



## COURSE INFORMATION SHEET

**SPRING 2006**

**1. Course:** MATHEMATICS 349 -- Calculus III  
**Lecture/Time:** L20 MWF 14:00 - 15:50  
**Instructor:** Dr. Jean Springer  
**Office/Phone/Email:** MS 574 220-6313 [jspringe@math.ucalgary.ca](mailto:jspringe@math.ucalgary.ca)

**2. Prerequisites:** Math 253 or 263 or Amat 219; and Math 211 or 221

**NOTE:** The Faculty of Science policy on pre- and co-requisite checking is outlined in the current University Calendar (see [www.ucalgary.ca/pubs/calendar](http://www.ucalgary.ca/pubs/calendar)) *Faculty of Science, section 5C*. **It is the students' responsibility to ensure that they have the pre- and co-requisites for the course, and if they do not they will be withdrawn from the course without notice.**

**3. Fee policy:** After the last day to drop/add courses, there will be no refund of tuition fees if a student withdraws from a course, courses or the session.

**4. The University policy on grading and related matters** is described in the current University Calendar, *Academic Standings*. In determining the overall grade in the course, the following weights will be used:

Quizzes	[5]	25%
Midterm Test	[1]	25%
Final Exam		50%

A passing grade on any particular component of the course is essential to passing the course as a whole. There will be a final examination scheduled by the Registrar's Office. \*\*\* The use of aids such as open book, etc. is NOT permitted.

**5. Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are outlined in the current University Calendar, *Faculty of Science, section 6A*. It is the student's responsibility to familiarize herself/himself with these regulations.

**6. 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 current University Calendar. See: <http://www.ucalgary.ca/honesty/>

**7. Dates and times of class exercises held outside of class hours (evening tests, Saturday laboratory examinations, weekend field trips, etc.):**

**\*\*THERE WILL BE NO OUT-OF-CLASS-TIME ACTIVITY.\*\***

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME ACTIVITY.



## MATHEMATICS 349 "CALCULUS III"

**Calendar Description:** H(3-1T)

Infinite sequences and series. Polar coordinates, parametric equations, arc length.  
Vector geometry, differentiation of vector-valued functions. Partial differentiation.

**Prerequisite:** Mathematics 253, 263 or Applied Mathematics 219; and Mathematics 211 or 221.

### *Syllabus*

<u>Topics</u>	<u>Number of Hours</u>
Sequences, Infinite series, Power Series, Taylor Series	12
Review of: Vectors in $\mathbb{R}^2$ and $\mathbb{R}^3$ , Lines, Planes, Cross and dot products, and Matrices	4
Curves in $\mathbb{R}^2$ and $\mathbb{R}^3$ , Polar coordinates, Parametrization, Arclength	6
Functions of several variables, Limits and continuity, Partial derivatives, Chain Rule, Directional derivative, Implicit functions.	12
<b>TOTAL HOURS</b>	<b>36</b>

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