



Faculty of Science
DEPARTMENT OF MATHEMATICS AND STATISTICS
Course Information Sheet

1. **Course:** MATH 253 /263 Winter 2005
Lecture/Time/Session: L05 M W F 15:00 Room ST 145
+ M263 L04 T 11:00 MS 527 (Braverman)
Instructor(s): Dr. V. Stastna
Office: MS 450 , 220-3345
e-mail: vstastna@math.ucalgary.ca

2. **Prerequisites:** MATH 249 or 251, or AMAT 217
NOTE: Credit for both MATH 253 and 219 will not be allowed.
Co-requisites: None

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) *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responsibility to ensure that they have the pre- and co-requisites for the course, and if they do not they will be withdrawn from the course without notice.**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	[Best 4 of 5]	30%
Mid-term Test		20%
Final Exam		50%

There will be a final examination scheduled by the Registrar's Office. A passing grade on the final exam is necessary to pass the course.

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 d
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 activities.
8. Textbook: Adams: *Single Variable Calculus*, Addison-Wesley, (OR Complete Course) any edition.
9. 35 minute quizzes will be written in labs in the weeks of: : Jan 17, 31, Feb 14 March 21, April 4.
- The Midterm will be held on March 11 during class the class time.
10. Calculators **ARE** permitted at quizzes, the midterm test, and the final exam.

11. Students registered in the Math 263 section of this course must complete all the components of Math 253, plus the additional weekly lecture of additional material. The final grade will be based on the completed components of Math 253, plus a Pass/Fail indicator for the Math 263 credit. Students who do not complete the Math 263 component, will be given a Math 253 grade.

SCHEDULE: From "*Single Variable Calculus*, 5th edition.

Week:	Sections:	Week:	Sections:
1 (Jan 10)	Review 5.6, 3.1	8 (Feb 28)	Review 4.9, 6.5
2 (Jan 17)	3.5, QUIZ 1	9 (Mar 7)	6.6, MIDTERM MAR 11
3 (Jan 24)	5.7, 6.1	10 (Mar 14)	7.1, 7.2
4 (Jan 31)	6.2, QUIZ 2	11 (Mar 21)	7.3, 4.8, QUIZ 4
5 (Feb 7)	6.3	12 (Mar 28)	ODE, Diff eqns,
6 (Feb 14)	6.4 QUIZ 3	13 (Apr 4)	7.9, A23-27, QUIZ 5
7 (Feb 23)		14 (Apr 11)	3.7, handout

MATHEMATICS 253 "CALCULUS II"

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

Inverses of trigonometric functions. Methods of integration, improper integrals. Separable differential equations, first and second order linear differential equations, applications.

Prerequisite: Mathematics 249 or 251 or Applied Mathematics 217.

Note: Credit for more than one of Mathematics 253, 263 and Applied Mathematics 219 will not be allowed.

Note: This course is a prerequisite for many 300-level courses in Pure Mathematics, Applied Mathematics, Statistics and Actuarial Science.

Syllabus

<u>Topics</u>	<u>Number of Hours</u>
Inverse functions, inverse trigonometric functions	5
Techniques of integration, numerical integration, improper integrals	9
Applications of integrals (area, volumes)	5
Taylor polynomials	5
Differential equations: separable, linear first and second order, constant coefficients, undetermined coefficients, variation of parameters	12
TOTAL HOURS	36