Course Syllabus
MTH 124—A Survey of Calculus
Michigan State University Summer 2017

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Office Hours: Wednesdays 9am -11am

Course Objective: This course is designed to give students an introduction to the concepts of calculus as well as present applications of these concepts in a variety of fields. The goal of the course is to focus on the application of calculus more than the mathematical development of calculus concepts.

Text: Applied Calculus 6e by Warner and Constenoble Publisher: Cengage Learning

On-line requirement: WebAssign—an online software for access to lessons, homework, and quizzes.
Link: www.webassign.net

Calculator: Recommend TI-83+ or TI-84. Other equivalent calculators (Sharp, Casio, HP) may be used. You are responsible for knowing how to use your calculator. A TI-89 or TI-92 or any laptop or tablet may not be used for taking exams.

Academic Integrity: The University's policy can be found at www.msu.edu/unit/ombud/honestylinks.html. Specifically stated in the MSU student handbook, "…no student shall claim or submit the work of another as one's own." The penalty for this will result in your being removed from the course.

Grading: Your grade shall be calculated by the following:

Assignment:	Points/each	Total Points
Using Web Assign (Introductory Assignment)	6	6
WebAssign assignment completion (all Learning and Practice Sets)	6	144
1 On-line Quiz per section (24 in all)	10	240
3 Reviews	25	75
2 Midterm Exams (Proctored)	100	200
Final Exam (Proctored)	235	235
	Total Points Possible:	900

Your overall grade will be converted into a percentage and your grade will be determined based on the following scale:

90 - 100% = 4.0	85 - 89% - 3.5	79 - 84% = 3.0	73 - 78% = 2.5
65 - 72% = 2.0	60 - 64% = 1.5	55 - 59% = 1.0	0 - 54% = 0.0

Timeframe: 1 semester. Expected time to dedicate to this course is a minimum of 12 hours weekly in addition to your time to complete your tests and any additional time you will need to firmly grasp the material presented.

Plan: Work at your own pace to master the material presented. Each part of the course is set up for you to complete by a certain date and due dates are posted on the website for each assignment. As you work through the assignments and you finish them ahead of time, additional time can be used retaking quizzes, doing extra practice, and/or getting help from your Teaching Assistant(s) or the course supervisor. Stay on pace as planned on the calendar. If you do not, you will not be able to be successful as the course progresses.

For each section, it is recommended you follow these steps to maximize your understanding of the material:

[1] Read/Skim the section in the textbook.

[2] Complete the on-line "Learning" assignment for the section (up to 5 times.) Make sure you have answered all questions correctly.

[3] Complete the on-line "Practice" assignment for the section (up to 5 times.) Make sure you have answered all questions correctly. These assignments also include the option to link to the on-line textbook to reread the section. Also, you can practice many problems of the same type by clicking on "Practice Another Version." It also gives you the option to "Master it" which opens a new window where another problem practicing the same content can be attempted.

[4] Utilize problems from the textbook for additional practice. Your textbook contains solutions to all of the odd numbered problems at the end of the book. This can be helpful so that you can check your work and ensure your understanding of the concepts.

[5] You can submit questions that will be answered in a timely manner by the course supervisor via email. Also, you can e-mail any questions to your TA(s) and/or get help from other resources available to you (study partners, tutors, MLC, etc.)

[6] When you are prepared, take the "Quiz" assignment for the section. If you are satisfied with your score, you may move on to the next section. If not, repeat the steps above and take the quiz again. **EACH QUIZ QUESTION CAN BE ATTEMPTED UP TO 3 TIMES!!** Resubmitting one answer at a time is counted as a retake for that question only.

[7] The "Review" assignments are due on the day of the exams. Significant time should be spent on them in preparation for the exams. Also, in the back of the textbook are Appendices which have additional practice problems.

[8] Additionally, there are practice exams with solutions posted under the "Resources" link to be utilized when preparing for the exams.

Important Dates:

Midterm Exam Dates are set for May 31st and June 15th. The time of the exams is 5:00pm– 6:30pm. If you are taking the exam on campus, a room location will be provided via email prior to the exams. If you are not taking the exam on campus, an approved testing location and time will need to be arranged with the instructor at the start of the course. If you have an unavoidable conflict with these times, you must work with the course instructor to make alternative arrangements. The final exam is June 29th from 5:00pm – 6:30pm

Last date to drop with full refund is May 25th. Last date to drop with no grade reported June 7th.

Topic Listings by section and due dates

Exam 1 Coverage

1.1 Functions from the Numerical, Algebraic, and Graphical Viewpoints
1.2 Functions and Models
1.3 Linear Functions and Models
2.1 Quadratic Functions and Models
2.2 Exponential Functions and Models
2.3 Logarithmic Functions and Models
3.1 Limits: Numerical and Graphical Viewpoints
3.2 Limits and Continuity
3.3 Limits and Continuity: Algebraic Viewpoints
Review 1 (Sections 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3)

All assignments for these sections are due on May 31st at 5pm. The 1st exam is held this day also.

Exam 2 Coverage

3.4 Average Rates of Change
3.5 Derivatives: Numerical and Graphical Viewpoints
3.6 Derivatives: Algebraic Viewpoint
4.1 Derivatives of Powers, Sums, and Constant Multiples
4.2 A First Application: Marginal Analysis
4.3 The Product and Quotient Rules
4.4 The Chain Rule
4.5 Derivatives of Logarithmic and Exponential Functions
5.1 Maxima and Minima
5.3 Inflection Points and Concavity
Review 2 (Sections 3.4, 3.5, 3.6, 4.1, 4.2, 4.3, 4.4, 4.5, 5.1, 5.3)

All assignments for these sections are due on June 15th at 5pm. The 2nd exam is held this day also.

Final Exam Coverage (Cumulative)

9.2 Derivatives of Trigonometric Functions (Intro to sine and cosine only)
6.1 The Indefinite Integral
6.3 The Definite Integral: Numerical and Graphical Viewpoints
6.4 The Definite Integral: Algebraic Viewpoints and the Fundamental Theorem of Calculus
7.2 Area Between Two Curves and Applications
Review 3--Final Exam Review (Cumulative--Covers all sections of the course)

All assignments for these sections are due on June 29th at 5pm. The Final Exam is held this day also