Math 4361.01 (CRN 81101)
Introductory Analysis
Fall 2017
3 undergraduate credits

- **Class meeting information:** 219 LDB from 2:00 - 3:20 TTh

- **Professor:** Dr. Brian Loft   **e-mail:** loft@shsu.edu
  Temporary Office: Farrington 111G (in A.S.C.)   **Office Phone:** 294-4465

  All course materials will be available via **Slack**: `https://join.slack.com/t/math4361shsu/signup`
  To create an account on **Slack**, you must use your `...@shsu.edu` email address.
  Ask to join "math4361shsu"

- **Office Hours:** Monday and Wednesday 1:00 - 2:00
  Tuesday & Thursday 11:00-12:00 and, of course, by appointment.

- **Course Description:**
  This course consists of a more thorough treatment of the material traditionally considered in elementary calculus. Topics include sets, functions, properties of the real number system and sequences. Writing Enhanced. Prerequisite: C or better in MATH 3300, or consent of the instructor.

- **Course Objectives:**
  Students completing this course should have mastery of the following major concepts. Other techniques and ideas will also be covered.

  – the properties of the real numbers as a complete ordered field
  – convergence of sequences of real numbers
  – the topology of the real numbers
  – limit points and compactness of $\mathbb{R}$
  – a rigorous development of the meaning of a limit
  – a rigorous development of the notion of continuity
  – the rigorous development of the derivative (if time permits)

- **Structure of course:**

  There is no textbook and there will be very few lectures. Course notes will be distributed at the beginning of the semester. These notes will include definitions, remarks, examples, problems, questions, and theorems.

  Each student should read and understand all of the definitions, remarks and examples followed by an *attempt* to answer **all** of the questions, solve **all** of the problems, and prove **all** of the theorems.

  Each attempted answer, solution, or proof should be written up neatly, completely and concisely. It may be useful to have each on its own sheet (or sheets) of paper. **All submitted work must be legible and consist of complete sentences.** (Note: an equation is considered a complete sentence.)

- ***Components:*** There are four integrated components within this course. A description of each and its weight is below.

  1. **Class presentations – 20 points –** Each day I will call on several students (or ask for volunteers) to present their work on the board. Student progress will be determined by two factors: (1) performance at the board presenting complete, correct work and answering questions from the class pertaining to this presentation and (2) performance when others are at the board, i.e. paying close attention to their presentation and, if necessary, politely questioning their work.

  2. **Written work – 30 points –** Each day written work will be collected. Every time a student goes to the front of the room to present her work on a particular problem, written solutions to that problem will be collected from the rest of the class. I will read these and return them the next day, marked either as "correct" or "rework." You are permitted to rework any solutions until they are deemed correct. Your written work grade will be determined by the number of points earned on "correct" solutions.

     If a correct solution is turned in *before* that problem is presented, **6 points** will be earned. If turned in after the presentation, **2 points** will be earned.

  3. **Class participation – 10 points –** Each student will be expected to attend each class and participate in a professional manner. Polite questions and comments are expected on a regular basis.

  4. **Exams – 20 pts each –** A midterm and a final exam on Wed., May 9, 8:00 - 10:00.

- ***Important Rules:***

  1. **Academic Honesty:** I assume that all work handed in to me or presented in class by you is **entirely** your own work. ***You must hand in your own original work.*** There are **no** accepted references for this class. You **may not** consult other people who are not in this class for help. You **may not** consult any textbooks for help. Doing so will be considered the worst possible form of plagiarism.

  2. **Attendance:** Since a significant part of your grade is class participation, and since you cannot participate if you are not present, it will be impossible to succeed (*i.e.* not fail the course) if class is missed.

  3. **Focus:** Since this class is almost entirely driven by the students, it is vitally important that during class time we stay focused on the presentations at the board. If you need to check Instagram, read notes from other classes, send a text message, or have a conversation on your phone or with a classmate do so outside of this class.

  4. **Etiquette:** We will spend a large portion of time during the semester with another student (or you) at the board in front of the class. When a student is presenting a proof that observers politely question, it is important that each member of the class *ask a question* about the proof, rather than offer a correction. And remember the most important rule: **Be Polite.**

- **Academic Dishonesty:** Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. See Student Syllabus Guidelines.

- **Classroom Rules of Conduct:** Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect. Students are to turn off all cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices to be used or seen during times of examination. Students may tape record lectures provided they do not disturb other students in the process.

- **Visitors in the Classroom:** Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrars Office.

- **Student Absences on Religious Holy Days Policy:** Students are allowed to miss class and other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students remain responsible for all work. See Student Syllabus Guidelines.

- **Disabled Student 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 visit with the Office of Services for Students with Disabilities located in the Counseling Center. See Student Syllabus Guidelines.

For more information on these policies, please visit the site

http://www.shsu.edu/syllabus/