

NORTH CAROLINA STATE UNIVERSITY

Department of Mathematics
MA 141-601 on DVD (or mpeg4)

To: MA 141-601 Students by DVD, Fall 2009

From: Dr. John Griggs

Welcome to MA 141! I sincerely hope you have a positive learning experience using the DVD (mpeg4) lectures. I trust that you will contact me when you need my help. The best ways to reach me are via fax (919-513-7336) or through my email (jrgriggs@ncsu.edu). Please **identify yourself as a MA 141-601 DVD student**. If you are asking a question about a specific problem, **clearly identify the problem/section** and write out or type out all of your steps so I can help you find your mistake – if there is one. If you have DVD (mpeg4) problems, please notify DELTA Support Services (515-9030).

The cable TV lessons were taped last year (Fall '08) in a studio/classroom on campus. The textbook for this course is *Calculus: Concepts and Contexts*, by James Stewart, 3rd edition. (MA141 on campus has changed to the 4th edition of the text; however, it is OK for the distance education class to use either one – they are very slightly different)

The tests are given **4:00 – 5:15 pm in SAS2108**. If you live more than 50 miles from NCSU, please contact me – not the DELTA Office - immediately so we can arrange for a mutually agreeable proctor at a local community college or university. The proctor should be faculty, preferably in the Mathematics Department who is able to send/receive faxes or scan and attach to emails. Please send me the name, title, email address, and fax number of the prospective proctor when you have identified that person so I can contact him/her and get some information.

Final average is 60% Test Average
30% Final Exam
10% Webassign Homework

A “built-in” curve for all students is to replace your one lowest test grade with the final exam grade if it is higher. If you miss a scheduled test without a University’s excused absence (illness with doctor’s documentation, etc.) then your final exam grade will replace 1 missed test. Please keep in mind, though, that the final exam will count at least 30% of your grade in the course. It could potentially count more if it replaces a lower test grade. Maple is not a part of the distance education course for MA141 nor MA241.

The 4:00 – 5:15 pm test dates in SAS2108 are:

Test 1: Monday, September 14
Test 2: Monday, October 5
Test 3: Monday, November 2
Test 4: Monday, November 23
Final Exam: Monday, December 14 (2:00 – 5:00 pm)

Homework will be delivered/submitted over the web using Webassign:

<http://webassign.ncsu.edu>

Please contact me when you need my help. The answers to the odd problems are in back of the book. I have tried to work lots of similar problems in class. Please note the “communication” of the step by step process. Your work on your tests communicates your mathematical understanding of the concepts. Take good class notes!

NORTH CAROLINA STATE UNIVERISTY
Department of Mathematics
MA 141 – 601
Fall 2009
PACING GUIDE (using 3rd edition)

Wednesday, August 19 through Friday, September 11:

Textbook coverage: 1.1 through 2.7; Appendix B

Test #1: Monday, September 14

Tuesday, September 15 through Friday, October 2:

Textbook coverage: 2.8 through 3.7

Test #2: Monday, October 5

Tuesday, October 6 through Friday, October 30:

Textbook coverage: 3.8 through 4.8

Test #3: Monday, November 2

Tuesday, November 3 through Friday, November 20:

Textbook coverage: 4.9 through 5.7 (trig integrals)

Test #4: Monday, November 23

Tuesday, November 24 through Friday, December 11:

Textbook coverage: 5.7 through 5.8; Appendix G

Comprehensive Final Exam: Monday, December 14 , 2:00 – 5:00 pm

Math WebAssign Student Help Sheet

1. Log In

You can do these assignments on any computer provided that you have Internet Access with Netscape Navigator 4.0 or higher or Internet Explorer 5.0 or higher. If you are doing this from home, go to step 3. If you have logged into the campus system before, then your login ID and password is the same as before. If this is your first time logging in, then your login ID is generally the first letter of your first name, 1st letter of your middle name and the first 6 letters of your last name unless you have been told otherwise. If your name was John Michael Doe, your login ID would be *jmdoe*. Do not use spaces or upper case letters in your login ID or password. Your password is your student ID # (no dashes).

If you have any problems logging in to UNIX, see the lab consultant in HA 244 or if a consultant is not available, call a consultant at the Hillsborough Building at 515-3035. They can answer questions regarding your login ID and your password ONLY.

2. Open Netscape or Internet Explorer

If you are using the NSCU UNIX system, click on your middle mouse button to pull up a menu called "Application Menu". Choose "Netscape Web Browsers" and **wait** for it to load. If a gray window pops up with the options "Accept" or "Do not accept", **choose "Accept"**. If you are at home, you will need an internet connection. If you have one, you can use either Netscape or Internet Explorer.

3. Start your Assignment

In your Internet browser, there is a box at the top labeled "Net Site" or "Address". Inside that box type:

<http://webassign.ncsu.edu>

Click on the link Continue Login, this will bring up a prompt to type in your login ID and your password. This will bring you to the Assignments Summary page. Begin your assignments by clicking on the name of your assignment. Type in your answers and click the submit button at the bottom of the page. If you get a red X next to an answer that means it is wrong. You can change the answer and re-submit anytime before the due date.

4. Log Out

After you finish your assignments, remember to close your web browser (Netscape/Explorer). If you are on a UNIX computer, type *logout* in the brown window labeled "xterm".

If you need help, come to the Math Multimedia Center in Harrelson 244. Tutors and Video taped courses are available. The phone number is 515-3157.

NORTH CAROLINA STATE UNIVERSITY
Department of Mathematics
Objectives MA 141
Fall 2009

- I. Recognize and graph equations for conic sections and for parametric equations. (Use Maple to graph equations)
- II. Conceptual and visual representation of limits, continuity, differentiability, and tangent line approximations for functions at a point. (Use Maple to find limits, automated differentiate, and use the limit-definition of derivative to differentiate.)
- III. Apply the limit theorems, the Squeeze Theorem, left and right limits, and limits involving infinity and L'Hospital's Rule.
- IV. Approximate roots of an equation using Intermediate Value Theorem and Newton's Method. (Use Maple to find exact solution to equations and to approximate roots via Newton's Method)
- V. Apply the power rule, product rule, quotient rule and the chain rule to functions explicitly and implicitly for finding derivatives.
- VI. Use derivatives in practical applications, such as distance, velocity, acceleration and related rates. Use first and second derivative tests to optimize functions and to find critical numbers, inflection points, extreme points, and the shape of the graph.
- VII. Sketch a possible graph of a function given the graph of its derivatives.
- VIII. Antidifferentiate basic functions, use Riemann Sums to estimate areas under the curve, and apply Fundamental Theorem of Calculus to evaluate definite integrals.

Note: There is a brief review of precalculus, including algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions including construction of new functions from old.