

MATH 2554 – Calculus I

Course Syllabus – Spring 2014

Instructor: Shanda Fulmer
Office: Science-Engineering (SCEN) 312
E-mail: srfulmer@uark.edu

Required Materials: There are two aspects of the required materials: the MYLABSPLUS Student Access Kit and the Turning Technologies response card (e.g., clicker).

SOFTWARE: MYLABSPLUS (MLP) Student Access Kit – This kit is **REQUIRED** for this class. The textbook is recommended, but not required since an electronic version of the textbook is included in the kit. If you have taken Calculus 1 at the University of Arkansas in the previous year or so, you shouldn't need to purchase the kit. To log in to MLP,

- (1) go to the website <http://uark.bb.mylabsplus.com>;
- (2) Find and click the "Forgot your password" link;
- (3) Enter the first part of your uark email address in the box labeled "User ID:" (e.g., if you were mathstudent@uark.edu, you would enter "mathstudent"); and
- (4) Check your email for a message with the subject "Password Reset Information" from PasswordReset@ResetCredentials.com, and follow the directions in the email.

PROBLEMS WITH THE SOFTWARE: If your login fails, please check that you typed in the correct web address for MLP: uark.bb.mylabsplus.com. If you are able to open your course but you are not able to access your assignments, please try again. If you have tried a few times and still receive some type of an error message, then you need to contact the MLP Technical Support line at 888-883-1299 (available 24/7) or click on the Support Tab and then click on the email address. If you contact the company please make sure that they give you a case number and keep that number in case it is needed for verification. Be sure that your browser will support the MLP software (e.g., be sure to run the browser check once you get started). On campus assistance is available in the MRTC located on the second floor of SCEN. From time to time, you may receive messages that your session has timed out. This often is due to the cookies downloaded to your computer from the MLP website. To resolve this issue, either delete the cookies from your computer or try logging in with a different browser (e.g., Chrome, Firefox, Safari, etc.).

AUDIENCE RESPONSE: The Turning Technologies audience response system will be used in all lectures. The student is required to purchase a Turning Technologies response card (clicker) unless one has previously been purchased for another class. The student is required to bring the clicker to every lecture. Web registration is available online at webreg.turningtechnologies.com. However for this class, I will manually register your clicker via a sign in sheet that will be passed around on Wednesday, January 22, 2014 in class. If you are not in class that day, you will be responsible for letting me know your clicker ID so that I can link your name and ID in my Turning Technologies program.

Textbook: *Calculus, Early Transcendentals*, William Briggs, Lyle Cochran, 2011, Pearson. As stated earlier, this is not required, as there is an electronic version of the textbook included in the MYLABSPLUS kit. However, if you work better from a print version, I suggest you obtain a copy, as it will be used in future calculus courses as well.

Calculators: No programmable graphing calculators of any kind will be allowed on any quiz/exam. In addition, neither an HP300s nor a Casio fx115m is allowed. **Any calculator with a differentiation/integration button is *NOT* allowed on any quiz/exam.** A scientific calculator can prove helpful, but it is not required. A TI-30X IIS is recommended since this is the type of calculator you will be given to use in the Testing Lab. If you have a graphing calculator, you may use it for in-class investigations and on HW.

OTHER TECHNOLOGY

Please do not have your cell phone on during class. Cell phones, palm pilots, Blackberries, iPods, etc. will not be allowed to be visible or used in any way during class. Do not plan to use these devices for a clock on the exam. Any device using earplugs/headsets is not allowed to be used in class. If you have any of these devices in your back-pack or pocket during class, be sure that they are turned off and left in your back-pack or pocket.

GRADING:

There will be 850 points available as follows:

50-minute Exams (4 at 75 points each)	300 points
Quizzes & Drill Exercises	100 points
Homework & Attendance	100 points
Mid-Term (departmental)	150 points
Final (departmental & comprehensive)	200 points
Total	850 points

Letter grades will typically follow a 90-80-70-60 scale, although the instructor reserves the right to revise downward if necessary.

There are two COMPREHENSIVE, COURSE-WIDE exams. These exams are written by the course coordinator, and graded by all course instructors. Review materials will be available to the student.

WEDNESDAY, MARCH 5	MIDTERM EXAMINATION	6:00-7:30 pm	150 pts
MONDAY, MAY 5	FINAL EXAMINATION	6:00-8:00 pm	200 pts

These exams are scheduled before the semester begins. **Students should ELIMINATE ANY CONFLICTS NOW.** Students who are entitled for accommodation by ADA must notify their instructor, and their instructor must notify the coordinator, at least one full week before the common examinations. Students who have a legitimate University-related conflict with the midterm or final exam must also identify themselves at least a week in advance. Last minute requests for make-up exams may not be granted. Make-ups for the hourly exams will not be given except in extraordinary circumstances.

There will be weekly quizzes/drill exercises throughout the semester. These quizzes will either come from the homework or be very similar to the homework. If you've done the homework, you shouldn't have any difficulty with the quizzes. Most of the quizzes will be given during the drill, but I may have some in lecture. **There will be no make-ups for unannounced quizzes and no late HW accepted.** However, I will drop the lowest quiz/drill exercise score from consideration in the final grade (with the option of dropping more scores depending upon the number of total scores throughout the semester).

There are two types of HW in this class: Paper HW (from the textbook) and Computer HW (from MLP). Generally, there will be a paper homework assignment for each class meeting. Typically paper homework assignments will not be collected for grading. However, it is extremely important that you keep up with paper homework, as this is the practice and important learning experiences you need in order to be successful on quizzes, investigations, and exams. (A minimum of two hours per night is to be expected.) Computer homework will be posted weekly on MLP. The general trend will be that the computer HW for the week will become live on Monday morning and will be due by Sunday evening at midnight. **Note that computer homework comes with deadlines.** *You should not wait until the last minute to complete your homework.* After the deadline the computer homework will not be available. Computer homework applies to your course grade under the HW and attendance category.

Attendance & Class Participation:

Class attendance is required and extremely important. Lecture & drill attendance is part of your grade—therefore, absences from class will influence your grade in more ways than just your overall performance. The Turning Technologies audience response system will be used in the lecture class. You are required to purchase a Turning Technologies remote clicker unless you have previously purchased one for another class. Attendance will be taken in lecture class using the clicker. Work that is contingent upon being in class that is collected (e.g., in class activities, unannounced quizzes) cannot be made up. Participation in class activities and discussion is encouraged and also contributes to your overall grade. Attendance will be worth two 10-point homeworks in your final grade. Attendance questions will be used to record attendance—therefore it is imperative that you bring your clicker to each class. Your correct responses on these questions will also comprise one HW assignment over the course of the semester.

Statement for Academic Integrity:

As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail." Each University of Arkansas student is required to be familiar with and abide by the University's Academic Integrity Policy which may be found at <http://provost.uark.edu/>. Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.

TESTING LAB ACADEMIC POLICY (SCEN 203)

The use of cell phones and any personal media devices (including iPods, PDAs, personal calculators, etc.) in any of the testing labs is strictly prohibited. Turn off all these devices BEFORE entering the Testing Lab and store them with your other belongings. Do not take out or turn on these devices until you have left the Testing Lab. No belongings, including purses or backpacks, may be brought into the lab. There is space allotted for your belongings on the shelves in the Testing Lab or in the lockers outside of SCEN 203. A violation of this policy could result in a non-replaceable zero on the quiz/exam being taken. In addition, you might be required to report to the Office of Community Standards and Student Ethics (OCSSE).

The only items allowed at the testing machine are a pen/pencil, your id, the official testing lab calculator, and the official testing lab scratch paper. Calculators and scratch paper are provided by the Testing Lab operator.

TUTORING

There are free student tutors in the Enhanced Learning Center (Gregson Hall), Mullins Library, ENGR, Reid, Futrall, Maple Hill, and MRTC – SCEN 209. Visit their websites for the latest hours.

Inclement Weather Policy:

Class will meet unless the University is closed. On-campus students are expected to be present. Off-campus students should make their own decisions in the best interest of personal safety. Off-campus students will not be penalized for being absent on those days the Fayetteville Public Schools are closed due to weather. If attendance is severely affected by weather, deadlines and exam dates may be adjusted. Please do not call the Department of Mathematical Sciences with weather-related inquiries. You may email me for information.

EMERGENCY PROCEDURES

Many types of emergencies can occur on campus; instructions for specific emergencies such as severe weather, active shooter, or fire can be found at emergency.uark.edu.

Severe Weather (Tornado Warning):

- Follow the directions of the instructor or emergency personnel
- Seek shelter in the basement or interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building
- Stay in the center of the room, away from exterior walls, windows, and doors

Violence / Active Shooter (CADD):

- **CALL-** 9-1-1
- **AVOID-** If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY-** Barricade the door with desk, chairs, bookcases or any items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it's safe.
- **DEFEND-** Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.

THIS SYLLABUS IS SUBJECT TO CHANGE. You will be notified in email, on MLP, and/or in class of changes. Failure to check your email and/or failure to read the announcements in MLP and/or failure to attend class will not constitute a reason to be allowed to make up any assignments, tests, or changes to the course.

MATH 2554 COURSE OUTLINE AND SUGGESTED SCHEDULE:

This schedule is an approximation and subject to change.

Week of	
13 January	2.1 The Idea of Limits 2.2 Definitions of Limits 2.3 Techniques for Computing Limits
20 January	MLK Holiday 2.4 Infinite Limits 2.5 Limits at Infinity
27 January	2.5 Limits at Infinity 2.6 Continuity 2.7 Precise Definitions of Limits
3 February	2.7 Precise Definitions of Limits 3.1 Introducing the Derivative Review Exam 1
10 February	3.2 Rules of Differentiation 3.3 The Product and Quotient Rule 3.4 Derivatives of Trigonometric Functions
17 February	3.5 Derivatives as Rates of Change 3.6 The Chain Rule 3.7 Implicit Differentiation
24 February	3.7 Implicit Differentiation 3.8 Derivatives of Logarithmic and Exponential Functions Review Exam 2
3 March	3.9 Derivatives of Inverse Trigonometric Functions Review MIDTERM EXAM – WEDNESDAY, 6:00 – 7:30 PM 3.10 Related Rates
10 March	3.10 Related Rates 4.1 Maxima and Minima 4.2 What Derivatives Tell Us
17 March	4.2 What Derivatives Tell Us 4.3 Graphing Functions 4.4 Optimization of Functions
24 March	NO CLASS—SPRING BREAK

31 March	4.5 Linear Approximation and Differentials 4.6 Mean Value Theorem Review Exam 3
7 April	4.7 L'Hopital's Rule 4.8 Antiderivatives 5.1 Approximating Areas Under Curves
14 April	5.1 Approximating Areas Under Curves 5.2 Definite Integrals 5.3 Fundamental Theorem of Calculus
21 April	5.4 Working with Integrals 5.5 Substitution Rule Review Exam 4
28 April	5.5 Substitution Rule Review
5 May	FINAL EXAM – MONDAY, 6:00-8:00 PM