

# Math 1420.02 Syllabus Fall 2017

**Course Title:** Calculus I  
**Room:** Lee Drain Building Room 218  
**Class Time:** Monday / Wednesday 10:00 – 10:50 pm  
Tuesday / Thursday 9:30 – 10:50 pm  
**Instructor:** Sarah Fritsch  
**Office:** Lee Drain Building Room 409  
**E-mail:** sarah.fritsch@shsu.edu  
**Office Phone:** 936-294-1562  
**Office Hours:** Mon / Tues / Wed / Thurs 11:00 – 11:50 am

**Final Exam:** Mon, December 4, 10:30 am – 12:30 pm in LDB 218  
**Textbook:** *Calculus: Early Transcendental Functions, 6<sup>th</sup> ed.* by Larson and Edwards (ISBN: 1285774779)

**When e-mailing instructor:** include your name, course (Math 1420) and write professionally  
\*\*E-mail or stopping by during office hours are my preferred methods of communication\*\*

## An Important Course:

MATH 1420. Calculus I. 4 Hours.

Topics include limits and continuity, the derivative, techniques for differentiation of algebraic, logarithmic, exponential and trigonometric functions, applications of the derivative and anti-differentiation, definite integral, Fundamental Theorem of Calculus.

Prerequisite: C or better in MATH 1410 or MATH 1314 and MATH 1316 with a grade of C or higher; or high school equivalent.

## **Course objectives:**

Students completing this course will be able to:

1. Find limits of functions numerically, graphically, and analytically.
2. Use the definition of derivative to find the derivatives of algebraic, logarithmic, exponential, and trigonometric functions.
3. Use basic differentiation rules, the product rule, the quotient rule, the chain rule, and implicit differentiation to take derivatives.
4. Use the first and second derivative test to analyze the behavior of graphs.
5. Solve a variety of application problems, including but not limited to related rates and optimization, using differentiation.
6. Compute indefinite and definite integrals of algebraic, logarithmic, exponential, and trigonometric functions using basic antiderivatives and integration by substitution.
7. Use Riemann Sums and definite integration to solve problems related to finding the area under the curve.
8. Apply the Squeeze Theorem, the Intermediate Value Theorem, Rolle's Theorem, the Mean Value Theorem, and the Fundamental Theorem of Calculus.

## Success in Calculus:

Success in calculus is dependent on two factors, good study habits and a strong content background in mathematics. Past experience has shown that students will have the following outcomes:

A student has... ..and... ..then they earn a...	...a strong mathematics background...	...a weaker mathematics background...
...good study habits...	A	C
...mediocre study habits...	C	F

A grade of a C or higher in Math 1420 Calculus I is a prerequisite for enrollment in Math 1430 Calculus II.

## Grading:

### **Grade Break-Down:**

The break-down of how different types of assignments affect your overall average is as follows:

Final Exam:	25%	
Test Grades:	50%	(All tests will be weighted equally and together worth 50% until the end of the Semester when the lowest test grade is weighted half as much as the other tests)

Daily Grades (Quizzes, HW, Attendance, etc.): 25%

Total: 100%

If you ask me to fill out a grade check form or ask what your grade is during the semester, I will use your average with all tests equally weighted. If you ask me for your current grade, I will just look at the score you can find on Blackboard as this is your current grade. If you need me to fill out a grade check form to verify your current course grade for your advisor, coach, etc. please come by my office during office hours or set up an appointment with me and I will fill it out then.

### **Semester Letter Grades:**

Letter grades are assigned at the end of the semester as follows: A (90%+), B (80% - 89.9%), C (70% - 79.9%), D (65% - 69.9%), and F (0 - 64.9%). A grade of A, B, or C is required to continue to Math 1430 Calculus II.

## Course Mechanics:

### **Homework:**

Homework based on the previous week's lectures will be due once a week at the beginning of class. Homework assignments and due dates are posted on Blackboard. One homework assignment may be turned in late (within 48 hours of the due date).

### **Quizzes & Tests:**

There will be periodic in-class quizzes. Quizzes may be announced or unannounced. There are three or four tests plus a final exam. The lowest quiz grade will be dropped and the lowest test will be weighted as worth less at the end of the semester.

## **Miscellanea:**

### **Calculators:**

Calculators can be a great aid to mathematical computations but they can also act like a magic wand, providing answers without understanding. In this course we will emphasize the understanding of mathematical concepts in place of calculator "magic", so the use of these magical wands will be restricted. Calculators may be used on homework but may only be allowed on portions of most quizzes or tests. Even when calculators are allowed, the emphasis will always be on the correct mathematical work and the appropriate communication of that work.

It is recommended that students have a graphing calculator, but a scientific calculator is a minimum. Students may not use calculators on cell phones, tablets, ipods, etc. and may not share calculators during tests. Students may not use calculators with CAS capabilities or TI-Nspire calculators on tests or quizzes. There may also be portions of tests or quizzes where a scientific calculator would be allowed but a graphing calculator would not be. There may be other tests or quizzes where no calculator is allowed.

### **Writing and Correct Notation:**

Mathematicians should write well. Please do not abbreviate (unless we have agreed on some common abbreviations.) Please write with good grammar, in complete sentences. Write so that others will find your work easy to read. Display your work in correct mathematical notation, with equal signs, appropriate symbols and function notation.

### **Definitions and Theorems:**

All students will memorize certain definitions and theorems and will be asked to write them verbatim on quizzes and tests. During the lecture, the instructor will specifically state if a definition or theorem needs to be memorized.

### **Electronics Use in the Classroom:**

Students are expected to take notes by hand on paper during the lecture. Traditional note taking encourages students to analyze and synthesize the material being covered as they write notes.

Students MAY NOT take notes on computers or tablets. Students should never attempt to take notes by taking photos. While this is surely not the intention of the student, this communicates that they don't feel like it is worth their effort to invest the personal exertion required to write down what is being put on the board. Students may not record the lectures in video, audio, or photographic form. The only exceptions to these policies would involve documentation from the office of Disability Services stating that one of the activities prohibited above is an appropriate accommodation for a recognized disability..

There should be no use of cell phones, laptops, or tablets in class. I should not see any of these items out on your desk under any circumstances. If I see it, I will assume that you are "engaged in non-course related activities" and will mark you as absent for the day. Per the syllabus, students being not mentally present, i.e. engaged in non-course related activities of any kind, is equivalent to not being physically present in the room.

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## **Classroom Policies:**

### **Late Work/Make-up Work:**

Generally no late work is accepted and no make-up work will be given. Each student may have one (1) extension on one (1) assignment. This assignment is due within 48 hours of the original due date and must be labeled "Extension" at the top of the assignment.

At the discretion of the instructor, a student may make up a missed test if it is missed for a documented and approved reason. The instructor reserves the right to request alternate documentation, original copies of documentation, to have a copy of the documentation to keep on file, to classify a situation as not an appropriate excuse, or to refuse to allow a student to make up an test for any reason that would preclude a student from making up an test based on her professional judgment. A student must contact the instructor **within 24 hours** of the missed test if they would like to have their situation reviewed for the possibility of making up a test.

A student should not expect to be able to make-up more than one test. No quiz make-ups will be allowed. The lowest **one** quiz will be dropped to balance this out.

### **Planned Absences:**

If a student knows that they will miss class for athletics, court dates, or another planned documented reason, the student should turn in their work before leaving.

### **Arriving Late:**

If a student is more than ten minutes late to class, then they will be marked as absent. If a student arrives late for an test, they will be allowed to start the test late as long as they arrive before the first test has been turned in. If another student has already turned in their test and left, then no additional students will be allowed to begin testing. If you are late for a quiz, you will have however much time remains to work on the quiz.

If some unforeseen situation comes up that causes you to be late, please come into class quietly, take your seat, and join in. The instructor will not embarrass you, but may speak with you privately or through e-mail if it is a consistent problem. Please do know that the repercussions discussed in the syllabus will be the natural consequence of being late. If you are late once or twice, they will not have a major impact on your grade. If you are late frequently, it will affect your grade in the course substantially. The goal is to set up policies that encourage all students to make it a matter of personal priority to arrive on time so that the instructor doesn't have to nag students about being tardy.

### **Attendance:**

Attendance will be taken at the beginning of each class period. If you are not sitting in your assigned seat, you will be marked as absent.

### **Leaving Early:**

If a student departs early, they will be marked absent. The instructor will dismiss class when it is over. If you need to step out into the hallway to deal with an emergency, leave your items on your desk and silently leave to go take care of the emergency.

### **Stepping into the Hall During Class:**

Leaving the room to use the restroom, get a drink of water, or engage in any other activities is something that should be reserved for true emergencies only. You should take care of personal activities before or after class. I do understand that true emergencies exist, but they should

be the exception rather than the rule. I am only asking you to uphold the same standard that I hold myself to, and I feel like that is very reasonable.

#### **Classroom Behavior:**

If a student's behavior is disruptive to other students, the student will be asked to leave and marked absent for that day. If a student is not engaged in the course (i.e. sleeping, texting, working on out-side work, etc.), the student will be marked absent.

#### **Missing Class:**

If a student misses class, it is their responsibility to get the notes from another student in the class. If you are unable to get notes from a classmate, you may come by my office during office hours and copy down notes by hand. Missing material is not grounds for turning in assignments late.

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### **University Policies:**

#### **Academic Honesty:**

The subject of Academic Honesty is addressed in Paragraph 5.3, Chapter VI, of the Rules and Regulations, Board of Regents, The Texas State University System, ([http://www.shsu.edu/~vaf\\_www/aps/documents/810213.pdf](http://www.shsu.edu/~vaf_www/aps/documents/810213.pdf)), and in the SHSU Student Guidelines published by the Office of Student Life (<http://www.shsu.edu/students/guide/StudentGuidelines2010-2012.pdf> pp 29-33).

Students are to abide by the Code of Student Conduct and Discipline in the Guidelines for Student Conduct in the Student Life Policies Handbook and infractions will be dealt with in accordance with these same Guidelines.

A student who copies another student's work and submits it as his/her own is cheating. Both the student who copied, as well as the student who allowed his/her work to be copied, will receive a grade of zero, and, possibly, an "F" in the course.

**NOTE: It is considered CHEATING to have notes, formulas, or programs in your calculators. Sharing calculators during quizzes/tests/final is strictly forbidden and will be considered cheating. Consequences will be severe.**

#### **Copyright Policy:**

All printed materials disseminated in class or on the web are protected by Copyright Laws. One copy (or download from the web) is allowed for personal use. Multiple copies or sale of any of these materials is strictly prohibited. The SHSU copyright policy can be found online at [http://www.shsu.edu/~vaf\\_www/aps/documents/891208\\_000.pdf](http://www.shsu.edu/~vaf_www/aps/documents/891208_000.pdf).

#### **Use of Cell phones, MP3 players, Text Messagers, etc., in Academic Classrooms and Facilities:**

The use by students of electronic devices that perform the function of a telephone or text messenger during class-time may be prohibited if deemed disruptive by the instructor to the conduct of the class. Arrangements for handling potential emergency situations may be granted at the discretion of the instructor. Failure to comply with the instructor's policy could result in expulsion from the classroom or with multiple offenses, failure of the course. Any use of a telephone or text messenger or any device that performs these functions during a test period is prohibited. These devices should not be present during a test or should be stored securely in such a way that they cannot be seen or used by the student. Even the visible presence of such a device during the test period will result in a zero for that test. Use of these devices during a test is considered de facto evidence of cheating and could result in a charge of academic dishonesty (see student code of conduct <http://www.shsu.edu/students/guide/StudentGuidelines2010-2012.pdf#page=29>). The cell phone policy can be found at [http://www.shsu.edu/~vaf\\_www/aps/documents/100728.pdf](http://www.shsu.edu/~vaf_www/aps/documents/100728.pdf).

#### **Classroom Rules of Conduct:**

Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

#### **Visitors in the Classroom:**

Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.

#### **Students with Disability Policy:**

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail [disability@shsu.edu](mailto:disability@shsu.edu)). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see: <http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

#### **Student Absences on Religious Holy Days Policy:**

In accordance with SHSU Academic Policy 861001, which can be found online at [http://www.shsu.edu/~vaf\\_www/aps/documents/861001.pdf](http://www.shsu.edu/~vaf_www/aps/documents/861001.pdf), an absence that is due to the observance of a religious holy day is excused under Section 51.911(b) of the Texas Education Code. Section 51.911(b) requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused