UNIVERSITY OF CALGARY

Faculty of Science

DEPARTMENT OF MATHEMATICS AND STATISTICS

Course Information Sheet

1.	**Course**:	MATH 253 /263		Winter 2004	
	Lecture/Time/Session:	**L**04	M W F	10:00	Room ST 145
		+ M263 L04	T	11:00	MS 527 (Ling)
	Instructor(s):	Dr. V. Stastna			
	Office:	MS 578 , 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 on page 198 of the 2003-2004 Calendar. **It is the students' responsibility to ensure that they have the pre- and co-requisites for the course. If they do not, they will be withdrawn from the course without notice.**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 on pages 41-42 of the 2003-2004 Calendar. 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 on page 199, of the 2003-2004 Calendar. 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 2003-2004 University Calendar under the heading "Student Misconduct", pages 53-56.

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.

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

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 19, Feb 2, 23, March 22, April 5.

   The Midterm will be held on March 12 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 12)	Review 5.6, 3.1	8 (Mar 1)	Review 4.9, 6.5
2 (Jan 19)	3.5, **QUIZ 1**	9 (Mar 8)	6.6, **MIDTERM MAR 12**
3 (Jan 26)	5.7, 6.1	10 (Mar 15)	7.1, 7.2
4 (Feb 2)	6.2, **QUIZ 2**	11 (Mar 22)	7.3, 4.8, **QUIZ 4**
5 (Feb 9)	6.3	12 (Mar 29)	ODE, Diff eqns,
6 (Feb 17)		13 (Apr 5)	7.9, A23-27, **QUIZ 5**
7 (Feb 23)	6.4 **QUIZ 3**	14 (Apr 12)	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

Topics	**Number of Hours**
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**