Exterior Course Website: http://www.math.ucla.edu/~heilman/31bs15.html
Prerequisite: MATH 31A, with a grade of C- or better.
Course Content: Transcendental functions (such as the exponential and logarithm functions); methods and applications of integration; sequences and series.

This Document: Reading this syllabus counts as one homework grade. In order to receive credit for reading the syllabus, you must read the syllabus by April 3rd, noon, PST. Make sure to read to the end.

Lecture Meeting Time/Location: Monday, Wednesday and Friday, 3PM-350PM, MS 4000A
Instructor: Steven Heilman, heilman@math.ucla.edu
Office Hours: Mondays, 9AM-11AM, Wednesdays 1PM-2PM, MS 7370
TAs: Iyer, G. S. geoff.iyer@gmail.com, Coley, I. A. iacoley@math.ucla.edu, Barnicle, M. G. barnicle@ucla.edu
TA Office Hours: Iyer, Thursdays, 2PM-3PM, MS 6160; Coley, Thursdays, 1130AM-1230PM, MS 3903; Barnicle, Thursdays 10AM-11AM, MS 2954.
Discussion Session Meeting Time/Location:

- 3A, Tuesday, 3PM-350PM, MS 5117, Iyer, G. S. http://www.math.ucla.edu/people/grad/gsiyer
- 3B, Thursday, 3PM-350PM, MS 5117, Iyer, G. S. http://www.math.ucla.edu/people/grad/gsiyer
- 3C, Tuesday, 3PM-350PM, MS 5118, Coley, I. A. http://www.math.ucla.edu/~iacoley/
- 3D, Thursday, 3PM-350PM, MS 5118, Coley, I. A. http://www.math.ucla.edu/~iacoley/
- 3E, Tuesday, 3PM-350PM, MS 5137, Barnicle, M. G. http://www.math.ucla.edu/~barnicle/
- 3F, Thursday, 3PM-350PM, MS 5137, Barnicle, M. G. http://www.math.ucla.edu/~barnicle/

Other non-required textbooks: Calculus, Thomas; Calculus, Strang.
First Midterm: Monday, April 20th, 3PM-350PM. Last names A though Ka: Bunche 1209B. Last names Kh through Z: MS 4000A
Second Midterm: Monday, May 11th, 3PM-350PM. Last names A though Ka: Bunche 1209B. Last names Kh through Z: MS 4000A
Final Exam: June 8, 630PM-930PM, Ackerman Grand Ballroom
The Student Math Center in MS 3974 offers group study and tutorials. For their schedule, click here.
Other Resources: Applets by Flash&Math

Email Policy:

- My email address for this course is heilman@ucla.edu.
• It is your responsibility to make sure you are receiving emails from heilman@ucla.edu, and they are not being sent to your spam folder.

• Do NOT email me with questions that can be answered from this document.

• Homework questions sent to me by email will be answered altogether in the form of a “digest.” I will get to every question, but I cannot reply to every email. This digest will be sent out typically two days before the homework is due.

Exam Procedures: Students must bring their UCLA ID cards to the midterms and to the final exam. Phones must be turned off. Cheating on an exam results in a score of zero on that exam. Exams can be regraded at most 15 days after the date of the exam. If you are an OSD student, I would encourage you to discuss with me ways that I can improve your learning experience; I would also encourage you to contact the OSD office to confirm your exam arrangements at the beginning of the quarter.

Exam Resources: Here is a page containing old exams for another 31B class. Here is another page containing old exams for another 31B class. Note that the material on the particular exams may be slightly different than our own exams.

Homework Policy:

• Late homework is not accepted.

• You may not use the internet to try to find answers to homework problems.

• The lowest two homework grades will be dropped. This policy is meant to account for illnesses, emergencies, etc.

• Do not submit homework via email.

• There will be 10 homework assignments, assigned weekly on Friday and turned in at the beginning of class on the following Friday.

• A random subset of the homework problems will be graded each week. However, it is strongly recommended that you try to complete the entire homework assignment.

• Collaboration on the homework is allowed and encouraged.

• All homework assignments must be written by you, i.e. you cannot copy someone else’s solution verbatim. I would encourage you to understand carefully how the homework solutions work, and how you would find such a solution on your own. Overusing collaborations or search technology should result in poor performance on the exams.

• Label your homework with the lecture number, and discussion section number.

• Homework solutions will be posted each Saturday, after the homeworks are collected.

Quiz Policy:
• There will be two quizzes, administered in the second and eighth weeks of class. In the second and eighth weeks of class, the homework will not be turned in, and instead, the quiz will count for the homework grade. The problems from the quiz will closely resemble or be identical to problems from the homework from that particular week.

• Quizzes will be administered in your discussion section, which is on either Tuesday or Thursday. Each quiz should last about 15 minutes.

**Grading Policy:**

• The final grade is given by the larger of the following two schemes. Scheme 1: homework (15%), the first midterm (20%), the second midterm (25%), and the final (40%). Scheme 2: homework (15%), the largest midterm grade (35%), final (50%). The final grade will be curved. However, anyone who exceeds my expectations in the class by showing A-level performance on the exams and homeworks will receive an A for the class.

• We will use the MyUCLA gradebook.

• If you cannot attend one of the exams, you must notify me within the first two weeks of the start of the quarter. Later requests for rescheduling will most likely be denied.

• You must attend the final exam to pass the course.

**Tentative Schedule:** (This schedule may change slightly during the course.)
Advice on succeeding in a math class:

- Review the relevant course material **before** you come to lecture. Consider reviewing course material a week or two before the semester starts.

- When reading mathematics, use a pencil and paper to sketch the calculations that are performed by the author.

- Come to class with questions, so you can get more out of the lecture. Also, finish your homework at least **two days** before it is due, to alleviate deadline stress.

- Write a rough draft and a separate final draft for your homework. This procedure will help you catch mistakes.

- If you are having difficulty with the material or a particular homework problem, review Polya’s [Problem Solving Strategies](#), and come to office hours.

<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
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<tbody>
<tr>
<td>1</td>
<td>Mar 30: 7.1, Derivatives of exponential functions</td>
<td>Mar 31</td>
<td>Apr 1: 7.2, Inverse functions</td>
<td>Apr 2</td>
<td>Apr 3: Homework 1 due, 7.3, Logarithms and their derivatives</td>
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<td>Apr 6: 7.4, Exponential growth and decay</td>
<td>Quiz in section</td>
<td>Apr 8: 7.5-7.6, Compound interest, logistic growth</td>
<td>Quiz in section</td>
<td>Apr 10: Homework 2 (ungraded). 7.7, L’Hôpital’s Rule</td>
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<td>Apr 13: 8.1, Integration by parts</td>
<td>Apr 14</td>
<td>Apr 15: 8.2,8.3, Trigonometric integrals, trigonometric substitution</td>
<td>Apr 16</td>
<td>Apr 17: Homework 3 due. 8.5, Method of partial fractions</td>
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<td>Apr 20: Midterm #1</td>
<td>Apr 21</td>
<td>Apr 22: 8.6, Improper integrals</td>
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<td>Apr 24: Homework 4 due. 8.8, Numerical integration</td>
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<td>Apr 27: 8.8, Error bounds for numerical integral</td>
<td>Apr 28</td>
<td>Apr 29: 9.1, Arc length</td>
<td>Apr 30</td>
<td>May 1: Homework 5 due. 9.2, Fluid pressure and force</td>
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<td>6</td>
<td>May 4: 9.4, Taylor polynomials</td>
<td>May 5</td>
<td>May 6: 9.4, Taylor’s Theorem, error bounds</td>
<td>May 7</td>
<td>May 8: Homework 6 due, 11.1, Sequences and Infinite Series</td>
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<td>May 18: 11.3, Convergence of series with positive terms</td>
<td>Quiz in section</td>
<td>May 20: 11.4, Conditional Convergence</td>
<td>Quiz in section</td>
<td>May 22: Homework 8 (ungraded). 11.5, Ratio and root tests</td>
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<td>May 25: No class</td>
<td>May 26</td>
<td>May 27: 11.6, Power Series</td>
<td>May 28</td>
<td>May 29: Homework 9 due. 11.6, More Power Series</td>
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</table>

**Compliance**
Ten percent of your homework grade is reading and complying with this document. To acknowledge that you have read and agree to the above, click here, and follow the instructions. (This link may not work on some smartphones, so make sure to use a computer instead.)