University of Alberta
Department of Mathematical & Statistical Sciences

Math 317 Q1: Honors Advanced Calculus II Winter 2014

Instructor: Xinwei Yu / CAB 527 / xinwei2@ualberta.ca / (780)492-5731
Office Hours: MWF 11am – 2pm or by appointment.
Lecture Room & Time: CAB281 MWF 10am - 10:50am; R 5pm - 5:50pm.
Course Web Page: http://www.math.ualberta.ca/~xinweiyu/317.Q1.14w/

Course Description:
In this course we will discuss more advanced topics such as infinite series, power and Fourier series, cardinal and ordinal arithmetics, vector calculus, and applications of calculus in modern science and engineering.

Course Prerequisites:
MATH 217 or equivalent.

Course Objectives and Expected Learning Outcomes:
Understand the rationale and appreciate the necessity of new developments of analysis around 1900. Be prepared for the study of real analysis, functional analysis, partial differential equations and other modern topics.

Temporary Lecture Schedule:

Dates	Topic
Jan. 6 - 31	Theory of functions
Feb. 3 - 14	Theory of sets
Feb. 24 - Mar. 14	Vector Calculus
Mar. 17 - Apr. 4	Topics

Recommended or Optional Learning Resources:
Although there is no required textbook, you are strongly recommended to get a book at roughly the same level as reference and source of extra practice. Links to several online textbooks can be found on the course website. Ask me if you are not sure whether the book you have is at the appropriate level.

Grade Evaluation:
The course mark will be calculated based on the following breakdown:

Course Component	Weight	Date
Assignments	30%	See course website.
Quizzes	20%	See course website.
Final Exam	50%	See course website.

Note:
- There is no midterm exam
- The date of the final examination is set by the Registrar and takes precedence over the final examination date reported in this document. Students must verify this date on BearTracks when the Final Exam Schedule is posted.
- An overall course mark of 50% or more guarantees a passing grade of at least D. An overall course mark of 90% or more guarantees a grade of at least A.

- Grades are unofficial until approved by the Department and/or Faculty offering the course.

Assignments and Quizzes:
- There will be about 6 assignments. The worst 2 assignment grades will be dropped.
- Assignments are due **2pm** on the due dates. An assignment box will be set up on 3rd floor of CAB before the first assignment is due.
- There will be about 6 quizzes. The worst 2 quiz grades will be dropped. There will be no make-up quiz.
- Quizzes are in class, each will take about 20 minutes.

Past (or Representative) Evaluative Material:
Such material will be available either on course website or as handout. However there is no guarantee of similarity between this year's exams to past exams.

Exam Aids:
All exams and quizzes are closed-book. During the exams/quizzes you are not allowed to use textbooks, notes, calculators, or any electronic device.

Missed Assignment/Lab:
No late assignment is accepted. Two lowest assignment scores (including zeroes for missed work) will be dropped.

Missed Final Examination:
A student who cannot write the final examination due to incapacitating illness, severe domestic affliction or other compelling reasons can apply for a deferred final examination. Such an application must be made to the student's Faculty office within 48 hours of the missed examination and must be supported by a Statutory Declaration (*in lieu* of a medical statement form) or other appropriate documentation (Calendar section 23.5.6). Deferred examinations are a privilege and not a right; there is no guarantee that a deferred examination will be granted. Misrepresentation of Facts to gain a deferred examination is a serious breach of the *Code of Student Behaviour*.

Any **deferred final examinations** are scheduled as follows:
Date: Saturday May 3, 2014.
Time & Location: CAB357 before 8:30am to register. The exam starts at 9am.

Re-examination:
A student who writes the final examination and fails the course may apply for a re-examination. Re-examinations are rarely granted in the Faculty of Science. These exams are governed by University (Calendar section 23.5.5) and Faculty of Science Regulations (Calendar section 192.5.9). Misrepresentation of Facts to gain a re-examination is a serious breach of the *Code of Student Behaviour*.

STUDENT RESPONSIBILITIES

Academic Integrity:
The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the *Code of Student Behaviour* (online at www.governance.ualberta.ca) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of

facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All forms of dishonesty are unacceptable at the University. Any offense will be reported to the Senior Associate Dean of Science who will determine the disciplinary action to be taken. Cheating, plagiarism and misrepresentation of facts are serious offenses. Anyone who engages in these practices will receive <u>at minimum</u> a grade of zero for the exam or paper in question and no opportunity will be given to replace the grade or redistribute the weights. As well, in the Faculty of Science the sanction for **cheating** on any examination will include **a disciplinary failing grade** (no exceptions) and senior students should expect a period of suspension or expulsion from the University of Alberta.

Collaboration on Assignments:
You are <u>encouraged</u> to discuss with fellow students. Even if you know how to solve a problem, explaining it to others may greatly improve the quality of your solution, not to say your understanding of the material. So in some sense, you are doing your friend a favor if you discuss with him/her.

However, **you have to write up solutions yourself.** Copying is not allowed. Every term there are several students who receive academic sanctions for copying assignments. See course website for some tips to avoid copying on assignments.

Exams:
Your student photo I.D. is required at exams to verify your identity. Students will not be allowed to begin an examination after it has been in progress for 30 minutes. Students must remain in the exam room until at least 30 minutes has elapsed. Electronic equipment cannot be brought into examination rooms and hats should not be worn.

Cell Phones:
Cell phones are to be turned off during lectures, labs and seminars. Cell phones are not to be brought to exams.

Audio or Video Recording:
Audio or video recording of lectures, labs, seminars or any other teaching environment by students is allowed <u>only with the prior written consent</u> of the instructor or as a part of an approved accommodation plan. Recorded material is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the instructor.

Students with Disabilities:
Students who require accommodation in this course due to a disability are advised to discuss their needs with Specialized Support & Disability Services (2-800 Students' Union Building).

Academic Support Centre:
Students who require additional help in developing strategies for better time management, study skills or examination skills should contact the Academic Support Centre (2-300 Students' Union Building).

Decima Robinson Support Centre for Mathematical & Statistical Sciences:
Students who require additional help with assignments or have questions about the course material in general are encouraged to visit the Decima Robinson Support Centre (528 Central Academic Building). Graduate students will be available to provide one-on-one help. In order to get maximum help during each visit, students are asked to be specific about the problem with which they are seeking help. The Centre is open Monday to Friday, 9:00 – 15:00.

Policy about course outlines can be found in section 23.4(2) of the University Calendar.

<u>Disclaimer:</u>
    Any typographical errors in this Course Outline are subject to change and will be announced in class.