COURSE INFORMATION

MATH 317 – Honors Advanced Calculus II – Winter 2012

TIME	MWF 10:00 – 10:50 am, R 5:00 – 5:50 pm
LOCATION	CAB 281 (Central Academic Building)
INSTRUCTOR	Arno BERGER
OFFICE	CAB 683
EMAIL	aberger@math.ualberta.ca
OFFICE HOURS	MWF 2:00 – 3:00 pm or by appointment
WEBSITE	www.math.ualberta.ca/~aberger/courses/math317_12/math317_12.html Please make a habit of visiting this site regularly.
COURSE NOTES	No set textbook will be used, and you should be prepared to take careful notes in class. However, the course will roughly follow notes from a previous version of MATH 317 which have kindly been provided by Dr. V. Runde and are available in electronic form on the course website.
SYLLABUS	Roughly Chapters 5–8 of Dr. Runde's notes. An outline of the topics covered is as follows: **The Implicit Function Theorem.** **The transformation formula for Riemann integrals.** **A taste of vector calculus.** **Improper integrals**. **Sequences and series of functions.**
HOMEWORK	Homework assignments will be posted fortnightly on the course website. Your worked-out solutions are due by 5:00 pm on Friday (beginning January 20) and must be deposited into the designated MATH 317 assignment box on the third floor in CAB. Collaboration on homework problems is acceptable. However, to receive credit you have to submit your own working. Your submission will be graded and returned to you as soon as possible.
TESTS & EXAM	Midterm tests I & II: **Thursday, February 9** and **March 15, in class.** Final exam: **Monday, April 23, at 9:00 am, location TBD.** Details for these events will be given in class. No textbooks, course notes, calculators and formula sheets will be permitted during examinations.

GRADING:

Homework	20%
Midterm test I	20%
Midterm test II	20%
Final exam	40%

An overall course mark of 40% or more guarantees a passing grade of at least D; an overall course mark of 80% or more guarantees a grade of at least A.

FURTHER READING:

Also available electronically on the course website are older MATH 217-317 notes by Dr. J. Muldowney which contain a large number of practice problems.

The following textbooks, available at the UofA libraries, are good sources for further background reading:

RG Bartle, DR Sherbert, *Introduction to Real Analysis*, Wiley, 2011 (4^{th} ed).

CH Edwards, *Advanced Calculus of Several Variables*, Academic Press, 1973.

K Jänich, *Vector analysis*, Springer 2001.

S Lang, *Undergraduate Analysis*, Springer, 1997 (2^{nd} ed).

MH Protter, CB Morrey, *A First Course in Real Analysis*, Springer, 1991 (2^{nd} ed).

IMPORTANT:

MATH 317 is the natural continuation of MATH 217. As the latter, it is a serious mathematics course. Do take it seriously: Take careful notes in class. Make a true effort on most homework problems, even if you cannot solve them completely. Regard asking questions as an important part of your leaning experience – don't be shy to ask your colleagues or instructor.

DEFERRED EXAM POLICY:

If you miss the **midterm test** for a valid reason (see Section 23.3(1) of the Calendar), the weight of the midterm will be transferred to the final. There will be no deferred midterm.

If you miss the **final exam** and your formal excuse is approved (in writing) by the University, you may write a **Deferred Exam** on **Saturday, May 5, 2012, at 9:00 am in CAB 357**. In addition to the requirements set out in Section 23.5.5 of the Calendar, if you wish to be considered for re-examination, you must have completed at least half of the term work (i.e. excluding the final). Term performance will be considered in the decision to grant a re-examination.

ACADEMIC INTEGRITY:

You are reminded of the official U of A statement concerning 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 (`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."*