Applied Calculus I
Loyola University Chicago – Math 131.007 – Fall 2013
Course Syllabus & Ground Rules

Course Details
Class Meetings: Mundelein Center, Room 406; Tu/Th 8:30–9:45 a.m.
Office Hours: IES, Room 507; Mon. 9:30–10:45 a.m. & Wed. 1:00–2:15 p.m.

FINAL EXAM:
• when: Saturday, December 14, 9:00–11:00 a.m.


Instructor Coordinates
Aaron Lauve
IES, Room 507      lauve@math.luc.edu
773.508.3727        www.math.luc.edu/~lauve

Contact
Communication by email is preferred. Include 131 in the subject line. Expect a reply within 48 hours.

Course Web Page(s)
Section-specific material and announcements will be posted to Sakai. See also:

Important Dates
In-term exam dates are tentative. Scheduled dates will be announced at least a week in advance.

Exam #1  September 19  Fall break  10/8
Exam #2  October 31  Last day to drop with a “W”  November 1
Final Exam  December 14  Thanksgiving  11/22

Requests to reschedule your final exam will be heard only for extenuating circumstances (e.g., three exams in one day is not deemed burdensome enough) and must be made through your Dean’s office.

Course Catalog & Syllabus
COURSE CATALOG. Math 131 (3 units): An introduction to differential and integral calculus, with an emphasis on applications. This course is intended for students in the life and social sciences, computer science, and business. Topics include: modeling change using functions, including exponential and trigonometric functions; the concept of the derivative; computing the derivative; applications of the derivative to business and life, social, and computer sciences; and an introduction to integration. (This course is not a substitute for Math 161.) Prerequisites: Math 118 or Math Placement Test.

SYLLABUS. Most of Chapters 1–6 in the text.
www.luc.edu/math/academics/courses/math131/
Technology
A TI-84+ or equivalent graphing calculator is **required** for this course. Use of any calculator more advanced than this **will not** be allowed during exams.

I am likely to use *Mathematica* during class. I will be happy to help you learn more about any tool that I use in class. Get it for **free** here: [myits.luc.edu/mathematica](http://myits.luc.edu/mathematica).

A Typical Day
This course will be run in a “flipped” manner. That is, students are expected to come to class: (i) with questions about previous material; (ii) having already read the textbook’s presentation of the material planned for the day; (iii) having already tried the **suggested exercises** from that section (to be maintained on our course webpage).

Expect the following sequence of events on a typical day (times to be adjusted as necessary):

- (10 min) questions about previous material and problems;
- (20 min) “review” of new material and exercises;
- (30 min) problem solving in groups of two or three;
- (10 min) presentation of one or two solutions to these problems.

Solutions to group work problems will be posted to class webpage before scheduled exams.

Course Components
**Homework** (15%). Students will work homework exercises using WebAssign ([www.webassign.net](http://www.webassign.net)), which has the following nice pedagogical features: (i) instant feedback if your solution is incorrect; and (ii) answers and solutions are provided after a number of failed attempts. Your “Class Key” for this course is **luc 5243 8627**. After September 6, you will need an access code to view the assignments. See “Odd and Ends” below for more details. Homework will be due roughly twice a week (Mondays and Wednesdays, at midnight). Your best 15 scores will be kept in computing your final grade.

**Class Work** (10%). Most days, rote exercises and more challenging problems will be worked during class in groups. These will be submitted at the end of class and will be graded very loosely on a scale of 0 to 2 (little or no progress, good progress, excellent progress). Your best 15 scores will be kept in computing your final grade. Occasionally, a quiz, worked individually, will replace the group work. These occasions will not always be announced ahead of time. All quiz grades will be kept in computing your final grade (but see “Odds and Ends” below).

**Exams** (3 × 25%). There will be two in-term exams. The final exam will be cumulative.

Course Grade
Final grades will be assigned as follows (all numbers are in %):

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>92 (%)</td>
</tr>
<tr>
<td>A-</td>
<td>90 (%)</td>
</tr>
<tr>
<td>B+</td>
<td>88 (%)</td>
</tr>
<tr>
<td>B</td>
<td>82 (%)</td>
</tr>
<tr>
<td>B-</td>
<td>80 (%)</td>
</tr>
<tr>
<td>C+</td>
<td>78 (%)</td>
</tr>
<tr>
<td>C</td>
<td>72 (%)</td>
</tr>
<tr>
<td>C-</td>
<td>70 (%)</td>
</tr>
<tr>
<td>D+</td>
<td>68 (%)</td>
</tr>
<tr>
<td>D</td>
<td>60 (%)</td>
</tr>
</tbody>
</table>

Course Etiquette
Please set your cell phones to “silent” upon entering class; phone noises are a distraction to everyone. Likewise, talking with your neighbor while I am lecturing or leading a discussion is **unacceptable** behavior. Reading newspapers, surfing the web, or texting your friends is **impolite** and is a distraction to your instructor; please find a better use for your time.

Finally, and most importantly, respect for others is **stressed** above all else; please **allow me** the first chance to answer your fellow students’ questions. I expect everybody to participate in class discussions, but that begins by fostering an environment where we do not hesitate to ask our questions.
Getting Help
It may take awhile to adjust to the different style and pace of the course. My first piece of advice is to use your book well: learn the definitions and read the examples’ solutions; do not be satisfied with the WebAssign assignments, but instead work the “Strengthen Your Understanding” problems at the end of each section, and the “Review Problems,” at the end of each chapter.

Please, SEEK HELP if you are falling behind. Form study groups, visit the Tutoring Center (www.luc.edu/tutoring/), come to my office hours, meet me outside of my office hours, find online resources (e.g., patrickjmt.com), give me feedback, etc.

Escape Routes
At any time, even after the last date for W-dropping the course, students who are experiencing medical or personal difficulties should not hesitate to consult their advisors or the Student Development Office or their dean. Don’t allow yourself to be overwhelmed by such problems; Loyola has resource persons who may be able to help you (www.luc.edu/wellness  www.luc.edu/bct)

\[ ^a \text{Learn more under “The Tutoring Center” below.} \]

Academic Integrity
The Academic Standards and Regulations web page

www.luc.edu/academics/catalog/undergrad/reg.shtml

outlines the definition and ramifications of cheating at Loyola University (the “Academic Integrity” link) as well as the recourses available to you should you be accused of cheating (the “Academic Grievance Procedure” link). By attending this course, you agree to uphold the high standards of Loyola. If you are found cheating on an exam, you will receive a zero (0) for the exam and the incident will be reported to your academic dean and recorded in your permanent file.

Disability Services
The Americans with Disabilities Act (ADA) is a federal statute that provides comprehensive civil rights protection for persons with disabilities. It requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please contact the SSWD office: in the Sullivan Center, suite 117, phone 773.508.3700, fax 773.508.3810, or online at www.luc.edu/sswd/.

The Tutoring Center
The Center for Tutoring & Academic Excellence (CTAE) offers two varieties of tutoring services for Calculus: free Small Group Tutoring as well as Tutor-Led Study Hall. To learn more or request tutoring services, visit the center online at http://www.luc.edu/tutoring.

Small Group Tutoring Students will meet weekly with their small tutoring group, which will include other students from the same course, to enhance their exposure to and interaction with course material. These sessions will be guided by a trained peer tutor. These groups are most successful when students join early in the semester. Students can request small group tutoring on the CTAE website after August 12th.

Tutor-Led Study Hall Beginning shortly after the start of the semester, Tutor-Led Study Hall for intro-level classes in our high-demand subjects (accounting, biology, chemistry, economics, mathematics, select nursing classes, physics, and statistics) will be offered several hours a week to provide additional assistance to students with questions that arise between small group and class meetings. Students can find our Tutor-Led Study Hall hours on the CTAE website. Sessions begin on August 26th.
Odds and Ends

Make-Up Quizzes/Exams. Make-up quizzes and exams will only be given for real emergencies, documented illnesses, or university-sponsored events. Students must notify me of their absence prior to the next regularly scheduled class (and before the examination if possible). If a student fails to appear for a make-up at the mutually arranged time, no further opportunities will be extended. Failure to contact me as stated above or inability to sufficiently document the extenuating circumstances of students’ absence will result in a grade of zero on the examination.

Loyola Email. On the occasion that I need to contact students outside of class, this is the only sensible way to proceed. If you would rather not use your @luc.edu email account, ... tough!

- You should receive an email from me before the start of our third class period.
- If you do not receive this message, please let me know as soon as possible.

Accessing WebAssign. From www.webassign.net, click on “I have a Class Key” in the “Account Log In” box (https://www.webassign.net/v4cgi/selfenroll/classkey.html) and enter luc 5243 8627.

- See www.webassign.net/user_support/student/ for help getting started.
- For roster management purposes, it would be helpful if you choose your LoyolaID when setting up your WebAssign account.
- Self-Enrollment with the above “class key” will be open until September 6. After that, you must enter an access code (one should have come bundled with your textbook) or you will be locked out of the system.

More Math. The department maintains a Blog (blogs.luc.edu/mathstats) and a Facebook page (www.facebook.com/lucmathstats) that will contain interesting math/stats related tidbits throughout the semester. Feel free to join the conversation. (Indeed, if there is a topic that you’d like to see discussed, send an email to webadmin@math.luc.edu and we’ll try to get a post up about it.)

Extra Credit: If you find study resources or popular articles that you think fellow students would appreciate, please feel free to share it on our course bulletin board (through Sakai) or on the department’s facebook page. (If you do, and you tell me about it, and I like what I see, I’ll increase one group-work score by one point. Repeatable a maximum of ten times.)

Getting Started

Below you will find a preliminary list of suggested exercises and problems (separated by “/ ”). It will be updated on our course webpage throughout the semester.

Chapter 1
1.1: 1, 5, 13, 21, 25, 29, 31 / 35, 37, 41, 45, 47, 55, 59, 68
1.2: 7, 15, 17, 18 / 25, 29, 31, 47, 52
1.3: 9, 13, 19, 27 / 37, 39, 43, 47, 49, 51, 57, 63, 66, 74
1.4: 9, 15, 21, 27 / 33, 39, 42, 47, 51, 55, 62
1.5: 1, 7, 11, 17, 21, 29 / 37, 39, 41, 43, 50, 68
1.6: 1, 5, 9, 13, 15, 17, 21 / 33, 35, 45, 58
1.8: 1, 3, 11, 15, 23 / 42, 55, 57, 63, 83, 90

Chapter 2
2.1: 1, 5, 6, 10 / 14, 18, 19, 32
2.2: 3, 4, 5, 10 / 13, 15, 16, 17, 26, 31, 43, 56
2.3: 1, 2, 4, 12, 19, 21 / 28, 40, 41, 43, 58
2.4: 2, 4, 7, 10, 12, 13, 15, 20, 28, 29, 32, 40, 43
2.5: 1, 5, 11, 14 / 19, 21, 23, 25, 29, 30, 34