

Course Outline Form: Fall 2016

General Information

Course Title: Real Analysis, Math 3200

Course Description:

This course provides a basic foundation for real analysis. The rigorous treatment of the subject in terms of theory and examples gives students the flavor of mathematical reasoning and intuition for other advanced topics in mathematics. Among others, topics will include: the real number line and the supremum property; metric spaces; continuity and uniform continuity; completeness and compactness; uniform convergence. Not all topics will be covered at the same level of depth. Lectures will follow the textbook. The objective of this course is to familiarize the students with the above-mentioned topics and related techniques.

Prerequisite(s): (Math*1160 or Math*2160), Math*2210

Credit Weight: 0.5

Academic Department (or campus): Mathematics and Statistics

Campus: University of Guelph Main Campus

Semester Offering: Fall 2016

Class Schedule and Location: LEC Tues, Thurs 11:30AM - 12:50PM, MCKN, Room 314

Note: There will be extra class day on Thursday, December 01, 2016, to replace the class of Tuesday, October 11, 2016. Tuesday schedule is in effect on Thursday, December 01, 2016.

Instructor Information

Instructor Name: Prof. Anna Lawniczak

Instructor Email: alawnicz@uoguelph.ca

Office location and office hours: MacN 522, Tue. & Th. 10:00AM-11:00AM

GTA Information

GTA Name: Not Applicable

GTA Email: Not Applicable

GTA office location and office hours: Not Applicable

Course Content

Specific Learning Outcomes: (1) demonstrate basic foundation for real analysis; (2) improvement of mathematical reasoning and intuition for other advanced topics in mathematics; (3) improvement of mathematical technical competence; (4) improvement of the ability of thinking critically and independently; (5) improvement of effectively communicate mathematical ideas.

Lecture Content: The lecture content, i.e. the covered material, will follow the selected material from the course-required textbook, as per course description. Not all course topics will be covered at the same level of depth.

Labs: Not Applicable

Seminars: Not Applicable

Course Assignments and Tests: There will be 2 in class tests during the term plus the final exam. The marks are assigned as follows:

- Test I - 30%, Thursday, October 20, 2016
- Test II - 30%, Tuesday, November 22, 2016
- Final Exam - 40%, on Thursday, December 08, 2016, at 7:00 PM – 9:00 PM, Room TBA

Requests for academic consideration because of illness or of a compassionate nature when term tests are missed must be made in writing and be accompanied by official certificate whenever possible. See the academic calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

The University policy must be followed when the final exam is missed

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/index.shtml>

There will not be graded take home assignments. However, from each covered topic, i.e. part of the covered material, there will be assigned problems and material to read from the textbook. The assigned reading material and the assigned problems will be announced in class and posted on CourseLink at the time when the corresponding topic is covered. The solutions to the problems will not be collected and graded. Solutions to selected problems will be posted on CourseLink. The term tests and the final exam will be based on the assigned problems and the covered material. One week before each term test information about which material and which problems are covered by the term test will be provided in class and in CourseLink. The final exam will be based on all the covered material of the entire course and all the assigned problems.

Final examination date and time: Thursday, December 08, 2016, at 7:00 PM – 9:00 PM, Room TBA

Final exam weighting: Final Exam - 40%

Course Resources

Required Texts:

“**Closer and Closer Introducing Real Analysis**”, **Carol S. Schumacher, Jones and Bartlett Publisher**, available at University of Guelph Library Guelph Book Stacks (QA331.S38 2008)

Recommended Texts:

"A Problem Book in Real Analysis" Asuman G. Aksoy and Mohamed A. Khamisi, Springer, available on line

Lab Manual: Not applicable

Other Resources: Not applicable

Field Trips: Not applicable

Additional Costs: Not applicable

Course Policies

Grading Policies

Requests for academic consideration because of illness or of a compassionate nature when term tests are missed must be made in writing and be accompanied by official certificate whenever possible. See the academic calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

The University policy must be followed when the final exam is missed

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/index.shtml>

There will not be graded take home assignments. However, from each covered topic, i.e. part of the covered material, there will be assigned problems and the material to read from the textbook. Students are expected to do the assigned problems and read the assigned material from the textbook. The assigned reading material and the assigned problems will be announced in class and posted on CourseLink at the time when the corresponding topic is covered. The solutions to the problems will not be collected and graded. Solutions to selected problems will be posted on CourseLink. The term tests and the final exam will be based on the assigned problems and the covered material. One week before each term test the information which material and which problems are covered by a term test will be provided in class and in CourseLink. The final exam will be based on all the covered material of the entire course and all the assigned problems.

Course Policy on Group Work: Not applicable

University Policies

E-mail Communication:

As per university regulations, all students are required to check their University of Guelph e-mail account regularly. University of Guelph e-mail is the official route of communication between the University and its students and between the instructor and the course students

When You Cannot Meet a Course Requirement:

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Drop Date:

The last date to drop one-semester courses, without academic penalty, is **Friday, November 04, 2016**. For regulations and procedures for Dropping Courses, see the Academic Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Copies of out-of-class assignments:

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Accessibility:

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities as soon as possible.

For more information, contact Student Accessibility Services (SAS) at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: <http://www.uoguelph.ca/csd/>

Academic Misconduct:

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Course Policy regarding use of electronic devices and recording of lectures:

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

Course Evaluation Policy:

Please see:

<https://courseeval.uoguelph.ca/files/Provosts%20Protocol%20for%20teaching%20evaluations%20-%20updated%20March%202010.pdf>

Additional Course Information

Resources:

The Academic Calendars are the source of information about the University of Guelph's procedures, policies and regulations, which apply to undergraduate, graduate and diploma programs: <https://www.uoguelph.ca/registrar/calendars/undergraduate/current/>
http://www.uoguelph.ca/ada-cbs/undergrad/ug_calendar.shtml