

Department of Mathematics
Christopher Newport University

Math 140-03
CRN - 7319

Calculus with Maple

Spring Term 2007

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Class Hours: TTR 11:00 am-12:45 pm
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Textbook: *Calculus*, Stewart 5th ed.

Course Objective: Math 140 is a foundation for several math courses including Math 240, Math 250, Math 260, and Math 320. This course provides an introduction to the calculus of functions of a single variable. The topics covered including limits, continuity, derivatives, methods of differentiation, the Mean Value Theorem, curve sketching, applications of the derivative, the definite and indefinite integrals, Fundamental Theorems of Calculus, and application of integrals. We also use a software package **Maple**.

Students should perhaps spend more time preparing for this class than other 100-level math classes. It is recommended that for each hour of lecture the students should spend at least two hours to practice the material. Key to success in this course is to come to class prepared and with questions ready for class discussion. At least half of each class period will be set aside for problems discussion.

This course is intended to achieve the following objectives

1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Learning fundamental principles, generalizations, or theories
3. Learning to apply course material (to improve thinking, problem solving, and decisions)

Course Outline:

<u>Chapter</u>	<u>Section</u>
1	1(review chapter)
2	2,3,5,6
3	1,2,3,5,6,7,8, 9, 10
4	1,2,3,4,5,7,10
5	1,2,3,4,5
7	2
6	1,2,5

Grading System: The course grade is based on: 1) weekly homework assignment that is 10% of the course grade, 2) three tests each of which is 20% of the course grade, 3) **Maple projects that accounts for 10% of the course grade**, and 4) final exam (Cumulative) which accounts for 20% of the course grade. The tests will be given approximately every four weeks. Final exam is scheduled for Tuesday May 1 from 11:00-1:30 pm in G-203.

Homework: Homework will be assigned daily and covered in class the next day.

Free Tutor: Mathematics department may offer free tutorial lab for this course. The lab is located in G-114.

Grading Scale: The course grade is assigned based on the following scale:

91 - 100 = A	74 - 77 = C^+	58 - 60 = D^-
88 - 90 = A^-	71 - 73 = C	00 - 57 = F
85 - 87 = B^+	68 - 70 = C^-	
81 - 84 = B	64 - 67 = D^+	
78 - 80 = B^-	61 - 63 = D	

Attendance: Attendance is necessary, and you are responsible for all class materials, assignments and deadlines.

Withdrawal Policy: The withdrawal policy is the same as an official university policy. Therefore the last day to withdraw is March 26, 2007.

University Regulations on Students with Disabilities:

If you believe that you have a disability, you should make an appointment to discuss your needs. In order to receive an accommodation, your disability must be on record in Disability Services located in the Academic Advising Center, Student Union, Room 3125 (Telephone - 594-8763; Fax - 594-8765).

**Math 140 List of Homework
Calculus, James Stewart**

<u>Pages</u>	<u>Problems</u>
22 - 24	1,5,17,19,21,23,25,33,37,39,41,53.
79 - 81	1,3,5,7,15,19, 23, 25, 29.
89 - 91	1,3,7, 11 - 29 odd, 39, 41.
110 - 112	3,7,9, 11, 15, 17, 21,33, 39,41,43,45 .
119 - 121	5,7,8,11,17,19.
132 - 133	1,7,13,15,19,21,23,25.
142 - 145	3,5,21,23,25,39.
154 - 157	1,5,9,11,15,19,23,25,27,31,39,55,57,61,67,*75.
174 - 175	1-17 odd,21,25,35,37,39.
181 - 184	1,3,7,9,17,23,29,31,43,53,57,.
188 - 190	1,7,11,19,25,*45.
195 - 197	5,9,17,23.
202 - 204	1,3,7,9,11,15,23,25.
210 - 212	5,9,15,17,21,23,31,33
229 - 232	3,5,7,17,19,29,31-37 odd,45,47,49,59.
238 - 239	1,3,5,11,13,17.
247 - 249	1,5,11,15,17,29,31,51,*52.
260 - 261	3,7,9,11,13,19,21,35.
270 - 271	1,3,9,11,13,19.
283 - 284	1,3,7,13,15,29.
305 - 306	1-15 odd,17,23,25,27,53.
324 - 325	1,3,11,17,21.
336 - 337	1,9,17,19,21,25,33,37,39,47,49.
347 - 349	3,5,7,9,11,13,17,19-33 odd.
356 - 358	1,2,5,9,11,13,17,19,23,25,31,35,53.
365 - 367	1-31 odd,37,41,43,45,49.
380 - 381	1,3,5,7,11,17,21,27 .
391 - 393	1,3,7,11,19,23.
405 - 406	1,3,5,9,10 .