Syllabus MTH 1125
Summer Session A 2018

Time: **MTWTh**   **10:30 am –1:30 pm**
Instructor: **Pat Rossi**
Office: **227C McCall Hall (MSCX); (334)670-3588; prossi@troy.edu**
Office Hours: **M-Th**   **1:30-3:00**   **Or By Appointment**

Text: <u>Calculus</u> <u>with</u> <u>Analytic</u> <u>Geometry</u>, 11th Edition, by Larson and Edwards Brooks/Cole – Cengage Learning), plus a WebAssign License (Access Code).

Textbook and WebAssign Options:

There are **two versions of the text:** *"Single Variable"* and *"Full Textbook."*

The *"Single Variable"* version of the text is identical to the first two-thirds of the *"Full Textbook."* (For example, page 79 in the *"Single Variable"* version is the same as page 79 in the *"Full Textbook,"* and page 150 in the *"Single Variable"* version is the same as page 150 in the *"Full Textbook,"* etc.) The difference between the two is that the *"Full Textbook"* contains material that only those students who take Calculus III need to have. So if your course of study does not include Calculus III and you have no intention of taking Calculus III for your own enjoyment, then you don't need the *"Full Textbook"* – the *"Single Variable"* version has everything that you need. (AND the *"Single Variable"* version is less expensive!)

I repeat: If your course of study does not include Calculus III and you have no intention of taking Calculus III for your own enjoyment, then you don't need the *"Full Textbook"* – the *"Single Variable"* version has everything that you need.

On the other hand: If your course of study DOES include Calculus III (or if you're seriously considering taking Calculus III for you own enrichment)), then you will need to buy the *"Full Textbook."*

Text Format: Each version of the text is available in three formats:

     Hardback: The traditional hardcover textbook

     Loose-leaf: The pages of the text are not bound, and each page has three holes so that the pages can be kept in a three-ring binder

     ebook: The text is in electronic format

WebAssign Format: WebAssign (an online homework program) is available in two formats:

Multi-Term Access Code: This enables you to use WebAssign for as long as you are enrolled in either Calculus I, II, or III. (Regardless of how many times you may have to take Calculus I, II, or III.)

One-Term Access Code: This enables you to use WebAssign for a single semester. So if you only take one semester of Calculus, the One-Term Access Code will be sufficient. At the end of the semester, the One-Term Access Code will expire.

Textbook & WebAssign (Package) Options:

The following options are offered at Troy University's Barnes & Noble Bookstore:

Single-variable textbook formats and ISBNs (Calculus I and II only):
ISBN 9781337275361: Hardback book (for MTH 1125/1126 only) This option does NOT come with a WebAssign License/Access Code
ISBN 9781337811064: Loose-leaf book (for MTH 1125/1126 only) This option DOES come with a Multi-Term WebAssign License/Access Code

Full textbook formats and ISBNs (Calculus I, II, and III)
ISBN 9781337275347: Hardback book (for MTH 1125/1126/2227) This option does NOT come with a WebAssign License/Access Code
ISBN 9781337604741: Loose-leaf book (for MTH 1125/1126/2227) This option DOES come with a Multi-Term WebAssign License/Access Code
ISBN 9781337652650: ebook - "Full Textbook" version (for MTH 1125/1126/2227) This option DOES come with a Multi-Term WebAssign License/Access Code

One-semester/term WebAssign with ebook:
ISBN 9781337621205

Calculation of Final Average

Test #1	32.5%
Test #2	32.5%
Final Exam	25%
Homework	10%

Assignment of Final Grade

Final Average	Grade
90-100	A
80-89	B
70-79	C
60-69	D
0 -59	F

NOTE: Final Grades Cannot be Given Out Over The Phone

Tests

Test #1 will be given on Thursday, June 7.
Test #2 will be given on Thursday, June 21.

Each test will cover material introduced in class up to and including the Tuesday before the test. Tests and homework assignments will be returned to the students (to keep) after they have been graded, but will remain the permanent property of the Instructor even after they are returned to the students.

Final Exam: Our Final Exam will be on Tuesday, June 26, from 10:30 am - 1:30 pm. The Final Exam will cover material introduced in class from Wednesday, June 20 up to and including Monday, June 25. Students will not be allowed to take the Final Exam early. Exceptions WILL NOT be made for those who have made travel arrangements (e.g. purchased an airplane ticket) for a date on, or before the Final Exam.

Attendance Policy:

More than three (3) absences (other than University Excused absences) will result in a grade of FA (Failure due to excessive absences).

Incomplete Policy

A grade of "I" (incomplete) may be given in the case of illness or emergency situations occurring towards the end of the semester, which make it impossible for the student to complete all course work by the end of the semester in such a way that the student's grade accurately reflects his or her mastery of the course material up to the time of the illness or emergency. Such grades are given very sparingly, and only in a case of genuine hardship. Time limits for removing an incomplete can be found in the Undergraduate Bulletin.

Makeup Policy:

There will be no make-up tests given during the semester. Make-up tests will be given on Monday, June 25 (2pm-4pm) **for those students who missed a test** during the course. **No student will be allowed to make up more than one missed test**. Notice that these make-up tests are only given to students who **missed a test** (for whatever reason) during the course. (This implies that you may choose to miss a test if you feel that you are not ready. Don't do this indiscriminately - You may need to miss a test later on in the course, due to extreme illness, etc. Nevertheless, the option remains. One catch - once you enter the room to take an exam, you must take the exam. You will not be allowed to enter the room, look at the exam, and then decide whether or not you want to take the exam.

Study and Preparation:

To increase your chances for success, do the assigned homework when it's assigned and ask questions either in class or during office hours on problems that you find difficult. Most of the homework that is assigned will not be collected. Nevertheless, you are still expected to do it - and to a great extent, your conscientiousness in this matter will determine your success in the course.

I highly recommend the services of the *Natural Science Center.* It is located in Room 126 of Eldridge Hall and the phone number is 670-3139. The *Center* has tutors available in Biology, Chemistry, Mathematics, and Physics. I encourage you to visit the *Center* early in the semester so that you can become familiar with their services. Through their tutors, they provide an invaluable service and many of my former students have benefitted greatly from their help.

For your benefit, **practice tests and other material are available on my website.** These practice tests are a good way to prepare for the tests, and you are encouraged to use them. Consider them to be a "tune up" for tests, rather than a substitute for doing the assigned homework. To get to my website:
1. My website address is: http://www.pat-rossi.com/
2. Click "Academic Links for Troy University Students"
2. Under "Course Links," click "MTH 1125."

AMERICANS WITH DISABILITIES ACT:

Troy University supports Section 504 of the Rehabilitation Act of 1973 and the Americans With Disabilities Act of 1990, which insure that postsecondary students with disabilities have equal access to all academic programs; physical access to all buildings, facilities and events; and are not discriminated against on the basis of disability. Eligible students, with appropriate documentation, will be provided equal opportunity to demonstrate their academic skills and potential through the provision of academic adaptations and reasonable accommodations. Further information, including appropriate contact information, can be found at the link for Troy University's Office of Human Resources at:
http://www.troy.edu/humanresources/ADAPolicy2003.htm

Other Matters: Behavior such as wearing headphones in class, sleeping in class, exiting class during a lecture, talking to classmates during the lecture, reading a newspaper during class time, reading a book other than the assigned text for the course during class time, or doing work not assigned in this class during class time will not be tolerated. (If you are sick, or need to use the restroom, raise your hand and ask to be excused.) Also, I do not "grade" students' tests immediately after the test is turned in – please don't ask me to grade yours. Also, I don't show the solutions to problems on a test to students immediately after they turn in their test – please don't ask me. The solutions are posted on my website within a reasonable amount of time after the test is given, so there is no need for me to work the problems out at the request of each person who asks.

Academic Honesty

Academic misconduct shall be handled according to the guidelines listed in the *Oracle*.

Cell Phones and Other Electronic Devices

Use of any electronic device (cell phone, tablet, laptop, etc.) by students in the instructional environment is prohibited unless explicitly approved on a case-by-case basis by the instructor of record or by the Office of Disability Services in collaboration with the instructor. Cell phones and other communication devices may be used for emergencies, however, but sending or receiving non-emergency messages during a class meeting is forbidden by the University. Use of a communication device to violate the Troy University "Standards of Conduct" will result in appropriate disciplinary action (See pp. 42-52 of the Oracle.)

In order to receive emergency messages from the University or family members, devices must be in a vibration, or other unobtrusive mode. Students receiving calls that they believe to be emergency calls must answer quietly without disturbing the teaching environment. If the call is an emergency, they must move unobtrusively and quietly from the instructional area and notify the instructor as soon as reasonably possible. Students who are expecting an emergency call should inform the instructor before the start of the instructional period.

Homework Assignments: Graded homework assignments will be from the **Web Assign** website. (Homework assigned from the text will not be graded.) Each Assignment, along with its due date, will be announced in class as well as through your Troy e-mail account (So check your e-mail regularly and keep your mailboxes cleaned out!). To register on the website, go to the address **http://www.webassign.net** and enter the following information:

User:	(Your student ID number or your email address)	
Password:	**Either:**	your previous password if you've used WebAssign before
	Or:	The first four letter of you last name (first letter capitalized) followed by the last four digits of your student ID number.

On the next page, enter your *access code* (if you did not get an access code with your text book, you can buy one at the Bookstore or you can buy one online simply by following the prompts on the Webassign registration webpage.) On the next page enter your *access code.*

Letters of Recommendation: I will gladly write letters of recommendation for students who receive an "A" in the course, who have reasonably good attendance, and who do not cause discipline problems; provided that the letters are for graduate/professional school and/or employment in a field related to your academic major. Letters of recommendation for employment must be for positions that will be filled in the near future. (e.g., don't ask me to write a letter of recommendation for a teaching position, when your date of graduation is over a year away.) Such letters are *confidential.* Also, if you want me to write a letter of recommendation, you must ask me *personally*. (i.e., do not put a note in my mailbox asking me for a letter of recommendation.) Oh - one more thing - the better I know you, the more I will be able to say about you in my letters of recommendation. *Therefore, it is to your advantage to come and see me, and ask for help during office hours*. This is how I get to know my students.

HOMEWORK EXERCISES

Set #1

p. 59	5-9 odds (use a calculator to *estimate* the limit - for #9, the calculator must be in **radian mode.)**
	21-27 odds (*estimate* the limit visually, based on appearance of the graph of f(x))
	45-55 odds (Do these the way that we did limits in class)
p. 71	5-21 odds (Do these the way that we did limits in class)
	41 - 45 odds (Do these the way that we did limits in class, and don't worry about finding the "simpler function.")
	47-61 odds

Set #2

p. 83	11-23 odds (Do these the way that we did limits in class) (the answer to #15 is negative infinity)

Set #3

p. 92	1-9 odds
p. 92	17-27 every other odd
p. 92	33, 35 Find and graph any vertical asymptotes
p. 92	37-45 every other odd

Set #4

p. 92	19-25 every other odd

Set #5

p. 206	17-35 every other odd
p. 215	9-25 Every other odd (Graph asymptotes only. Don't worry about graphing intercepts, relative extrema, or points of inflection.)

Set #6

p. 206	5-15 odds; 19-33 every other odd
p. 215	11-27 Every other odd (Graph asymptotes only. Don't worry about graphing intercepts, relative extrema, or points of inflection.)

Properties of Limits

Set #7

p. 71	37, 39 For each part, write down the property of limits that we use to do the problem. (e.g., "The limit of a sum equals the sum of the limits.")

Continuity

Set #8

p. 83	31, 33 (Look at the graph to determine the answer) 39-51 odds (don't worry about "removable discontinuities")

Derivatives

Set #9

p. 107	5 (do this visually, using the graphs) 9-27 odds (Compute these using the *definition of derivative* (i.e. using the *limiting process*)) 29-35 odds (Do Part (a) only)

Set # 10

p. 118	5 (do this visually, using the graph), 7-59 every other odd (using the rules of derivatives)

Set #11

p. 118	9-57 every other odd (using the rules of derivatives)

Set #12

p. 129	5-55 every other odd , 9, 13, 1725, 29, 33, 39, 43, 47, 51

Set #13

p. 129	7-53 every other odd; 73, 75

Trig Limits

Set #14

     p. 71   63-73 odds

Set #15

     Function Composition Handout (from my website)

Set #16

     Chain Rule Handout (from my website)

Set #17

     p. 140   11-31 every other odd; 35-53 every other odd

Set #18

     p. 140   9-33 every other odd, 47-51 every other odd

Set #19

     Liebniz Chain Rule Handout (from my website)

Set #20

     p. 149   5-17 every other odd; 25, 29

Set #21

     p. 149   7-19 every other odd; 27, 31

Set #22

     p. 157   11- 29 odds

Set #23

     p. 187   5-37 every other odd - skip #33

Set #24

     p. 187   7-35 every other odd

Higher Order Derivatives

Set #25

     p. 129   91-103 odds

Curve Sketching

Set #26

     p. 196   3-13 every other odd; 17-25 every other odd; 53, 55

Set #27

     p. 196   5-11 every other odd; 19-27 every other odd

Set # 28

     p. 206   17-35 odds

Set #29

     p. 216   9-33 every other odd; 5, 7

Set #30

     p. 216   11-31 every other odd

Abs Extrema

Set #31

     p. 171   23-31 odds

Set #32

     Applied Max/Min Handout (from my website)

Anti-derivatives

Set #33

     Basic Anti-Derivatives - Part #1 (Handout from my Website)

Set #34

Basic Anti-Derivatives - Part #2 (Handout from my Website)

Set #35

      p. 255   11, 13, 15-35 every other odd

Set #36

      p. 251   13-33 every other odd

Differentials & U-Substitution

Set #37

      p. 240   19-27 odds

Set #38

      Elementary U-Substitution (Handout from my Website)

Set #39

      p. 305   5, 7, 9-29 every other odd; 39, 43

Set #40

      p. 305   11-27 every other odd; 41, 45

Summation Notation

Set #41

      p. 267   5-15 odds

Set #42

      p. 292   9-23 odds; 29, 35

Fundamental Theorem - Part #1

Set #43

      p. 292   75-85 odds

Set #44

      p. 305   21, 25, 41, 59, 61-67 odds

Set #45

      p. 277   13, 17, 21, 25, 33, 37, 41 odds

Set #46

      p. 277   15,19, 23, 27, 31, 35, 39, 43

Set #47

      Properties of Logarithms (Handout from my website)

Set #48

      p. 321   21-33 every other odd; 43-63 every other odd

Set #49

      p. 321   23-35 every other odd; 45-61 every other odd

Set #50

      p. 330   5-25 every other odd; 33, 37, 41

Set #51

      p. 330   7-23 every other odd; 35, 39

Course Description: Limits, continuity, the derivative, applications of the derivative, Rolle's Theorem, Mean Value Theorem, maximum and minimum problems, the differential, anti-differentiation and the definite integral, the application of the definite integral to area problems. *Prerequisite: MTH 1114 or advanced placement.*

COURSE OBJECTIVES

Upon completion of this course, the student should be able to:

1. Find the limit of functions.
2. Determine intervals of continuity of a function.
3. Perform the operation of differentiation on algebraic, trigonometric, exponential, and logarithmic functions.
4. Apply the concepts of the first and second derivatives to curve sketching.
5. Make applications of the derivative in maxima and minima problems.
6. Use differentials to make approximations and approximation errors.
7. Perform the operation of anti-differentiation.
8. Apply properties of the definite integral.
9. Appreciate and use vocabulary and symbols of mathematics as the basic language of science.
10. Recognize the relationship of mathematics to the emerging technological world.
11. Apply Rolle's Theorem and the Mean Value Theorem.

Important Dates (Which Are Not Listed Elsewhere in the Syllabus)

May 28	Holiday – Memorial Day – No Class
June 5	Last Day to Add a Course (in person or on Student Planning)
June 5	Last Day for Free Schedule Course Adjustments
June 5	Last Day to Withdraw (from Summer Session A) without financial penalty
June 5	Last Day to Drop a Course (from Summer Session A) without financial penalty
June 15	Last Day to Drop a Course for Session A
June 15	Last Day to Withdraw from the University (for Summer Session A)
June 26	Last Day of Class/Final Exam
June 29	Last Day to File Intent to Graduate for Fall 2018

University Firearms Policy

Regardless and in spite of recent changes in Alabama law related to the matter, it remains the policy of Troy University that no person other than authorized law enforcement officers shall be permitted to bring any firearm onto any campus, teaching, or service support property, owned or leased by the University, no matter whether they hold a permit to do so, or not. It has been determined that it is the University's prerogative to establish its policy related to this question and therefore the current University policy on firearms remains in effect.

This syllabus represents a tentative plan for the instruction in this course. The instructor reserves the right to amend this syllabus if, in his opinion, such action will enhance and/or optimize learning. Any changes in this syllabus will be announced in class and/or on the instructor's website. This syllabus is a best possible assessment of the course aspirations, assignments and requirements at the time it was developed for this semester.