Math 121 Syllabus (TR) Fall 2013

INSTRUCTOR: _______________________________________________ SECTION: ____________________

COURSE TITLE:  Calculus and Applications   CREDIT: 3 semester hours

EMAIL: You can reach your instructor by emailing your instructor at ma121mtlc@as.ua.edu. Please put your instructor’s name in the subject box. Replies to automated emails will not be answered.

PREREQUISITE: C- or higher in MATH112 or placement.

TEXTBOOK AND ACCESS CODE: "Calculus with Applications: Brief Version, 9th edition" by Lial, Greenwell, and Ritchey, published by Addison Wesley. An access code is required to complete all assignments and tests for this course. The access code allows the student to access the publisher’s website for the course, where all assignments and tests must be completed and where the entire textbook may be viewed online. Access codes can be purchased with or without a hard copy of the textbook at a bookstore or online from the publisher.

COURSE DESCRIPTION AND OBJECTIVES: This course is intended to give a broad overview of Calculus and is taken primarily by students majoring in Commerce and Business Administration. This course does not provide sufficient background for students who will need higher levels of Calculus. Note: This course does not satisfy the requirement for Math 125 or 126. Evaluation will be based on online homework, quizzes, four tests, and a comprehensive final.

- The course presents the essential characteristics and basic processes of inquiry and analysis in the discipline.
- The course encourages the development of critical thinking skills and requires students to analyze, synthesize, and evaluate knowledge.
- The course considers its subjects in relation to other disciplines and to the human condition.
- The course is not limited to majors in any discipline.
- The course does not focus on professional skills.

GENERAL LEARNING OUTCOMES FOR 100-200 LEVEL COURSES:
- Students will be able to discriminate between reliable and less reliable information in their decision-making.
- Students will develop effective mathematical communication skills.

LEARNING OUTCOMES FOR THIS COURSE: Upon completion of this course students will be able to
- Differentiate and integrate algebraic, exponential, logarithmic, and multivariable functions.
- Analyze graphs to determine where the graphs are increasing, decreasing, continuous, and determine the limits of functions.
- Classify values as the minimum or maximum values of functions.
- Calculate the area between two curves.
- Apply the methods taught in this course to real-life business applications.

GRADE: The course grading is under the “A, B, C, D, or F” policy, +/- grades will be given. The final grade will be based on the following breakdown of graded work:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Tests</td>
<td>40% (10% on each)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Homework</td>
<td>9%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>1%</td>
</tr>
<tr>
<td>Study Plan</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

COURSE GRADE SCALE
- A+ 98 -100%
- A  92 – 97.9%
- A- 90 – 91.9%
- B+ 88 – 89.9%
- B  82 – 87.9%
- B- 80 – 81.9%
- C+ 78 – 79.9%
- C  72 – 77.9%
- C- 70 – 71.9%
- D+ 67 – 69.9%
- D  62 – 669
- D- 60 - 61.9%
- F <59.9%

Students must earn a minimum of 70% (C-) to successfully pass this course.

Note: Wednesday, Oct. 30th is the last day to drop this class with a W. No withdrawals will be allowed after this date.

TEST DEADLINES:
- Test 1: Wednesday September 18
- Test 2: Wednesday October 9
- Test 3: Mon.-Wed. October 28-30
- Test 4: Wednesday November 20
- Final Exam Week: Sunday - Friday December 8-13

Test times available: Times to be announced in class and through email.
Final Exam times available: 8 am, 11:30 am, 3:30 pm, 7 pm (all times may not be available each day)
Please read Test Rules of this syllabus for detailed information.

MTLC INFO: LOCATION: B1 Tutwiler
- PHONE: 348-2592
- HOURS: Sunday: 6pm – 9pm
- Mon. – Thur.: 8am – 10pm
- Friday: 8am – 4:45pm

CLOSINGS: Labor Day Holiday: Sun. 9/1 & Mon. 9/2
- Fall Break: Thurs.10/31 thru Sun. 11/3
- Thanksgiving: Tues. 11/26 at 5PM until Sun. 12/1

NOTE: Last day for help in MTLC is Friday 12/7
**MATH SOFTWARE LOG IN INFORMATION:**
- Option 1: Log into myBama, go to your Blackboard Learn courses, click on Math 121.
- Option 2: Go to [www.ua.mylabsplus.com](http://www.ua.mylabsplus.com). Your username: Crimson email prefix example: jksmith
  Your password: CWID example: 12345678
- Then you will find your current course under the **Alabama Fall 2013** Term.

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**All Assignments (both Homework and Quiz) are due by 8:00AM on the given date.**

### Test 1 Material: Test 1 is on Wednesday 9/18

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Title</th>
<th>Completion Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/22</td>
<td></td>
<td>ORIENTATION</td>
<td></td>
</tr>
<tr>
<td>8/27</td>
<td>3.1</td>
<td>Limits</td>
<td>Thur. 8/29</td>
</tr>
<tr>
<td>8/29</td>
<td>3.2</td>
<td>Continuity</td>
<td>Tue. 9/3</td>
</tr>
<tr>
<td>9/3</td>
<td>3.3</td>
<td>Rates of Change</td>
<td>Thur. 9/5</td>
</tr>
<tr>
<td>9/5</td>
<td>4.1</td>
<td>Techniques for Finding Derivatives</td>
<td></td>
</tr>
<tr>
<td>9/10</td>
<td>4.2</td>
<td>Derivatives of Products and Quotients</td>
<td>Thur. 9/12</td>
</tr>
<tr>
<td>9/12</td>
<td>4.3</td>
<td>The Chain Rule</td>
<td>Tue. 9/17</td>
</tr>
<tr>
<td>9/17</td>
<td></td>
<td>Test 1 Review &amp; Questions</td>
<td></td>
</tr>
</tbody>
</table>

### Test 2 Material: Test 2 is on Wednesday 10/9

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Title</th>
<th>Completion Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/19</td>
<td>4.4</td>
<td>Derivatives of Exponential Functions</td>
<td>Tue. 9/24</td>
</tr>
<tr>
<td>9/24</td>
<td>5.1</td>
<td>Increasing and Decreasing Functions</td>
<td>Thur. 9/26</td>
</tr>
<tr>
<td>9/26</td>
<td>5.2</td>
<td>Relative Extrema</td>
<td>Tue. 10/1</td>
</tr>
<tr>
<td>10/1</td>
<td>5.3</td>
<td>Higher Derivatives; Concavity, &amp; the 2nd Derivative Test</td>
<td>Thur. 10/3</td>
</tr>
<tr>
<td>10/3</td>
<td>6.1</td>
<td>Absolute Extrema</td>
<td>Tue. 10/8</td>
</tr>
<tr>
<td>10/8</td>
<td></td>
<td>Test 2 Review &amp; Questions</td>
<td></td>
</tr>
</tbody>
</table>

### Test 3 Material: Test 3 is on Mon.-Wed. 10/28 - 10/30

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Title</th>
<th>Completion Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/10</td>
<td>6.4</td>
<td>Implicit Differentiation</td>
<td>Tue. 10/15</td>
</tr>
<tr>
<td>10/15</td>
<td>6.6</td>
<td>Differentials: Linear Approximation</td>
<td>Thur. 10/17</td>
</tr>
<tr>
<td>10/17</td>
<td>7.1</td>
<td>Antiderivatives</td>
<td>Tue. 10/22</td>
</tr>
<tr>
<td>10/22</td>
<td>7.2</td>
<td>Substitution</td>
<td>Thur. 10/24</td>
</tr>
<tr>
<td>10/24</td>
<td>7.3</td>
<td>Area and the Definite Integral</td>
<td><strong>Sun. 10/27</strong></td>
</tr>
<tr>
<td>10/29</td>
<td></td>
<td>Test 3 Review &amp; Questions (if you have not already taken the test)</td>
<td></td>
</tr>
</tbody>
</table>

### Test 4 Material: Test 4 is on Wednesday 11/20

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Title</th>
<th>Completion Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/5</td>
<td>7.4</td>
<td>The Fundamental Theorem of Calculus</td>
<td>Thur. 11/7</td>
</tr>
<tr>
<td>11/7</td>
<td>7.5</td>
<td>The Area Between Two Curves</td>
<td>Tue. 11/12</td>
</tr>
<tr>
<td>11/12</td>
<td>9.1</td>
<td>Functions of Several Variables</td>
<td>Thur. 11/14</td>
</tr>
<tr>
<td>11/14</td>
<td>9.2</td>
<td>Partial Derivatives</td>
<td></td>
</tr>
<tr>
<td>11/14</td>
<td>9.3</td>
<td>Maxima and Minima</td>
<td>Tue. 11/19</td>
</tr>
<tr>
<td>11/19</td>
<td></td>
<td>Test 4 Review &amp; Questions</td>
<td></td>
</tr>
</tbody>
</table>

### Review for Final Exam

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Title</th>
<th>Completion Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/21</td>
<td>9.4</td>
<td>Lagrange Multipliers</td>
<td>Tue. 11/26</td>
</tr>
<tr>
<td>12/3 &amp; 12/5</td>
<td></td>
<td>Review for Final Exam</td>
<td></td>
</tr>
</tbody>
</table>

**Final Exam during the week of December 8-13**
EMAIL: All correspondence for this course will be made through your crimson email account. If you have trouble with your crimson account, then you can get help at the OIT help desk located in Gordon Palmer. You can reach your instructor by emailing your instructor at mail121mtlc@as.ua.edu. Please put your instructor’s name in the subject box. Replies to automated emails will not be answered.

ATTENDANCE/PARTICIPATION: Attendance for this course is mandatory. You are expected to attend all of your scheduled classes. Class meets each Tuesday and Thursday unless noted. You are expected to attend class in its entirety and participate in the classroom lectures and discussion. The use of personal laptop computers and texting during class time is prohibited. The MTLC in B1 Tutwiler is available for you to do homework and quizzes and get free tutoring.

QUIZZES and HOMEWORK: A graded homework and quiz will be assigned on each section covered. They must be completed before each expiration date and time. At the end of the semester a minimum of 3 homework grades and a minimum of 3 quiz grades will automatically be dropped. Homework can be worked on until all questions are correct. You can select similar question for any question that you miss and try again until you get it correct. You will have 2 tries for each quiz. You must hit the “Submit” button to score your quiz. All deadlines are Tuesdays and Thursdays at 8:00 am for homework and 8:00 am for quizzes. NOTE: You will not be given help on your quizzes or tests. Tests must be taken in the MTLC.

STUDY PLAN: The study plan is due by the end of the semester. It consists of topics that were not mastered on quizzes during the semester. Please use it as a way to study for each test and your final exam. The study plan is worth just as much as one test grade, so make sure to take it seriously.

CALCULATOR: For tests, you will be allowed to use the CASIO FX-260-Student version (available at the University bookstores) or the testing calculator that is available on the computer during testing. Using another calculator is considered academic misconduct.

MAKE-UP POLICY: If homework or quizzes are missed due to any circumstance, the zero scores will be part of your three dropped homework’s or quizzes at the end of the semester. Students who miss work due to official University business must make other arrangements beforehand. Students who miss a test and have an excuse must make up the missed test on the Thursday or Friday following test week upon approval of a petition request form with supporting documents attached. All such petitions must be filed by 10pm on the Monday after test week and can be done online by going to http://mtlc.ua.edu/ and selecting the petition tab.

REPLACEMENT POLICY: All students will be allowed to replace the lowest test grade with the grade made on the final exam. However, zeros due to an unexcused absence or academic misconduct will not be replaced.

WORKING FROM HOME: The Math 121 course work can be done on your personal computer. Internet access is required in order to reach the website where the notes, homework, and exercises are found. To be able to access the MyLabsPlus software you will log into MyBama and then go to your Blackboard Learn courses where you should see Math 121. If an assignment does not open correctly at home, the student will NOT be able to make up this work after the expiration date. No extension will be given to students because of issues with a home computer. To be safe, work well ahead of the deadlines at home, so that if there is any problem you will be able to go to the MTLC and complete the assignment before the deadline. Tests must be taken in the MTLC. The software does NOT work with Safari and another Internet browser will be needed. Also, if there is a timeout error when working in the software, the cookie browser/internet history will need to be deleted or try another browser.

MTLC RULES
1. The MTLC is a math classroom. Please be quiet during your visit to the MTLC.
2. Cell phones, food, drinks (including water), tobacco products, and companions are NOT allowed in the Center. A cell phone violation will cause your cell phone to be detained until you leave the MTLC. Your cell phone needs to be out of sight and turned off.
3. Other than mathematics, no activities such as talking, surfing the Internet, playing computer games, typing a paper, sleeping, etc. are allowed in the MTLC. If these activities are observed, you will be asked to leave the MTLC.
4. The use of a computer in the MTLC is on a first-come first-serve basis; no reservation can be made for normal course work. (Reservations are required for tests. See Test Rules below.)
5. Please do not hesitate to ask questions in the MTLC. Staff members in the MTLC are there to help you.

CODE OF ACADEMIC CONDUCT: All students in attendance at the University of Alabama are expected to be honorable and to observe standards of conduct appropriate to a community of scholars. The University expects from its students a higher standard of conduct than the minimum required to avoid discipline. Academic misconduct includes all acts of dishonesty in any academically related matter and any knowing or intentional help or attempt to help, or conspiracy to help, another student. The Academic Misconduct Disciplinary Policy will be followed in the event of academic misconduct.

DISABILITY STATEMENT: If you are registered with the Office of Disability Services, please make an appointment with me as soon as possible to discuss any course accommodations that may be necessary. If you have a disability, but have not contacted the Office of Disability Services, please call 348-4285 or visit 133-B Martha Parham Hall East to register for services. Students who may need course adaptations because of a disability are welcome to make an appointment to see me during office hours. Students with disabilities must be registered with the Office of Disability Services, 133-B Martha Parham Hall East, before receiving academic adjustments.
Severe Weather Protocol
In the case of a tornado warning (tornado has been sighted or detected by radar; sirens activated), all university activities are automatically suspended, including all classes and laboratories. If you are in a building, please move immediately to the lowest level and toward the center of the building away from windows (interior classrooms, offices, or corridors) and remain there until the tornado warning has expired. Classes in session when the tornado warning is issued can resume immediately after the warning has expired at the discretion of the instructor. Classes that have not yet begun will resume 30 minutes after the tornado warning has expired provided at least half of the class period remains.

UA is a residential campus with many students living on or near campus. In general classes will remain in session until the National Weather Service issues safety warnings for the city of Tuscaloosa. Clearly, some students and faculty commute from adjacent counties. These counties may experience weather related problems not encountered in Tuscaloosa. Individuals should follow the advice of the National Weather Service for that area taking the necessary precautions to ensure personal safety. Whenever the National Weather Service and the Emergency Management Agency issue a warning, people in the path of the storm (tornado or severe thunderstorm) should take immediate lifesaving actions.

When West Alabama is under a severe weather advisory, conditions can change rapidly. It is imperative to get to where you can receive information from the National Weather Service and to follow the instructions provided. Personal safety should dictate the actions that faculty, staff and students take. The Office of Public Relations will disseminate the latest information regarding conditions on campus in the following ways:
- Weather advisory posted on the UA homepage
- Weather advisory sent out through Connect-ED--faculty, staff and students (sign up at MyBama)
- Weather advisory broadcast over WVUA at 90.7 FM
- Weather advisory broadcast over Alabama Public Radio (WUAL) at 91.5 FM
- Weather advisory broadcast over WVUA 7. WVUA 7 Storm Watch provides a free service you can subscribe to that allows you to receive weather warnings for Tuscaloosa via e-mail, pager or cell phone. Check http://www.wvua7.com/stormwatch.html for details.

TEST RULES: All tests must be taken in the MTLC.

1. There are four 70-minute tests and a 150-minute comprehensive final exam. Test dates are listed on the front page of the syllabus.
2. You may take your tests early: “Early” means before the close of online registration for that exam. No registration is needed and no penalties will apply for early tests. However, no tests will be given on Sundays. You may not begin a test if the MTLC is scheduled to close before the end of your full allotted time: usually you must begin by 8pm (7pm for a final exam), or on Fridays by 3pm (2pm for a final exam).
3. You must reserve a time in order to take an exam on a test deadline day. The front page of the syllabus lists beginning and ending dates/times for online registration for each exam. To register online, go to the MTLC website (www.mtlc.ua.edu), select link Test Registration, log in as instructed, select link Register, then choose an available date and time. You may freely cancel or change your test time while online registration is active. Be sure to verify your registration: log back in to the test registration site or check your confirmation email message.
4. After online registration closes (at 5pm on Friday before the Test week), you must come in person to the MTLC to register or to change your test time. You must sign up manually with the instructor on duty; no phone calls or email arrangements can be accepted. In this case, points will be deducted from your test grade as follows:
   - 10 points if you did not register online,
   - 10 points if you change your test time after online registration closes but before your scheduled test time,
   - 10 points if you miss your test time and reschedule, or if no open seats remain when you come to register
These penalties are CUMULATIVE. You may fill out a petition request form to have the penalty waived if you have a valid excuse.
5. If you miss a test and your course’s testing period has NOT ended, come to the MTLC to reschedule. If the testing period is over, see MAKE-UP POLICY above.
6. Arrive on time for your test. Tardiness will cost you working time on the test. Bring your ID and pencils with you. Swipe your ACT card at the MTLC entrance and then follow signs to the back hallway. Staff will check your ID and give you a personalized test paper (which is your initial scratch paper), then direct you to your seat.
7. Absolutely NO ELECTRONIC DEVICES other than your CASIO FX-260-Student version scientific calculator may be active in the testing area. Use of any electronic device (including cell phones, ipods, mp3 players and unauthorized calculators) during a test will be treated as academic misconduct.
8. When you sit down at your computer, place your cellphone face down on the table with your ID on top of it. Cellphones must be turned completely off and all other belongings must be placed on the floor. Once you enter the testing area, all review material must be put away. As soon as you are seated, you may begin your exam. The MTLC will give you additional scratch paper as needed; no other paper is allowed. When you are finished, staff will collect all papers. Warning: do NOT touch the browser’s BACK button, your test will close and you will have to start over.
9. You will be allowed to review your test before you leave the lab. You may not write down any information pertaining to test questions to take with you when you leave the MTLC after an exam. You may not share any test information with anyone who hasn’t taken the test. Violators will be charged with academic misconduct.
10. During test weeks, the MTLC will be available for studying, reviewing, and or working assignments during normal hours on Monday and 9-10 PM on Tuesday-Thursday. The lab will be closed for testing only for the final exam.
11. No one may leave during a test without permission. This includes getting water and using the restroom.