COURSE OUTLINE

Instructor: Mary Casey-Gifford, B.S., R.T., (R)  caseym@mccc.edu

Course Number: RAD 224
Course Title: Introduction to Pathology
Credits: 2

Hours: 2 lecture
Pre-requisites: RAD 228, RAD 217
Co-requisites: RAD 220, RAD 240

Catalog description (2018-2019 Catalog):
Provides a survey of the disease process and pathological conditions. An in-depth study of diseases commonly demonstrated radiographically is presented.

Required texts:
Title: Radiographic Pathology
Author: TerriAnn Linn-Watson
Publisher: Wolter Kluwer
Edition: Second

Title: Radiographic Pathology Workbook
Author: TerriAnn Linn-Watson
Publisher: Wolter Kluwer
Edition: Second

Revision date: Spring 2020
Course Coordinator: Sandra L. Kerr, 609-570-3337, e-mail: kerrs@mccc.edu
Course Competencies/Goals

Upon completion of this course the student will be able to:
1. Gain an understanding of the pathology of physiologic processes and conditions that can affect tissues, organs, and body systems.
2. Utilize pathology and radiography principles to develop the technical competence to perform diagnostic imaging procedures on patients afflicted with disease.
3. Develop an understanding of the intricacies associated with providing direct patient care with patients afflicted with disease in today’s health care setting.
4. Apply pathology principles to recognize the difference between abnormal and normal radiographic appearances.
5. Understand the significance of the variety of imaging and medical procedures used in diagnosing diseases.

Course-specific Institutional Learning Goals (ILGs)/General Education Goals.

Institutional Learning Goal 1. Written and Oral Communication in English. Students will communicate effectively in both speech and writing.
Institutional Learning Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.
Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.
Institutional Learning Goal 5. Social Science. Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.
Institutional Learning Goal 6. Humanities. Students will analyze works in the fields of art, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language.
Institutional Learning Goal 7. History. Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.
Institutional Learning Goal 8. Diversity and Global Perspective: Students will understand the importance of a global perspective and culturally diverse peoples
Institutional Learning Goal 10. Information Literacy: Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.
Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.
Unit Objectives:
Week #1 – 2 Pathology Principles, Neoplasia & Genetic Disorders
Following the completion of week 4, the student will be able to:
- Define basic terms related to pathology. (CG 1; ILG 1, 3)
- Discuss the classifications of disease. (CG 1; ILG 3)
- List the causes of tissue disruption. (CG 1; ILG 3)
- Describe the healing process. (CG 1; ILG 3)
- Identify complications connected with the repair and replacement of tissue. (CG 1; ILG 3)
- Identify diseases caused by or contributed to by genetic factors. (CG 1; ILG 3)

Weeks 2 – 4: Skeletal System
Weeks 5 - 8: Respiratory & Circulatory Systems
Weeks 9 - 12: Gastrointestinal System & Urinary Systems

Following the completion of week 14, the student will be able to:
- Describe the various systemic classifications of disease in terms of etiology, manifestations, diagnosis, treatment, common sites, and prognosis. (CG 1, 2, 4, 5; ILG 1, 3)
- Classify diseases in terms of their attenuation of x-ray photons; correlate to technical factor selection. (CG 1,2; ILG 1, 2, 3)
- Describe the radiographic appearance of common diseases of the skeletal, respiratory, circulatory, gastrointestinal, and urinary system. (CG 1, 4; ILG 1, 3)
- Correlate diagnostic imaging procedures with medical procedures used to diagnose disease. (CG 1, 5; ILG 1, 3)
- Identify radiographic positions, imaging procedures, and interventional techniques appropriate for diseases common to each body system. (CG 5; ILG 1, 3)
- Discuss the role of the radiographer when performing radiographic procedures on patients diagnosed with disease. (CG 2,3; ILG 1, 3, 9)

Attendance Policy

Attendance Policy:

1. Students are expected to be in attendance at the scheduled start time of all class and laboratory sessions; late arrival is disruptive to the class and instructor. Attendance will be taken for all lectures. The following grading system will be recorded for late arrival and absences:

A. Lecture:
   1. Three points will be deducted from the final lecture grade for each late arrival to a scheduled lecture.
   2. Five points will be deducted from the final lecture grade for each absence from a scheduled lecture.

2. Make-up examinations are not permitted. Students who miss an examination must provide a valid, documented excuse the next class session. Valid excuses include emergent situations that arose unexpectedly and could not be mitigated at the time of the exam. Examples include but are not limited to death in family, illness,
vehicular repair with supporting documentation from the respective agency. Planned vacations, events, advanced request for time away are not considered valid excuses. If determined valid by the instructor, the final exam weight will be calculated with the additional missed exam weight. This will serve as verification of material comprehension covered on the missed examination. A grade of zero will be recorded for invalid excuses and the final exam will be calculated as listed in the course outline.

3. Students who miss the final examination must contact the instructor by email or phone by the start of the examination administration. A valid, documented excuse must be submitted within two days of the final exam administration date. Valid excuses include emergent situations that arose unexpectedly and could not be mitigated at the time of the final exam. Examples include but are not limited to death in family, illness, vehicular repair with supporting documentation from the respective agency. Planned vacations, events, advanced request for time away are not considered valid excuses.

If determined valid, the make-up final exam date will be determined by the course instructor in consultation with the student. The final exam must be taken prior to the start of the summer term to be eligible for the summer term radiography courses.

4. Late homework will only be accepted with a valid, documented excuse within one week of the original due date... Late assignments will only be given half credit.

5. There are no make-up quizzes. Students who miss a quiz without a valid documented excuse will be given a zero (0). Quizzes will be administered at the start of class. Late arrivals will not be permitted additional test taking time. In cases of a valid, documented excuse, the missed quiz will be dropped from the grade calculation.

6. Cell phones and other electronic devices must be OFF or in vibration mode upon entering the classroom. Students may not receive a call in vibration mode, send or receive a text message during lecture without permission from the instructor. Permission will be granted for lecture only on an individual basis for emergency purposes. Cell phones and all electronic devices must be OFF during examinations and placed at the front of the classroom with personal belongings. Items may be retrieved at the conclusion of the examination.

**Method of Instruction**

This is a fourteen-week course that provides instruction in pathological processes and conditions of the bodily systems. Discussion of the clinical applications of these diseases and conditions is encouraged.

**Evaluation and Grading System**

A grade of "C+" (77%) or higher must be achieved in the course in order to continue taking radiography courses the next semester. There will be a minimum of 4 exams, an oral presentation with a written report, and an assignment of 5 self-assessments from the workbook.

Details of quiz and examination formats and dates will be provided by the instructor. A rubric is attached that will be used to evaluate the oral presentation with the written report.
The grading is as follows:
Tests = 45%
Oral Presentation = 25%
Chapter self-assessments = 15%
Quizzes = 15%

**Academic Integrity**

Mercer County Community College is committed to Academic Integrity -- the honest, fair and continuing pursuit of knowledge, free from fraud or deception. This implies that students are expected to be responsible for their own work.

Academic Integrity is violated whenever a student:
A. Uses or obtains unauthorized assistance in any academic work.
B. Gives fraudulent assistance to another student.
C. Knowingly represents the work of others as his/her own, or represents previously completed academic work as current.
D. Fabricates data in support of an academic assignment.
E. Inappropriately or unethically uses technological means to gain academic advantage.

For any academic integrity violation, the faculty member will determine the penalty and shall notify the chairperson of the Academic Integrity Committee of the violation and the penalty imposed. Students should refer to the MCCC Student Calendar/Handbook for the complete policy and OMB210 [http://www.mccc.edu/academic_policies_integrity.shtml](http://www.mccc.edu/academic_policies_integrity.shtml).

**Accessibility**

Mercer County Community College is committed to ensuring the full participation of all students in its programs. If you have a documented differing ability or think that you may have a differing ability that is protected under the ADA or Section 504 of the Rehabilitation Act, please contact Arlene Stinson in LB216 (stinsona@mccc.edu) for information regarding support services.
# Topical Outline

The general plan for the 14-week semester identifies the topic to be discussed. Reading assignments will be provided by the individual instructor.

<table>
<thead>
<tr>
<th>Semester Week #</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Introduction</td>
</tr>
<tr>
<td></td>
<td>Pathologic Process</td>
</tr>
<tr>
<td>2</td>
<td>Pathologic Process</td>
</tr>
<tr>
<td></td>
<td>Skeletal System</td>
</tr>
<tr>
<td>3</td>
<td>Skeletal System</td>
</tr>
<tr>
<td>4</td>
<td>Exam I</td>
</tr>
<tr>
<td>5</td>
<td>Respiratory System</td>
</tr>
<tr>
<td>6</td>
<td>Respiratory System</td>
</tr>
<tr>
<td>7</td>
<td>Circulatory System</td>
</tr>
<tr>
<td>8</td>
<td>Exam II</td>
</tr>
<tr>
<td><strong>SPRING BREAK (3/16/20 – 3/22/20)</strong></td>
<td>ENJOY!</td>
</tr>
<tr>
<td>9</td>
<td>Gastrointestinal System</td>
</tr>
<tr>
<td>10</td>
<td>Gastrointestinal System</td>
</tr>
<tr>
<td>11</td>
<td>Urinary System</td>
</tr>
<tr>
<td>12</td>
<td>Exam III</td>
</tr>
<tr>
<td>13</td>
<td>Student Presentations</td>
</tr>
<tr>
<td>14</td>
<td>Student Presentations</td>
</tr>
</tbody>
</table>
**TENTATIVE SCHEDULE**

MEETING TIME: Thursday, 10:00am – 11:50am

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading Assignment</th>
</tr>
</thead>
</table>
| 1    | Course Introduction  
Pathologic Process | Chapter 1 |
| 2    | Pathologic Process (continued)  
Skeletal System | Chapter 2  
Quiz Chapter 1 |
| 3    |  
Skeletal System | |
| 4    | Exam I | Self-assessment due |
| 5    | Respiratory System  
**Disease Project Approval Due** | Chapter 3 |
| 6    | Respiratory System | Quiz Chapter 3 |
| 7    | Circulatory System | Chapter 8 |
| 8    | **Exam II**  
**SPRING BREAK (3/18/19 – 3/24/19)** | **ENJOY!** |
| 9    | Gastrointestinal System | Chapter 4 |
| 10   | Gastrointestinal System | Quiz Chapter 4 |
| 11   | Urinary System | Chapter 6 |
| 12   | **Exam III** | **Self-assessment due** |
| 13   | Student Presentations | |
| 14   | Student Presentations | |

Students are expected to read the assignments prior to the class session.
FINAL PROJECT - DIAGNOSIS OF DISEASE

Select a disease/condition that you are interested in researching extensively. The disease must be one that will not be detailed in lecture. Submission of the topic and rationale is due by Week #5 using the form in this course outline. The instructor will approve or offer suggestions within one week; duplicate diseases will not be approved. A total of ten (10) points will be deducted from the final project grade if the topic and rationale are submitted after Week #5.

Students will have the option to do an oral presentation or a video. If students choose to collaborate efforts (in groups of no more than two), there will be an additional component of a written research paper about the chosen disease/condition that should be three to five pages in length.

The Power Point oral presentation or video must include the following:
A. Describe the pathophysiology of the disease with one supporting visual aid
B. Identify imaging and/or medical examinations performed to diagnose this disease with one - two supporting visual aids. If you elect to present imaging procedure(s) from the affiliate hospital, signed approval for release of the images must be obtained from the senior clinical instructor or radiology department supervisor. Patient information must be deleted from the printed image.

Length of presentation: 4 - 6 minutes. Note cards may be used for reference, however, reading notes is not permissible. Oral presentation dates will be scheduled for weeks 13 -14.

Written paper should be 3 to 5 pages in length and include the relevant information about the chosen disease or pathological condition:
A. Causes of disease or condition
B. Scope, prevalence, geographics of disease or condition
C. Demographics of afflicted
D. Main symptoms and major effects
E. Ways to prevent and treat
F. Future outlook to stem or eradicate

Submissions that are due Week 13 are noted below. A total of 15 points will be deducted from the final project grade for late submissions.
A. Radiograph release form signed by Clinical Instructor or Supervisor as applicable.
B. Power Point presentation slides
C. Video Presentation (as applicable)
D. Written Report (as applicable)
E. Works cited page (APA Style)

A minimum of four peer reviewed, professional journal articles and/or reliable valid websites must be referenced.
Student(s) Name(s) _____________________________________________

Choice of Project

PowerPoint Presentation

________________________

Video Presentation

________________________

Collaboration

________________________

I will need a computer for the presentation

YES _____ NO ________

Disease Proposed _____________________________________________

Rationale:

Date Received: _________________________________

Faculty Recommendations:

Faculty Approval: _________________________________ Date ______________
Grading for Oral/Video Presentation

The following rubric will be used to assess your presentation:

Introduction to Pathology (RAD 224)  
Spring 2020

Rubric for Oral Presentation

| STUDENT: ____________________ |

<table>
<thead>
<tr>
<th>Organization</th>
<th>Excellent (5 pts)</th>
<th>Good (4 pts)</th>
<th>Fair (3 pts)</th>
<th>Poor (1 pt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation was very easy to follow. Transitions were well planned and executed cleanly.</td>
<td></td>
<td></td>
<td></td>
<td>Presentation lacked organization. Poor transitions between slides and/or visuals. Presentation lacked order and very difficult to follow.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Information is comprehensive and correct.</th>
<th>Information has insufficient detail or has one or two errors.</th>
<th>Information lacks detail or has three or four errors.</th>
<th>Information is not comprehensive and had more than four errors.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Mechanics</th>
<th>Presentation materials have no misspellings or grammatical errors.</th>
<th>Presentation has no more than two misspellings and/or grammatical errors.</th>
<th>Presentation has three misspellings and/or grammatical errors.</th>
<th>Student’s presentation has four or more spelling errors and/or grammatical errors.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Elocution</th>
<th>Student uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear the presentation.</th>
<th>Student’s voice is clear. Student pronounces most words correctly. Most audience members can hear presentation.</th>
<th>Student’s voice is low. Student incorrectly pronounces terms. Audience members have difficulty hearing the presentation.</th>
<th>Student mumbles, incorrectly pronounces terms, and speaks too quietly for audience in the back of the classroom to be heard.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Eye Contact</th>
<th>Student maintains eye contact with audience seldom returning to notes.</th>
<th>Student maintains eye contact most of the time but occasionally returns notes.</th>
<th>Student occasionally has eye contact but reads most of the report.</th>
<th>Student reads all of the report with no eye contact.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Delivery Time</th>
<th>Within specified time limit</th>
<th>One minute shorter or longer than time limit</th>
<th>&gt; 1 minute or &lt; 2 minutes longer or shorter than time limit</th>
<th>&gt; 2 minutes longer or shorter than time limit</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Works Cited</th>
<th>Accurate APA format</th>
<th>1 error noted</th>
<th>2 errors noted</th>
<th>&gt; 3 errors noted</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Speaker is well informed and elaborates beyond the displayed material</th>
<th>Speaker is informed and elaborates beyond the material displayed.</th>
<th>Speaker brings little knowledge to the presentation beyond what is displayed</th>
<th>Speaker simply reads the material displayed.</th>
</tr>
</thead>
</table>
## Grading for Research Paper

The following rubric will be used to assess the written report:

**Introduction to Pathology (RAD 224)**  
Spring 2020

**STUDENTS: ___________________________________**

<table>
<thead>
<tr>
<th>Quality of Research</th>
<th>Excellent (5 pts)</th>
<th>Good (4 pts)</th>
<th>Fair (3 pts)</th>
<th>Poor (1 pt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources are relevant, reliable, and properly cited within the body of the paper.</td>
<td>Sources are all peer reviewed and mostly relevant to chosen topic.</td>
<td>Reliability of some sources is questionable; only some information is relevant to topic.</td>
<td>Sources are unreliable and aren't peer reviewed. Information is only vaguely related to chosen topic.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content</th>
<th>Content includes a strong understanding of essential knowledge as indicated through breadth and depth of exploration of chosen pathology/disease.</th>
<th>Content includes a good understanding of essential knowledge as indicated through breadth and depth of exploration of chosen pathology/disease.</th>
<th>Content includes a somewhat weak understanding of essential knowledge as indicated through breadth and depth of exploration of chosen pathology/disease.</th>
<th>Content does not include an understanding of essential knowledge as indicated through a lack of breadth and depth of exploration of chosen pathology/disease.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar/ Quality of Writing</td>
<td>Paper has no misspellings or grammatical errors. Writing has word choices sophisticated and flows well from sentence to sentence.</td>
<td>Paper has 1 misspelling and/or grammatical errors. Writing contains fairly effective word choice and mostly flows with some awkward transitions.</td>
<td>Paper 2 misspellings and/or grammatical errors. Paper does not flow, jumping from topic to topic without connecting ideas.</td>
<td>Paper has &gt; 3 spelling errors and/or grammatical errors. Paper does not follow writing guidelines and is very disjointed. There is no overall structure or transition in the topics presented.</td>
</tr>
<tr>
<td>Clarity &amp; Tone</td>
<td>Sentences are clear, concise, and direct; tone is appropriate.</td>
<td>Sentences are generally clear, concise, and direct; tone is appropriate.</td>
<td>Sentences are occasionally wordy or ambiguous; tone is too informal.</td>
<td>Sentences are unclear and lack clarity, tone is inappropriate for scholarly writing.</td>
</tr>
<tr>
<td>APA Guidelines</td>
<td>Paper meets all APA formatting requirements (Title page, bibliography, margins, and font).</td>
<td>Paper meets most APA formatting requirements (Title page, bibliography, margins, and font). 1 error noted</td>
<td>Paper meets APA formatting requirements but contains significant errors. 2 errors noted</td>
<td>Paper does not meet most of the APA formatting requirements (Title page, bibliography, margins, and font). &gt;3 errors noted</td>
</tr>
<tr>
<td>Length of Paper</td>
<td>Body of paper is within specified page limit</td>
<td>Body of paper is one page shorter or longer than page limit.</td>
<td>Body of paper is &gt; 1 page longer or shorter than page limit.</td>
<td>Body of paper is &gt; 2 pages longer or shorter than page limit.</td>
</tr>
</tbody>
</table>