

COURSE OUTLINE

WINTER 2012

1. MATHEMATICS 353 – Calculus IV

<u>Lec</u>	<u>Day</u>	<u>Time</u>	<u>Instructor</u>	<u>Office</u>	<u>Phone</u>	<u>Email</u>	<u>Office Hours</u>
L02	MWF	13:00	V. Stastna	MS 450	403.220.3345	vstastna@ucalgary.ca	MWF 14:00-15:00 or by appt

Course Website or Blackboard course name: MATH 353 L02

2. **Prerequisites:** Mathematics 349

(see Section 3.5C of Faculty of Science www.ucalgary.ca/pubs/calendar/current/sc-3-5.html and Course Descriptions: www.ucalgary.ca/pubs/calendar/current/course-desc-main.html)

3. **Grading:** The University policy on grading and related matters is described in sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course, the following weights will be used:

Quizzes	[5]	30 %
Midterm Test	[1]	20 % (see #5.)
Final Exam		50 % (To be scheduled by the Registrar)

The various components above will be assigned a percentage score and will be combined with the indicated weights to produce an overall percentage in the course. The conversion table between course percentage and letter grade will be provided at least one week before the withdrawal deadline.

A passing grade in the Final Examination is essential for an overall grade of C- or better.

4. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in section 3.6: www.ucalgary.ca/pubs/calendar/current/sc-3-6.html. It is the student's responsibility to be familiar with these regulations. See also www.ucalgary.ca/pubs/calendar/current/e-3.html.

5. **The Midterm Exam** will be scheduled out-of-class-time: **Friday, March 9, 2012 (16:30-18:00)**

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME ACTIVITY. If you have a conflict with any out of class time activity, please inform your instructor at least one week in advance of the activity so that other arrangements may be made for you.

6. **Textbook:** Adams, Calculus of Several Variables OR Complete Course (any edition).

7. **Examination Policy:** A calculator is allowed. Students should also read the Calendar, Section G, on Examinations: www.ucalgary.ca/pubs/calendar/current/g.html

8. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**

- (a) **ACADEMIC MISCONDUCT** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under K. Student Misconduct (<http://www.ucalgary.ca/pubs/calendar/current/k.html>) to inform yourself of definitions, processes and penalties.
- (b) **ASSEMBLY POINTS** in case of emergency during class time. Be sure to **FAMILIARIZE YOURSELF** with the information at <http://www.ucalgary.ca/emergencyplan/assemblypoints>.
- (c) **ACADEMIC ACCOMMODATION POLICY.** Students with documentable disabilities are referred to the following links: Calendar entry on students with disabilities: <http://www.ucalgary.ca/pubs/calendar/current/b-1.html>
Disability Resource Centre: <http://www.ucalgary.ca/drc/>
- (d) **SAFEWALK:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call **220-5333** for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.

- (e) **FREEDOM OF INFORMATION AND PRIVACY:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, **students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page.** For more information see also <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **STUDENT UNION INFORMATION:** VP Academic **Phone:** 220-3911 **Email:** suypaca@ucalgary.ca.
 SU Faculty Rep. **Phone:** 220-3913 **Email:** sciencerep@su.ucalgary.ca **Website** <http://www.su.ucalgary.ca/>
 Student Ombudsman: <http://www.ucalgary.ca/provosti/students/ombuds>
- (g) **INTERNET and ELECTRONIC COMMUNICATION DEVICE Information.** You can assume that in all classes that you attend, **your cell phone should be turned off.** Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
9. **Quizzes:** will be written in tutorials Jan 24, Feb 7, 28, March 20, April 3
- Midterm:** Friday, March 9, 16:30-18:00 (Out-of-class-time event). Location TBA

Syllabus

<u>Topics</u>	<u>Number of Hours</u>
<u>Differentiation</u> Extrema of functions of several variables, Lagrange multipliers, Applications	10
<u>Multiple Integrals</u> Double integrals, Iterated integrals, Double integrals in polar coordinates, Area, volume, Triple integrals, Triple integrals in cylindrical and spherical coordinates, Change of variables, Jacobians	12
<u>Vector Calculus</u> Vector fields, Line integrals, Independence of path, Green's theorem, Curl and divergence, Surface integrals, Divergence Theorem, Stokes' Theorem	14
TOTAL HOURS	36

Week:	Section: (selections from "Calculus of Several Variables":
1, 2	10.1, 13.1, 13.2
3, 4	13.3, 14.1, 14.2
5, 6	14.3, 14.4, 14.5, 14.6
7	Reading Week
8, 9	15.1, 15.2, 15.3
10, 11	15.4, 15.5, 15.6
12,13	16.1, 16.2, 16.3
14	16.4, 16.5