Medical Radiation Sciences 3X03 – Research Methods for Medical Radiation Sciences

2016-2017 (Term Two)

INSTRUCTOR: D. F. Moscu Email moscudf@mcmaster.ca

Course Description: Prepares students for applied clinical research in Medical Radiation Sciences. Topics include systematic description of observations, testing hypotheses, distinction of quantitative and qualitative research and critical review of published literature.

Lectures: Monday and Wednesday – 8:30-9:30 (T13/127)
          Friday – 10:30 – 11:30 (T13/127)

Labs and tutorials are scheduled every other week. A TA will be present at that time to help students work through the assigned material if required. Students are not required to attend their assigned lab/tutorial section and may choose to complete laboratory assignments without assistance. All due dates will be posted on AVENUE TO LEARN.

The lab and tutorial session should be used as a scheduled time for group collaboration for the Midterm Assignments and the Final Project.

Required Texts & Materials:
There is no required text for this course. Brief notes and reading assignments will be provided with the lecture slides on the course page on AVENUE TO LEARN. Students are encouraged to find supplementary material regarding those topics which they feel they require additional information.

Course Objectives:
To prepare students for applied clinical research in Medical Radiation Sciences. Topics include systematic description of observations, testing hypotheses, distinction of quantitative and qualitative research and critical review of published literature.

Schedule of Topics:
1. Introduction to clinical research;
2. Formulating research questions;
3. Performing literature reviews;
4. Methods of describing data, measurement and sources of error;
5. Critical reading of published literature and mainstream media coverage;
6. Basic statistics and data analysis;
7. Presenting data effectively
Evaluation:

- 3-5 Lab Assignments: 25-40%
- Midterm Test: 5-10%
- Midterm Assignment – Literature Review (Group): 20-30%
- Final Project – Short Journal Article (Group): 20-30%
- Final Test: 5-10%

Absences & Missed Work:

If you are absent from the university for a minor medical reason, lasting up to 3 calendar days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form (MSAF). Absences for a longer duration or for other reasons must be reported to your Faculty office, with documentation, and relief from term work may not necessarily be granted. When using the MSAF, report your absence to course instructor or designate. You must then contact the instructor/instructional assistant/other immediately (normally within 2 working days) by email. Please refer to the contact list on the first page of this outline for appropriate email addresses. The instructor/instructional assistant will indicate what relief may be granted for the work you have missed, and relevant details such as revised deadlines, or time and location of a make-up exam/quiz/test. Please note that the MSAF may not be used for final deliverables, nor can it be used for a final examination or its equivalent.

Checking Your Grades:

Grades will be posted on Avenue to Learn as they are available. Please review them to ensure they are correctly entered as compared to the mark received. Please notify the instructor of any errors.

Re-mark Policy:

Material may be remarked if requested. To have material remarked please submit the material, the rubric and the description of why the student believes their works meets the requirements as outlined in the rubric to the instructor. The grade received on the re-mark shall be final.

Communication between Students and Faculty:

Communication between Students and Faculty shall be done electronically to the email address of the instructor. Do not use the Avenue to Learn email function. Include your name, student number and MACID in all communication. Please include MED RAD SCI 3X03 in the subject line.

Student Responsibilities:

To get the most out of the course, you must be prepared to:

- attend all sessions, make up all missed work, and provide documentation for authorized absences;
- interact frequently with faculty, students, TAs, and other support staff;
- plan and manage your own time;
- complete preparatory tasks (such as reading, writing assignments, and initial research) in advance of sessions;
- develop and use reflective learning skills (for example identifying learning objectives, planning and carrying out research tasks, acting on academic feedback);
- work as an effective, efficient, and responsive team member on group assignments;
- follow all the guidelines as outlined in the Introduction section of the Laboratory Manual;
- check the course Avenue site, and your McMaster and Avenue e-mail daily for updates; and,
follow all university policies and guidelines, and in all ways be a responsible university member.

Senate Student Policies
Students can view full policies here (http://www.mcmaster.ca/policy/Students-AcademicStudies/).
Senate Policy Statements are also available from the Senate Secretariat Office, Room 104, and Gilmour Hall.

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty.

The following illustrate only four of many forms of academic dishonesty:

- plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained;
- copying or using unauthorized aids in laboratory exercises
- improper collaboration in group work; and
- copying or using unauthorized aids in quizzes, tests and examinations

All students are reminded of the importance of academic integrity, and the serious consequences of academic dishonesty.

You acknowledge that your behavior in all aspects of this course should meet the standards of the McMaster University Student Code of Conduct. You understand that any inappropriate behavior directed against any of your colleagues, teaching assistants, or the instructional team will not be tolerated. Disruptive behavior during any session (e.g. lecture, seminar, lab, tutorial) such as talking, sleeping or non-class computing while an individual presents information, or constantly being late, will also not be tolerated. Abuse, ridicule, slander, inappropriate language, and discrimination towards instructors teaching staff, teaching assistants and other students will not be tolerated in any capacity. Shared spaces including e-spaces such as the Avenue to Learn course discussion board are to be considered inclusive and safe.

Plagiarism Detection
In this course, we will be using a web-based service (Turnitin.com) to reveal plagiarism. Students will be expected to submit their work electronically to Turnitin.com and in hard copy so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to www.mcmaster.ca/academicintegrity).

Copyright Policy
In this course you will have access to material that is subject to copyright laws. This includes (but is not limited to) textbooks and all resources developed by the instructors such as lab manuals, demonstration videos, quizzes, assignments, tests, class notes and class slides. Under no circumstance are you allowed to share or redistribute this material in any printed or electronic form without the explicit written consent of the copyright holder. This includes posting any course material on Internet bulletin boards, course repositories, social networks, etc.

The instructors and the university reserve the right to alter this outline if necessary.

The instructors and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.