiography.

3. To recognize the uses and contraindications of contrast media and the treatment for reactions to contract media.

P.O. 2-1 List all contrast media with their indications, contraindications, and use in special procedures.

2-2 Define the classifications of contrast media and give examples of each.

2-3 List the characteristics of radiopaque and radiolucent contrast media.

2-4 Explain the composition of positive contrast media.

2-5 Describe the difference between ionic and nonionic contrast media

2-6 List the adverse reactions possible to contrast media and what treatment should be given.

2-7 Explain how contrast media are chosen for a procedure.

Reference & Evaluation

Reference: Text, Chapter Two Evaluation: Test on Chapter Two

Skeletal System
Learning Outline

Goal: 1. To review the anatomy and physiology of the skeletal (osseous) system.

2. To learn theories to perform special radiologic procedures on the skeletal system of the body.

3. To learn the basic pathologic conditions of the skeletal system.

P.O. 3-1 Define the classifications of the skeleton.

3-2 List and give examples of the five types of bones in the body.

3-3 List, define, and give examples of the three types of joints in the body.

3-4 Describe the structure of bones.

3-5 Describe the physiology and function of bones.

3-6 List and describe five different special radiologic procedures for the skeletal system.

3-7 Describe arthrography.

3-8 List the causes and describe the different types of congenital anomalies discussed.

3-9 Describe nonneoplastic bone changes as well as neoplastic bone changes and give examples of each.

3-10 Describe and define the different types of fractures discussed.

3-11 Describe the six types of arthritis listed.

3-12 List other joint diseases.

Reference & Evaluation

Reference: Text, Chapter Three Evaluation: Test on Chapter Three

Hepatobiliary System
Learning Outline

Goal: 1. To review the anatomy and physiology of the liver, gallbladder, bile ducts, and pancreas.

2. To learn the special modalities and procedures that are used to image the liver, gallbladder, bile ducts, and pancreas.

3. To become acquainted with the pathophysiology and radiographic manifestations of all common disorders of the biliary system.

P.O. 4-1 Identify the anatomy of the liver, gallbladder, bile ducts, and pancreas.

4-2 Explain the physiology and function of the liver, gallbladder, and pancreas....

4-3 Explain the impact that the function of each organ has on the other organs.

4-4 Describe the impact that the physiology and function of each organ has on pathologies.

4-5 List the various special-imaging procedures for the liver, gallbladder, bile ducts, and pancreas.

4-6 List and describe the various forms of hepatitis.

4-7 Define the four forms of jaundice.

4-8 Explain acute and chronic cholecystitis.

4-9 Describe the difference between the different types of cholelithiasis.

4-10 List and describe the three pathologies of the pancreas discussed.

~~Reference & Evaluation~~ Unit 5

Reference: Text, Chapter 4 Evaluation: Test on Chapter 4

Goal: 1. To review the basic anatomy of the esophagus, stomach, small bowel, and large bowel.

2. To review the physiology and function of the esophagus, stomach, small bowel, and large bowel.

3. To learn the special imaging modalities and procedures that are performed on the esophagus, stomach, small bowel, and large bowel.

4. To understand the pathophysiology and radiographic manifestations of all of the common pathologic conditions of the gastrointestinal system.

P.O. 5-1 Identify all anatomic components of the esophagus, stomach, small bowel, and large bowel and explain their relationship to each other as well as to other organs.

5-2 Explain the physiology and function of these four areas of the digestive tract.

5-3 Describe how each organ functionally affects the others.

5-4 List and describe the various special imaging procedures performed for each area.

5-5 Identify the radiographic manifestations of the listed pathologies of the gastrointestinal tract.

5-6 Describe the various pathologic conditions affecting the gastrointestinal system.

Reference & Evaluation

Reference: Text, Chapter Five Evaluation: Test on Chapter Five

Gastrointestinal System
Learning Outline

Goal: 1. To review the anatomy and basic physiology of the urinary system.

2. To learn theories that will enhance understanding of the special procedures used to demonstrate the urinary system.

3. To learn pathologic conditions related to the urinary system.

P.O. 6-1 Draw the structure of the kidney.

6-2 Draw the internal architecture of the kidney.

6-3 Describe the process of urine production and passage.

6-4 Describe cystography.

6-5 List and define the two types of intravenous pyelograms.

6-6 Define the difference between retrograde pyelography and retrograde urethrography.

6-7 Explain the use and advantage of ultrasonography in renal imaging.

6-8 List two types of nuclear medicine studies of the urinary system.

6-9 Describe extracorporeal shock wave lithotripsy.

6-10 Define the basic urinary pathology terminology.

6-11 Describe the different types of congenital anomalies found in the urinary system.

6-12 Recognize the various types of benign conditions on a radiograph and explain each condition.

6-13 Define the various types of malignant conditions.

Reference & Evaluation

Reference: Text, Chapter Six Evaluation: Test on Chapter Six

Reproductive System
Learning Outline

Goal: 1. To review the basic anatomy and physiology of both the male and the female systems.

2. To become acquainted with the pathophysiology of the reproductive system.

3. To become familiar with the radiographic manifestations of all the common congenital and acquired disorders of both the male and the female reproductive systems.

P.O. 7-1 Describe the physiology of the male and the female reproductive systems.

7-2 Identify anatomic structures on diagrams and radiographs of the reproductive system.

7-3 To become familiar with the radiographic manifestations of all the common congenital and acquired disorders of both the male and the female reproductive systems.

7-4 Describe the various pathologic conditions affecting the female reproductive system and their radiographic manifestations.

7-5 Describe the various pathologic conditions affecting the male reproductive system. and their radiographic manifestations.

7-6 Describe the special radiographic examinations of the female reproductive system.

7-7 Explain mammography and its importance in women's health.

Reference & Evaluation

Reference: Text, Chapter Seven Evaluation: Test on Chapter Seven

Respiratory System
Learning Outline

Goal: 1. To review the basic anatomy and physiology of the respiratory system.

2. To become acquainted with the pathophysiology of the respiratory system.

3. To become familiar with the radiographic manifestations of all the common congenital and acquired disorders of the respiratory system.

P.O. 8-1 Identify anatomic structures on both diagrams and radiographs of the respiratory system.

8-2 Describe the physiology of the respiratory system

8-3 Describe the various pathologic conditions affecting the respiratory system and their radiographic manifestations.

8-4 Describe the special radiographic examinations of the respiratory system.

8-5 Define terminology relating to the respiratory system.

Reference & Evaluation

Reference: Text, Chapter Eight Evaluation: Test on Chapter Eight

Circulatory and Lymph Systems
Learning Outline

Goal: 1. To review the basic anatomy and physiology of the circulatory system and the lymph system.

2. To become acquainted with the pathophysiology of the circulatory system and the lymph system.

3. To become familiar with the radiographic manifestations of all the common congenital and acquired disorders of the circulatory system.

4. To learn the congenital and acquired disorders of the lymph system.

P.O. 9-1 Describe the internal anatomy of the heart.

9-2 List the components of the lymph system.

9-3 Describe the physiology of the circulatory system.

9-4 Describe the physiology of the lymph system.

9-5 Describe the various pathologic conditions affecting the circulatory system and their radiographic manifestations.

9-6 List and define the important pathology of the lymph system.

9-7 Describe the special radiographic examinations of the circulatory system.

9-8 Describe the special radiographic examinations of the lymph system.

9-9 Define terminology relating to the circulatory system.

9-10 Define terminology relating to the lymph system.

Reference & Evaluation:

Reference: Text, Chapter Nine Evaluation: Test on Chapter Nine

Nervous System

Learning Outline

Goal: 1. To review the basic anatomy and physiology of the central nervous system and the

2. Describe the anatomic components of the central nervous system.

3. To review the imaging modalities for the nervous system.

4. To become familiar with the radiographic manifestations of all the common congenital and acquired disorders of the nervous system.

P.O. 10-1 Describe the physiology of the nervous system.

10-2 Describe the anatomic components of the central nervous system.

10-3 Name and describe the imaging modalities for the brain and the spinal canal.

10-4 Define terminology relating to the skull, brain, and spinal cord.

10-5 Describe the various pathologic conditions affecting the skull and nervous system and their radiographic manifestations.

Reference & Evaluation

Reference: Text, Chapter Ten Evaluation: Test on Chapter Ten