COURSE DESCRIPTION
CALCULUS I
MA 125–6B
SPRING 2019

DEPARTMENT OF MATHEMATICS
UNIVERSITY OF ALABAMA AT BIRMINGHAM

Course Instructor: Jean Rugamba
Office: 477 Campbell Hall
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Office Hours: Wednesdays, Fridays 12:30–1:30 pm

Meeting times: MW 10:10 am-12:00 pm
Meeting location: CSB 303
Prerequisite: Grade of C or better in MA 106, MA 107 or equivalent
Credits: 4 semester hours

Important dates:
First day of classes: Monday, January 7, 2019.
Spring Day: March 11 - 17, 2019.
Last day to withdraw: Friday, March 1, 2019.
Last day of classes: Wednesday, April 17, 2019.
Test 1: (sections 1.1-1.6, 2.1-2.3) - approx. Jan. 30
Test 2: (sections 2.4, 2.5, 2.8, 3.6, 3.1, 3.2) - approx. Feb. 20
Test 3: (sections 3.3-3.5, 3.7, 4.1-4.3) - approx. Mar. 25
Test 4: (sections 4.4, 4.5, 5.1-5.3) - approx. Apr. 15
These dates are tentative. The particular sections to be covered in the tests are provided for information only and can be slightly shifted based on the actual pace.
Final exam: Wednesday, April 24 from 1:30–4:00pm; room to be announced later.

Course policies:
- Please make sure that you are able to receive e-mail through your Blazer-ID account. Official course announcements may be sent to that address.
- If you wish to request a disability accommodation please contact DSS at 934-4205 or at dss@uab.edu.
- If a test is missed due to a serious veriable circumstance or official university business, make-up test maybe allowed. Otherwise, if you miss an exam you
will receive a zero score for this exam. In all cases you must inform your instructor of such circumstances before the exam takes place.

- Calculators (without internet access) will be allowed during any of the tests or quizzes. In addition, students can bring one quick reference card to tests, including the final exam (i.e., a standard size 5 by 8 inches-index card; both sides can be used).

Methods of teaching and learning:

- 28 class meetings of 110 minutes consisting of lectures and discussions of examples and homework problems. Time for four in-class tests is included.
- Students are expected to undertake at least 8 hours of private study and homework per week.
- The online homework system WebAssign will be used (see below).

Course content:

- Motivation: Slopes of tangents, velocity and other difference quotients
- Definition of limit, limit laws, limits involving infinity
- Continuity and classification of discontinuities (singularities), Intermediate Value Theorem
- Tangents, velocities, other rates of change, definition of derivative, and derivatives as functions
- Derivatives of polynomial, exponential functions and trigonometric functions
- Product and quotient rules
- Chain rule, implicit differentiation, related rates
- Derivatives of inverse trigonometric and logarithmic functions
- Indeterminate forms, l’Hospital’s Rule
- Linear Approximations and Newton’s Method
- Maximum and minimum values, Mean Value Theorem, shapes of curves
- Optimization problems
- Antiderivatives, distances, area

Assessment procedures:

- Student achievement will be assessed by the following measures:
  - **Regular online homework.** Homework will be due one week after assignment. Feedback is provided when wrong answers are given. Students are encouraged to retake the homework problems (with randomly changed parameters) until they obtain correct answers. An unlimited number of takes is allowed during the week in which the set is available. Homework contributes 10% to the course average. Problems on tests are modeled after homework problems. Staying on top of homework is therefore extremely important.
  - **Weekly in-class quizzes.** These will be short quizzes on materials covered the previous week and they will usually be given on Mondays at the beginning of class. A pool of problems from which these quizzes are drawn from, may be given beforehand each week. Quizzes count for 7% of the course average.
  - **Attendance.** Attendance counts for 3% of the course average
• **Four in-class tests.** In-class tests contributes a total of 50% to the course average.
• **A 150-minute comprehensive final examination.** The final contributes 30% to the course average.

- Your final grade is determined according to the following table:
  
<table>
<thead>
<tr>
<th>Course performance</th>
<th>88-100</th>
<th>75-87</th>
<th>62-74</th>
<th>50-61</th>
<th>below 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Grade</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
</tbody>
</table>

**Tips:**
- Help is available in the Math Learning Lab (HBB202), if you can’t find me.
- By working steadily and regularly, you will increase your chances to succeed in this course.
- Remember, being a full-time student is a full-time job.

**How to get started on Enhanced WebAssign:**

1. Go to **www.webassign.net** and click on [LOGIN] on the left on your screen, and then click on [I HAVE A CLASS KEY].
2. Enter the following course key:
   
   uab 4211 5481

   and proceed; enter **uab** if prompted for your institution.
3. When prompted to purchase an access code, select “...trial period” (you do not need to purchase an access code at this time. However, you must purchase an access code within two weeks to continue using the system beyond the two-week trial period. The system will prompt you to enter your access code when the deadline approaches.)
4. After your first registration, you can sign in as a returning user.
5. Should you run into technical problems Enhanced WebAssign provides technical support online and by phone.