# Math 1410.05 Syllabus Fall 2017

**Course Title:** Elementary Functions
**Room:** Lee Drain Building Room 400
**Class Time:** Monday / Wednesday / Friday 12:30 – 1:50 pm
**Textbook:** *OpenStax PreCalculus*
**Free e-book at:** https://openstax.org/details/precalculus

**Instructor:** Sarah Fritsch
**Office:** Lee Drain Building Room 409
**E-mail:** sarah.fritsch@shsu.edu
**Office Phone:** 936-294-1562
**Office Hours:** Mon / Tues / Weds / Thurs 11:00 am – 11:50 am

**Recheck Sessions:**
Fridays 9:30 am – 12:00 noon, location and time slots may vary based on student need and instructor availability
**Recheck Sign-ups:** By Thursday at 8:00 am

**Final Exam Session:** Mon, Dec 4, 1:00 – 3:00 pm in LDB 400

**When e-mailing instructor:** include your name, course (Math 1410), course time (8 am MWF), and write professionally
**E-mail or stopping by during office hours are my preferred methods of communication**

## An Important Course:

This course is designed with only one thing in mind, to prepare students for calculus. Each topic we cover, the methods we use, the pace of the course, the amount of time required outside of class, and the workload were selected precisely because they help us fulfill that one purpose.

A grade of C or better in this class means that a student has shown that they are ready to take calculus, and will be able to move on to take calculus next semester.

**Course goals:**
Students completing this course will be able to:

1. Write mathematics according to accepted standards.
2. Use function notation and recognize functions as a fundamental mathematical concept.
3. Work with composition of functions.
4. Identify one-to-one and onto functions and compute the inverse of a function.
5. Use simple graphing techniques to understand the shape of a function.
6. Solve equations involving polynomial and rational functions.
7. Solve equations involving exponential and logarithmic functions.
8. Work with elementary functions on the unit circle to solve equations involving trig functions.
9. Work with inverse trigonometric functions.

**Prerequisites:**
Students entering this course should be comfortable with elementary algebra and intermediate algebra, function notation, linear equations, and factoring quadratic equations.

## Course Mechanics:

The material in this course is broken up into three different groups: the topics that are absolutely essential for success in calculus that you must know like the back of your hand the day you walk in the door (Basic Objectives), the topics that you need to know for success in calculus that we need to get a very solid foundation for now but that you may have some time the perfect in calculus (Enrichment Objectives), and the material that you should come into this semester knowing but that we will review because we need to have it fresh in our minds (Review Objectives). Your score in this course will be determined by both the percentage of each type of objective that you have shown lasting competency in and the average you earn on quizzes and class work this semester.

**Study Videos and Study Quizzes:**
Before each class session you are expected to study the material that we will cover. This enables you to come to the lecture prepared. In other courses this is often accomplished by having the student read the related information out of their textbook. In lieu of reading, I have posted videos covering the material. I have found that most students prefer this to reading mathematics from the textbook.

After watching the videos, students should complete the related Study Quiz. These quizzes are designed to both provide the student with an opportunity to practice what they have just learned and to provide accountability regarding and encouragement to study before class.

The Study Quizzes are due at the beginning of the class period. They will be graded and this grade will be part of your average score on quizzes and class work. No late Study Quizzes will be accepted under any circumstances (this includes excused absences). I will drop your two lowest Study Quiz grades at the end of the semester.

**Class Lectures and Activities:**
In class we will both review, clarify, and expand upon the material that you studied before class. This may take different forms on different days. We may discuss questions based on problems on the Study Quiz, take notes on more in-depth material, complete group assignments, or complete individual practice.

All students are expected to be actively engaged with the instructor and their peers during class each time we meet.

**Practice Assignments:**
These assignments are designed to provide students with an opportunity to practice what they have learned in class. The Practice Assignments may be started in class as group or individual assignments, or they may be individual assignments that are to be completed wholly outside of the classroom to practice material covered in a more lengthy course lecture.

The Practice Assignments will be due the day after each module. They must be turned in completed before a student is eligible to take their Objective Mastery Assessment.

*Syllabus is subject to change. Any changes will be announced in class and posted on Blackboard.*

Each week I will select one of the Practice Assignments to be graded as a quiz grade. I will not announce which assignment is selected ahead of time, so make sure that you complete all assignments as if they will be graded for correctness. In order to receive credit for this quiz grade, the Practice Assignments must be turned in on time.

**Objective Mastery Checkpoints:**
The initial checkpoints will be completed after each module. They will cover the objectives from the module covered the previous week.

The Objective Mastery Checkpoints are timed. If you can't complete the problems in the given amount of time, then you don't know the material well enough. If Disability Services has determined that you should receive extended time on quizzes as a accommodation for a documented disability, please bring me your paperwork from Disability Services.

In order to take the Objective Mastery Checkpoint you must bring the completed Practice Assignments from the module. The Objective Mastery Checkpoints will be graded based on the objectives. Each objective is listed separately in Blackboard and will be scored as "Not Yet Mastered", or "Mastered".

Objective Mastery Rechecks may be taken during office hours and other scheduled times if you do not demonstrate mastery on one or more objective or you did not bring your completed practice assignments and therefore did not complete the checkpoint. To retake an Objective Mastery Checkpoint you will need to complete problems selected for you out of OpenStax PreCalculus. You will find the problems selected for you as a comment in the grade book. OpenStax PreCalculus is a free on-line textbook. You can find a copy of the book and a link to related website in the menu to the left. If you have not already turned in the completed assignments, you must also bring the completed assignments when you come to take the Objective Mastery Recheck.

**Qualifiers:**
Every three or four modules we will devote a day in class period to taking Qualifying Checkpoints. Students will take assessments that are similar to the Objective Mastery Checkpoints to demonstrate that the mastery that they have already demonstrated is long-term and lasting. If a student shows continued mastery of an objective, their ranking for that objective will be upgraded from "Mastered" to "Qualified". A student must have already shown "Mastery" to be able to upgrade to "Qualified".

**Final Exam Week:**
We will not have a traditional final exam. During our final exam time slot a students may come in and make a final attempt at qualifying on any objectives that they have yet to qualify on.

## Grading:

**Objective Mastery Rankings:**
Each type of objective—Review Objectives, Basic Objectives, and Enrichment Objectives—is considered separately. A student's goal is to reach the "Qualified" level in as many objectives as possible.

**Professionalism Score:**
A student's professionalism score is based on Study Quiz grades, attendance, working with peers in class, asking questions during presentations, completing presentations of problems, and any other daily class work that Ms. Fritsch decides to grade. The professionalism score will be 50% graded assignments (Study Quizzes and other graded assignments) and 50% active involvement in class.

**Semester Letter Grades:**
Your grade this semester is determined by both demonstrating lasting mastery of objectives and your professionalism score

To earn an A for the semester a student must have:
- Qualified on 100% of the Review Objectives
- Qualified on 100% of the Basic Objectives
- Qualified on 95% of the Enrichment Objectives
- Earned an A on their Professionalism Score

To earn a B for the semester a student must have:
- Qualified on 100% of the Review Objectives
- Qualified on 95% of the Basic Objectives
- Qualified on 50% of the Enrichment Objectives
- Earned at least a B on their Professionalism Score

To earn a C for the semester a student must have:
- Qualified on 100% of the Review Objectives
- Qualified on 90% of the Basic Objectives
- Earned at least a C on their Professionalism Score

To earn a D for the semester a student must have:
- Qualified on 75% of the Review Objectives
- Qualified on 50% of the Basic Objectives
- Earned at least a D on their Professionalism Score

Otherwise, a grade of F is earned

A grade of A, B, or C is required to continue to Math 1420 Calculus I.

## 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 will not be allowed on 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.

**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.

**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 synthesis 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 intension 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.

## Classroom Policies:

**Attendance on Lecture Class Days:**
For a lecture day, you don't have to do anything to get an absence excused. Your first four non-qualifier day absences are automatically excused. You do not need to provide documentation or tell me why you were gone. Please use these excused absences carefully.

As in most professional jobs, you are given a fixed number of personal days that you can miss. It is your responsibility to use them sparingly so you are not caught unable to come to work after you have used up all of your personal days.

Only in extremely catastrophic cases (beyond normal periodic illnesses) will a student be allowed additional excused absences.

If an absence is marked as excused, then a student:

- will have access to the lecture resources for that day
- may e-mail an electronic copy of any study quizzes to Ms. Fritsch by class time (to confirm on time completion)
- may turn in the original copy of any study quizzes to Ms. Fritsch by the next class day (to facilitate grading)

If a student has an excused absence on a day when a Mastery Checkpoint is given, a student:

- may turn in any practice assignments the next Friday (without having to complete any additional practice problems).
- may take the Mastery Recheck the next Friday.

If an absence is marked as unexcused, then a student:

- will NOT have access to the lecture resources for that day
- may NOT submit any study quizzes late.

If a student has an unexcused absence on a day when Mastery Checkpoint is given, a student:

- may turn in any practice assignments the next Friday, but WILL HAVE TO COMPLETE additional practice problems as they would if they had taken a Mastery Checkpoint, did not master the objectives, and were trying to practice for a Recheck.
- will NOT receive a score for the quiz grade based on one of the practice assignments
- may take a follow up Mastery Recheck the next Friday.

**Attendance on Qualifier Days:**
If a student misses class on a day when we are taking qualifiers, they will need to schedule coming in on a Friday during a Recheck session to take their Qualifiers. It is in your own best interest to take your qualifiers in class as this will save you from additional work later.

**Planned Absences:**
If a student knows that they will miss class for athletics or another university-sponsored event, the student should speak to Ms. Fritsch before leaving to coordinate the completion of the work you will miss. Missing a qualifier-day does not use up one of your excused absences.

**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.
Your first four non-qualifier day absences are automatically excused. You do not need to provide documentation or tell me why you were gone. Please use these excused absences carefully.

**Arriving Late:**
If a student is more than ten minutes late to class, then they will be marked as absent.

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.

**Leaving Early:**
If a student departs early, it will be marked as absence.

**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.

## 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), 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 .

**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 messager 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 messager 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.

**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). 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, 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