Course No:	MA3160	**Instructor:**	Todd King
Course Name:	Multivariable Calculus with Technology	**Office:**	210 Fisher Hall
Credits:	4 semester credits (0 – 4 – 0)	**Mailbox:**	323 Fisher Hall
Semester:	Spring 2008	**Telephone:**	487 - 1990
Sections:	R02 and R05	**e-mail:**	trking@mtu.edu
Day / Time:	Recitation: MWF : 09:05 – 09:55 (15-329) – R05	**Office Hours:**	MWF: 11am – noon
	MWF : 10:05 – 10:55 (15-329) – R02		and by appointment

Textbook: <u>Calculus, Single and Multivariable, 4th Edition</u> by Hughes-Hallet et al.

Prerequisites: MA2160 or equivalent

Course Description:
Introduction to calculus in two and three dimensions, which includes a computer laboratory. Topics include functions of several variables, partial derivatives, the gradient, multiple integrals; introduction to vector-valued functions and vector calculus, divergence, curl, and the integration theorems of Green, Stokes, and Gauss.

Course Objectives:
Upon successful completion of this course students should have the knowledge to:
  ➢ Analyze and graph functions in 2 / 3 dimensions
  ➢ Understand and apply partial derivatives
  ➢ Optimize multivariable functions
  ➢ Integrate functions of several variables
  ➢ Apply and evaluate flux and line integrals
  ➢ Understand and apply calculus to vector fields

Course Content:
The recitation sessions will be used to present the topics outlined on the attached course schedule and to review homework problems. Material from Chapters 12, 13, 14, 15, 16, 17, 18, 19 and 20 of the course text will be covered.

Course Evaluation:	Quizzes	30%
	Hour Exams	40%
	Final Exam	20%
	Laboratory	10%

Grading Scale:	90 – 100	A	70 – 75	C
	85 – 90	AB	65 – 70	CD
	80 – 85	B	60 – 65	D
	75 – 80	BC	< 60	F

Quizzes and Examinations:
Quizzes (usually 2 per week) will be given, and will comprise 30 percent of the course grade. The lowest quiz will be dropped. Two hour exams will be given during the semester, and account 40 percent of the course grade. The final will be <u>comprehensive</u>, and worth 20 percent. The laboratory will make up the remaining 10 percent of the grade.   Homework will be assigned and reviewed daily, <u>but will not be collected or graded</u>. Borderline cases will be determined at the discretion of the instructor. Factors that provide positive influences are attendance, diligence, persistence and performance on the final exam.

Evening Exam Information:
> The time and location for Exams I and II are given below. Top compensate for the evening exams class will not be held on Wednesday, 6th February (Winter Carnival) and Friday, 7th March (Friday preceding Spring break).

> ***Exam I : Monday, 25th February: Dow 641 – 6:00 – 7:00 pm***
> ***Exam II : Monday, 14th April: Dow 641 – 6:00 – 7:00 pm***

Conduct and Courtesy:
> The following course rules of conduct will be enforced to maintain a respectful and businesslike atmosphere in the classroom. Failure to abide by the rules will result in the loss of quiz points.

> - Turn off cell phones/pagers <u>before</u> entering class
> - Limit discussion to course business
> - Arrive on time

Cheating or Plagiarism:
> Proper professional and ethical behavior is expected of all students in this class. **This is taken very seriously**. If cheating is suspected a score of zero will be given for the quiz/exam. At the discretion of the instructor, the Dean of Students will be notified.

Attendance Policy:
> Consistent attendance is highly encouraged, but daily attendance will not be monitored. Quizzes are an effective tool for rewarding good attendance. ***Quizzes or exams missed for unexcused reasons will be assigned a grade of zero. If you are aware that you will miss a quiz/exam for a valid reason (e.g., sports trip, project team activity) you MUST contact the instructor IN ADVANCE to make arrangements to take the quiz/exam (usually in advance of the absence).*** The reason is that every effort is made to return quizzes/exams during the next class period. Absences due to illness, family emergencies, etc., normally require a note from the Dean of Students Office in order to be excused. In cases where it is not possible to take a quiz in advance of an <u>excused</u> absence, no grade will be assigned (i.e., the quiz will not be included in the course grade computation).

Suggestions for Success:
> - Prepare for class (review notes, do homework, formulate questions)
> - Attend class faithfully
> - Ask questions! (in class and during office hours)
> - Use your resources (study groups, Internet)
> - Keep current

MTU complies with all federal and state laws and regulation regarding discrimination, including the Americans with Disability Act of 1990 (ADA). If you have a disability and need a reasonable accommodation for equal access to education or services at MTU, please call the Associate Dean of Students (487-2212). For other concerns about discrimination, you may contact your advisor or the Affirmative Action Office (487-3310).