Introduction to analysis (Math 131A), Spring 2015, San José State University
MacQuarrie Hall 234, MW 10:30–11:45am (Sec. 01, code 21649)

Instructor: Dr. Tim Hsu (pronounced “shoe”).
Office and phone: MacQuarrie Hall 419, (408)924-5071.
Office hours: MW 9:30–10:30; MW 1:30–2:30. Current schedule available at:
http://www.math.sjsu.edu/~hsu/courses/generic/sched.pdf
E-mail: hsu@math.sjsu.edu. I can be reached by e-mail at many times of the day, and
will try to respond within 24 hours.
Course web page: http://www.math.sjsu.edu/~hsu/courses/131a/

and yellow cover).
Optional texts: Writing Proofs, Hsu, downloadable from course web page.
Grading: Your semester grade consists of: Homework 20%; Exam 1 14%; Exams 2 and 3
18% each; Final exam 30%.

Goals of the course. In this course, we will examine two questions: (1) How can we be
sure that calculus works? (2) What are the key properties that make the real numbers work?
In answering those questions, we will encounter some of the deepest ideas of mathematics,
including convergence, continuity, and topology.

Prerequisites. Besides the formal prerequisites (Math 32 and 108), you need to realize
that this course is one of the most difficult undergraduate courses we offer. If you have
never taken a course in which you spent most of your time writing proofs, you must talk
with me immediately, and at least take Math 108 this semester as a co-requisite.

Class is a cell-free zone. Please turn off all cellphones before you get to class.
Homework. Homework will be due roughly once a week, with an outline of problem
set 01 due Fri Jan 30, with problem set 01 due Mon Feb 02. For more details on
homework content and the process of doing homework (including outlines and revisions),
see the handout on homework.
Specific homework assignments will be determined as the term progresses. For a complete
list of all homework assigned to date, and downloadable versions of almost all handouts from
class, you can always check the course web page.

Problem sessions. In addition to my regular office hours, starting on Fri Jan 30, I will
also hold problem sessions for this class every Fri, at a time and a place to be announced.
These sessions are completely optional, and you should be fine without them, but the time
is available for those who can make it.

Checkins. Because we only meet on two days each week, it is crucial that you do
substantial independent work in the long gap between Wed and Mon. To that end, I will
require you to “check in” with me each week in that time period. See the handout on check-ins
for more details.

Exams. We will discuss this topic in more detail before the first exam, but briefly, the
material on exams will mostly resemble the material from the homework. All exams are
closed-book.

Calculators. You will not be allowed to use calculators for any in-class exams. The
numerical work on exams will be simple enough that a calculator shouldn’t be necessary,
and even if you make numerical mistakes, you won’t lose a lot of points on them.

Exam dates. The dates of our three in-class exams and final exam are found on the
syllabus below. In particular, the final exam will be held on Tue May 19, from 9:45am–
noon. Please make sure that you are still on campus at that time (e.g., don’t buy a plane
ticket that leaves town on May 18).
**How to add this course.** If you are not registered for this course, and you would like to add it, you must first put a full effort into completing all of the work in the course. Second, if you are a graduating senior, you need to produce documentation to verify that.

I’ll make a waiting list, which you get on by filling out and turning in the information form for the course. I’ll give out add codes starting **Tue Feb 03** (or possibly earlier), mainly based on completeness of homework, and as long as there is room, I will continue to give out add codes until add date (**Tue Feb 10**). Note, however, that graduating seniors have the highest priority, and that Open University students have the lowest priority.

**How to drop this course.** Until **Tue Feb 03**, you can drop at my.sjsu.edu. Nothing will appear on your transcript, but please let me know if you drop.

To drop after Tue Feb 03, you must go to the student services center and submit a Course Drop form to the Director of Academic Services. Dropping under these circumstances is only allowed for “serious and compelling reasons” (course catalog). A low grade is not a serious and compelling reason.

**Academic integrity.** Your commitment to learning (as shown by your enrollment at SJSU) and SJSU’s Academic Integrity Policy require you to be honest in all of your academic course work. Faculty are required to report all infractions to the Office of Student Conduct and Ethical Development. See: [www.sjsu.edu/studentconduct](http://www.sjsu.edu/studentconduct)

**Disabilities.** If you need course adaptations or accommodations due to a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities register with the Accessible Education Center (formerly the Disability Resources Center) to establish a record of their disability.

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**Tenative syllabus**

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<tr>
<th>Date</th>
<th>Reading</th>
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<tr>
<td>Mon Jan 26</td>
<td>Sects. 1–3</td>
<td>Mon Mar 30</td>
<td>Sect. 18</td>
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<td>Sect. 4</td>
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<td>Sect. 7</td>
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<td>Wed Feb 11</td>
<td>Sect. 9</td>
<td>Wed Apr 15</td>
<td>Integration</td>
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<td>Mon Feb 16</td>
<td>Sect. 9</td>
<td>Mon Apr 20</td>
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<td>Wed Feb 18</td>
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<td>Wed Apr 22</td>
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<td>Sect. 10</td>
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<td>Sect. 17</td>
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<td>Review</td>
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<td>Sect. 17</td>
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<td>Exam 2</td>
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<td>Mon Mar 23</td>
<td>SPRING BREAK</td>
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<td>Wed Mar 25</td>
<td>NO CLASSES</td>
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