

MATH 361A
MATHEMATICAL ANALYSIS I
CSULB
SPRING 2023

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OFFICE: MON/WED 5:15-5:45, TUE 11-11:30

Overview. The study of functions defined on the real numbers is foundational for passing to advanced mathematics. In this course, we'll consider the real numbers and key properties of functions whose domain and range consist of such values.

The course will run in an *inquiry-driven* style. Using the text as a guide, we'll explore the subject's important ideas, techniques, and results through both class discussion and small group activity. Giving serious thought outside of class to the topics that arise from classwork and the text should make the course a rewarding experience.

Text. K. Richards & J. Ross, *Introductory Analysis: An Inquiry Approach*

Exams. There will be three take-home exams due at around weeks four, eight, and twelve. You're welcome to discuss the problems with classmates, but the written work that you submit should be *your own*. Strive to write in concise, clear sentences.

Typed work is preferred—this is an opportunity to learn LaTeX. (See the class website for LaTeX help.) Submissions of pdf files will be made on a class dropbox. Late work will be accepted only in case of personal emergency.

Course project. Find a topic to be examined independently. One possibility is to work out an especially challenging unassigned problem in the text. Note the “Extended explorations” chapter. The goal is explore a topic or problem in some depth.

I encourage you to work with a partner. Be advised that the standards for group work will be proportionally higher. In addition to writing up your work, you will give a brief talk on it to the class (10-15 minutes) during the final exam time. If you work in a group, each member must make some contribution during the presentation. Submit one write-up for the group.

I urge you to chat with me about what you're working on and planning to do. If you're having difficulty, please see me.

WWW. Materials related to the course (course description, assignments, list of reference materials) will appear at

www.csulb.edu/~scrass/teaching

Please recommend things that you'd like to see on the site.

Evaluation.

Exams (3)	75% (25% each)
Course project	25%

Here's an indication of how I will assign grades. These are **minimum** standards. The actual

boundaries between grades might be lower than these, but won't be higher.

85-100%	A
75-85%	B
65-75%	C
50-65%	D

To each individual part of your work I will assign a mark 0-10. See below for an *indication* of what these marks mean.

10	Clear, elegant, shows depth of understanding and special insight or creativity
9	Clear, shows understanding and some elegance and insight
8	Mostly clear, shows understanding, little elegance and insight
7	Somewhat clear, lacking depth of understanding, little elegance and insight
6	Some significant misconceptions or shortcomings
5	Highly significant misconceptions
0-4	Shows little effort.

Key to comments on marked papers.

- a This needs a supporting **argument**.
- a? What's the **argument**—the line of reasoning—here?
- d **Describe** what's going on here.
- e **Explain** what you're doing here.
- h? **How** did you get this?
- i **Illustrate** what you're talking about—give an example, a picture, etc.
- m The **meaning** here isn't clear.
- p A **picture** would help here.
- s This is not a **sentence**.
- w **Word**ing is awkward, confusing, etc. Meaning is unclear.
- y? **Why** is this so? What's the connection to what you've already said?
- ! Very nice. Something especially clear, insightful
- ? What this means or what you're doing is **unclear**. Where does this come from?
- X Something's wrong here—in concept or calculation.
- ✓ This is right—you have the idea.

Fine Print

Values The CNSM is committed to providing a safe and positive learning environment and has established a zero-tolerance policy for any sexual/gender-based misconduct, including, but not limited to sexual harassment, assault, dating violence, stalking for all faculty, staff, and students.

As members of The Beach community, we practice tolerance and denounce hate and prejudice. Our classroom will strive to be a place of mutual respect where the focus is on learning and student success.

Basic needs program If you are having trouble affording enough food to eat, don't have a safe and reliable place to sleep, and/or experiencing an emergency or crisis we are here to help. We are the Basic Needs Program and we have emergency services and resources to assist you. To learn more about our programs and services you can visit our website at csulb.edu/basicneeds.

Disability Students may ask their University at any time for a reasonable accommodation. It is the faculty member's responsibility to immediately refer this student to the Bob Murphy Access Center for assistance, including a review of appropriate medical documentation. BMAC will work with the faculty member to determine the appropriate accommodation.

Withdrawal A copy of the School of Natural Sciences withdrawal policy is available from the Department Office. Note that it's different from the University withdrawal policy and the deadlines are earlier. Deadlines to which you should pay particular attention to appear below. Withdrawals from this course will be allowed only in accordance with University and College policies. Please be aware of the more specific and restrictive withdrawal policy for the College of Natural Sciences and Mathematics.

Weeks 1-2. Withdrawals will not appear on the student's permanent record.

Weeks 3-8. Withdrawals are permissible only for serious and compelling reasons. Academic progress unsatisfactory to the student is considered a serious and compelling reason during this period. Instructor and Department Chair signatures on the drop form are required.

Weeks 9-12. Withdrawals are permissible for serious and compelling reasons, but during this period, unsatisfactory academic progress is not considered a serious and compelling basis to drop a course. Circumstances must be shown that preclude the student from attending class or from any effective opportunities to study. In addition to the normal withdrawal form, a special form must be completed, and instructor and department chair signatures are required.

Weeks 13-15. Withdrawals are permissible only for serious accident or illness and involve a total withdrawal from the University. Detailed written documentation must accompany withdrawal forms. Instructor, chair, and college dean signatures are required.

Cheating/Plagiarism Cheating and plagiarism are in violation of the California Administrative Code, Title 5, Section 41301. CSULB has adopted a specific policy with respect to the violations of this nature (see the Bulletin or Schedule of Classes). Any student in violation of this code and policy in any assignment or examination related to this course shall be subject to the options specified in the policy statement. This may result in the student receiving a failing grade in the course or, in certain circumstances, being expelled from the University.