



Sirindhorn International Institute of Technology, Thammasat University

MAS116/GTS116

Semester/Year: 2/2018

Course Code: MAS116/GTS116

Instructors:

Associate Professor Dr. Nirattaya Khamsemanan (course coordinator)

รองศาสตราจารย์ ดร. นิรัตยา คำเสมานันท์ (ผู้ประสานงานวิชา)

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Office: RS 1-317/10 (the 3rd floor main building, the Common and Graduate Study office)

Dr. Asawin Sinsarp

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Time:

Section 1: Tuesday 09:00-12:00 RS 1-410

References:

1. The partial notes of MAS116/GTS116 Mathematics I, Volume 1, Second Semester, 2018, Composed by Dr. Nirattaya Khamsemanan, SIIT, TU.
2. The partial notes of MAS116/GTS116 Mathematics I, Volume 2, Second Semester, 2018, Composed by Dr. Nirattaya Khamsemanan, SIIT, TU.
3. H. Anton, I. Bivens, S. Davids, *Calculus, Late Transcendentals*, International student version 10th edition, John Wiley & Sons, Inc

Course webpage: nirattaya.com/mas116s18

Facebook page: Search for “Siitmas116s18” and follow it

Grading: Your final grade will base on the followings

Homework	10%
Class Attendance	10%
Quizzes	10%
Midterm Examination	35%
Final Examination	35%

Midterm Examination: 12 Mar 2019 TIME 09:00 - 11:00

Final Examination: 14 May 2019 TIME 09:00 - 12:00

Course Description: This course covers differential and integral calculus for functions of one variable and infinite series. Topic include: limits and continuity, derivatives of functions, extrema of functions, indeterminate forms, techniques of integration, and power series.

Calculator: No calculator is needed for this course. Calculators will no be allowed for quizzes, midterm, or final exams. So, I strongly suggest not using calculators for your homework.

Quizzes and Exams: All quizzes and exams will be closed book. There will be no makeup's for missed work; an unexcused absence will be given a grade of 0, and an excused absence (and there are very few reasons for excusing a missed exam) may be replaced by the corresponding section of the final exam. **The instructor or coordinator should be notified before missing any exam or quiz if at all possible and immediately thereafter when not possible.** The instructor will determine if the absence from an exam will be excused.

Lectures: You are very STRONGLY encouraged to attend lectures. Although the instructors will follow the book rather closely, it WILL be far simpler to understand the materials from the lectures, rather than from the book alone. Simply reading (or even memorizing!) the book, without achieving an understanding of the ideas involved, will be insufficient to obtain a passing grade. **Students who miss more 30% of classes will not be allowed to take the final exam and will automatically fail (Grade F) the course.**

Homework: As the name suggests, homework is a work to be done outside of class. We will not devote much class time to discussing homework problems. Please feel free to see your instructor to obtain assistance. You are encouraged to work with other students on the homework however you must write down your own work. It would be a mistake to skip the homework, because no skill (in mathematics, foreign language, athletics, and so on) can be learned by passive involvement, but only by regular practice. Homework assignments will be graded with attention given to the method and insight rather than final outcomes. **Late work will not be accepted.** Write all your work in paper. You won't get full credit even when your answer is right without all of your work written down.

Please submit all homework in the MAS116 box in front of the CGS Department which is located on the 3rd floor of RS building.

Goals: The goal for the semester is to learn, understand and be able to work with the main ideas of differential and integral calculus, including limits, continuity, differentiation, integration and various applications of the derivative and the integral. This does not only mean that you should be able to work through a bunch of problems similar to ones seen in the homework. But that you should have the ability to articulate the ideas presented in the course in a clear and coherent manner as well.

Expectations:

We expect you to do most of your learning outside of the classroom. You should expect to spend 5-8 hours a week studying and working on calculus outside of class. Mathematics, like most subjects, is learned by doing it. We will not have time in class for you to do a lot of mathematics yourself. However, we do expect you to come to class and participate actively in class discussions. If you must miss a class, I expect you to find out what happened, either from your instructor or one of your classmates. You are responsible for everything that goes on in class.

Academic Integrity:

A fundamental tenet of all educational institutions is academic honesty; academic work depends upon respect for and acknowledgment of the work and ideas of others.

Misrepresenting someone else's work as one's own is a serious offense in any academic setting and it will not be condoned.

Academic misconduct includes, but is not limited to, providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for academic evaluation (e.g. papers, projects, examinations and assessments - whether online or in class); presenting, as one's own, the ideas, words or calculations of another for academic evaluation; doing unauthorized academic work for which another person will receive credit or be evaluated; using unauthorized aids in preparing work for evaluation (e.g. unauthorized formula sheets, unauthorized calculators, unauthorized programs or formulas loaded into your calculator, etc.); and presenting the same or substantially the same papers or projects in two or more courses without the explicit permission of the instructors involved.

A student who knowingly assists another student in committing an act of academic misconduct shall be equally accountable for the violation and shall be subject to the sanctions and other remedies described in The Student Code. Sanctions shall include, but are not limited to, a letter sent to the Dean of Students of the University; a grade of 0 on the assignment, quiz or exam; a grade of F for the course.

Lectures Rules and Regulations

1. I TALK, you LISTEN. Be respectful to your classmates and your instructor. Keep your voice down. No chitchatting. Do not disturb the class.
2. 15 minutes rule: if you attend the class 15 minutes or more after the scheduled class time, you may not earn attendance credit for that day.
3. All communication devices must be off or on silent mode during lecture times.
4. In case of emergency, you have to take your phone call outside. You are not allowed to talk on the phone in class.
5. No snoring during class time.
6. Any violation of academic integrity will not be tolerated.
7. Three strikes you out! If the disorder level is high, noise etc, the whole class will be warned. If it reaches three times, the whole class will not receive the attendance credit that day.
8. Video-taping, taking a photograph, voice recording and any other ways of recoding the lectures are not allowed.
9. Pets are not permitted in class.
10. You must dress according to TU dress codes to attend classes, e.g. no T-shirts, no flip-flops, no shorts, no tang-tops etc. Otherwise, attendance credits, quizzes and exams will not be granted.

Enrolling in this course means that you agree to obey the Lectures Rules and Regulations above. Should you fail to follow any of these rules, you may not receive attendance credit. You are not allowed to take the quiz and you may be asked to leave the classroom, and/or more penalties will be applied.

Other Remarks

Your time is valuable; we want you to get as much as possible out of your time in the classroom with me. Please don't hesitate to let instructors know how you feel about the pace, or just about how things are going in general.

MAS116/GTS116 2/2018 Schedule of Lecture

This is a tentative schedule. We will try to follow this, but timeline may be shifted according to the class rhythm and other unforeseen factors. It is subjected to change without prior notifications.

Topic	Date
Mathematical Induction	Tuesday, January 15, 2019
Functions	
Limits	
Continuity	Tuesday, January 22, 2019
Rate of Change and Definition of Derivative	
Derivative	
Derivative of Trig. Functions and Chain Rule	Tuesday, January 29, 2019
Implicit Differentiation	
Quiz 1	
Related Rates	Tuesday, February 12, 2019
Log. Diff. and L'Hopital's Rule	
Increasing, Decreasing and Concavity	Tuesday, February 26, 2019
Curve Sketching	
Optimization	Tuesday, March 5, 2019
Quiz 2	
Midterm Exam	12 Mar 2019 TIME 09:00 - 11:00
Area Problem, Antiderivative and Substitution Technique	Tuesday, March 19, 2019
Riemann Sums and Definite Integrals	
Fundamental Theorem of Calculus	Tuesday, March 26, 2019
Area Between Two Curves and Volumes by Slicing	
Volumes by Cylindrical Shells	Tuesday, April 2, 2019
Integration by Parts and Trigonometric Integrals	
Trigonometric Substitutions and Partial Fractions	Tuesday, April 9, 2019
Quiz 3	
Numerical Integral; Simpsons Rule	Tuesday, April 23, 2019
Improper Integral	
Sequences	Tuesday, April 30, 2019
Series	
Quiz 4	
Maclaurin and Taylor Polynomials and Series	Tuesday, May 7, 2019
Power Series and Interval of Convergences	
Final Exam	14 May 2019 TIME 09:00 - 12:00

