MA 124 CALCULUS II C1

Lectures:

Tuesdays and Thursdays, 8:00am - 9:30am, STO Room B50

Discussion sections:

C2 Mondays	9:00am - 10:00am	MCS B23
C3 Mondays	10:00am - 11:00am	MCS B23
C4 Mondays	4:00pm - 5:00pm	PSY B41
C5 Fridays	1:00pm - 2:00pm	MCS B23
C6 Fridays	2:00pm - 3:00pm	MCS B23

Teaching Fellow:	Elizabeth Russell (till 02/02) resp. Peter Barendse (after 02/02)
office:	111 Cummington St, MCS B42
phone:	(617) 353-5204 resp. (617) 353-9547
e-mail:	erussell@bu.edu resp. peterb@math.bu.edu
office hours:	Wednesdays 2:30pm - 3:30pm, Thursdays 9:30am - 10:30am resp. Tuesdays 11:00am - 12:00am, Thursdays 4:30pm - 5:30 pm and by appointment

Instructor:	Nikola Popovic
office:	111 Cummington St, MCS 238
phone:	(617) 353-1491
e-mail:	popovic@math.bu.edu
office hours:	Tuesdays 9:30am - 10:30am Thursdays 2:30pm - 3:30pm and by appointment

Important dates:

- Thursday, February 16, 8:00am: tentative date for first midterm (in-class) exam

- Friday, February 17: last day to drop class without a W

- Thursday, March 30, 8:00am: tentative date for second midterm (in-class) exam

- **Thursday, May 4, 9:00am - 11:00am: comprehensive final exam**

Contents: This course opens with one of the oldest problems in modern calculus, the area problem. Chapter I gives the solution in terms of the definite integral, which is the basic concept of integral calculus. We then state the Fundamental Theorem of Calculus, which relates integration and differentiation, and discuss useful integration techniques which greatly simplify the solution of many problems. Chapter II is devoted to various applications of the integral calculus: We learn to compute areas between curves, volumes of solids, and lengths of curves, and discuss examples from biology, economics, and statistics. One of the most important applications of calculus is to differential equations. In Chapter III, we give a brief introduction to this vast subject. Finally, in Chapter IV, we treat infinite

sequences and series. Their importance in calculus stems partly from the fact that many functions can be approximated by so-called power series. In particular, we introduce the concepts of convergence and the limit, and discuss various criteria for convergence.

Texts: The textbook for our course is *Calculus, Concepts and Contexts, 3rd Edition*, by James Stewart, Chapters 5-8. **It is imperative that you work with the 3rd Edition of this book.**

Homework: There will be weekly homework assignments involving exercises from the textbook. I strongly encourage you to try each of the problems yourself before talking to your colleagues about them. After all, seeing and understanding the difficulties involved in a problem are as important as knowing how to solve it. The weekly quiz problems (see below) will be selected from the homework.

Weekly Quizzes: There will be approximately ten quizzes administered during the discussion sections. You *must* take the quiz in the discussion section in which you are registered. The problems on the quizzes will be taken directly from those on the homework (or will be quite similar). The two lowest quiz scores will be dropped.

Examination Policy: All quizzes and exams are closed book; no "crib" sheets, papers, notes, mechanical, electronic, photonic or quantum apparatuses of any type are permitted, with the exception of calculators and slide rules. Calculators and slide rules *are* permitted. The exams will test your mastery of the subject, and your ability to do the assigned homework on your own is extremely important to your success.

Make-up Policy: With the exception of serious personal illness or family emergency, *no* make-up exams will be given. Please make sure you make your travel arrangements accordingly. You will receive a zero for a missed exam or quiz.

Ways to Get Help:

1. **Discussion Sections.** These are an excellent opportunity for you to get help in mastering the techniques and solving problems. You must be enrolled in one of the five discussion sections and attend every week in order to take the class.

2. **Office Hours.** Both the teaching fellow and myself hold regularly scheduled office hours (see previous page). You are encouraged to come in with any questions. I will be available on a first-come first-served basis. If the need arises, appointments can be made to meet at other times.

3. **Course Web Site.** I will maintain a course web site: http://math.bu.edu/people/popovic/MA124 In particular, I will regularly post the weekly homework assignments, as well as solutions to the quiz problems, to the site.

4. **Math Help Room.** The Math and Computer Science Building (111 Cummington St), room MCS 144, the schedule should be posted on the door. The room is staffed by math graduate students and the service is provided free of charge.

5. **University Resource Center.** The center has a free tutoring program; to find out more, call (617) 353-7077.

6. **Math Help Sessions in the Residence Halls.** Diane Meuser holds Math Help Sessions in the Claflin Hall Lobby, West Campus, on Tuesdays from 7:30pm until 10:30pm. This is free mathematics tutoring for students in any math course. Any schedule changes will be posted on her web site: http://math.bu.edu/people/dmm

Course Grades: Quizzes 1/4, each of the two in-class midterm exams 1/4, comprehensive final exam 1/4.

Academic Code: You are to rely on your own ideas and knowledge in solving the problems on quizzes and exams. Communication with other individuals or machines, in any form, is not permitted during these times. Violations of the Academic Conduct Code will be dealt with according to the rules of the Code.