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School of Health Sciences
Program: Medical Radiography Technology
Option:

MRAD 3314
Radiographic Anatomy and Physiology

Start Date: January, 2004

End Date: April, 2004

Total Hours: 45   **Total Weeks:** 16

Term/Level: 3   **Course Credits:** 1.5

Hours/Week: 3   **Lecture:** 1   **Lab:** 2

Shop: **Seminar:**   **Other:**

Prerequisites

Course No.   Course Name

MRAD 2214   Radiographic Anatomy and
Physiology

MRAD 3314 is a Prerequisite for:

Course No.   Course Name

None.

■ Course Description

This course continues on from MRAD 2214 and begins with the skull. Skull topics include surface landmarks, radiographic planes, lines, and bony anatomy. The cranial and facial bones will be covered in detail. The body organs, glands, vessels and nerves are studied according to region. Throughout the course, emphasis is on surface anatomy, the radiographic appearance of structures, and the details of structure and function that are pertinent to radiographic procedures. Basic cross-sectional anatomy of the head, thorax, abdomen, pelvis and spine will also be covered this term.

■ Detailed Course Description

- To provide students a detailed outline of the skull anatomy.
- To provide students an overview of the central nervous system, and cardiovascular system.
- To provide students the knowledge of basic radiographic cross-sectional anatomy.

■ Evaluation

Quizzes × 7	20%	Comments: 60% is the required pass mark in this course.
Lab Review Assignments	5%	
Midterm Examination	30%	
Web Site Assignment	5%	
Final Examination	40%	
TOTAL	100%	

■ Course Learning Outcomes/Competencies

Upon successful completion, the student will be able to:

(Each of the following statements are identified with the relevant Critical Task for Competency (CT) according to the CAMRT publication January 1997)

1. Identify and describe the structure and function of the cardiovascular system.   A7

2. Identify and describe the structure and function of the central nervous system.   A7

3. Identify and describe the structure and function of the lymphatic system.   A7

4. Identify anatomical structures of cardiovascular, nervous and lymphatic systems as seen   A4, A7
    radiographically.

5. Identify human anatomical structures as shown on cross-sectional radiographs, including: A7, B1
    - head.
    - chest.
    - abdomen and pelvis.
    - spine.

6. Correlate cross-sectional anatomy seen on an image to the slice location in the body area.
    The course outcomes and sub-outcomes align with the following Competency Profiles of
    the CAMRT:
    - Position the patient to demonstrate the required anatomical structures.   A4.6
    - Identify anatomy and patient position on the image.   A7.3
    - Verify that required structures are demonstrated.   A7.4
    - Collimate only to the area of interest to minimize patient dose.   B1.6

■ Verification

I verify that the content of this course outline is current.

_____   _____
         Authoring Instructor   Dec 19/03   Date
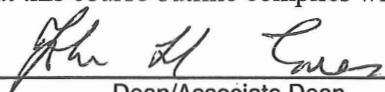
I verify that this course outline has been reviewed.

_____   _____
     Program Head/Chief Instructor   Dec 17/03   Date

I verify that this course outline complies with BCIT policy.

_____   _____
        Dean/Associate Dean   Dec 18 2003   Date

Note: Should changes be required to the content of this course outline, students will be given reasonable notice.

■ Instructor(s)

Lois Doody, RTR, ID, MEd   Office Location: SW3-4084   Office Phone: 604-432-8336
                             Office Hrs.:   Mon-Fri – 0830-1630   E-mail Address: ldoody@bcit.ca

■ Learning Resources

Required:

- *Radiographic Skeletal Anatomy*, Glenda Bryan

- *Principles of Anatomy and Physiology*, Tortora & Grabowski

Material to be distributed as required.

Recommended:

- *The Anatomy Coloring Book*, Kapit & Elson

- *Basic Physiology and Anatomy*, Chafee & Lytle

- Cross-sectional anatomy texts

- Current journals and news articles

- Pencil crayons, gel pens for lab material work

- Internet site references:
    - http://www.mic.ki.se/MEDIMAGES.html
    - http://www.netanatomy.com/
    - Great orbit site: http://mywebpages.comcast.net/wnor/lesson3.htm
    - Interactive 3D skull: http://www.csuchico.edu/tlp/info/projects/skull/
    - CT Teaching files: http://www.ctisus.com/tf/
    - The Visible Human Project: http://www.nlm.nih.gov/research/visible/frozen_ct.html

■ Information for Students

(Information below can be adapted and supplemented as necessary.)

The following statements are in accordance with the BCIT Student Regulations Policy 5002. To review the full policy, please refer to: http://www.bcit.ca/~presoff/5002.pdf.

Attendance/Illness:
In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with his/her instructor or Program Head or Chief Instructor, indicating the reason for the absence. Prolonged illness of three or more consecutive days must have a BCIT medical certificate sent to the department. Excessive absence may result in failure or immediate withdrawal from the course or program.

Academic Misconduct:
Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited and will be handled in accordance with the 'Violations of Standards of Conduct' section of Policy 5002.

■ **Information for Students (cont'd.)**

Attempts:

Students must successfully complete a course within a maximum of three attempts at the course. Students with two attempts in a single course will be allowed to repeat the course only upon special written permission from the Associate Dean. Students who have not successfully completed a course within three attempts will not be eligible to graduate from their respective program.

■ **Assignment Details**

Web Site Assignment

- A series of cross-sectional images will be posted to a Web site as the class covers each required body area.
- Each student will be required to label pertinent structures on the posted images and submit for marks.
- Further details will be discussed in class.

Lab Review Assignments

- During the lab sessions, the class will be divided into working groups.
- Each week, each working group will be responsible for the delivery of a concept review during the lab session.