

Calculus I (IBPE) 微積分一(能源學程)

Instructors Info

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TA Info

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Course Info

- **Class Schedule:** Wednesday 10:10~12:00 (Period 3,4) and Friday 9:10~10:00 (Period 2).
- **Class Location:** DAA Eng. 5825.
- **Class Webpage:**
http://www.math.ncku.edu.tw/~cliu/Calculus_I_Fall_2014.htm
- **Course Description:** Standard first semester course of single variable calculus. Topics include the concept of limit, differentiation and its applications, integration and its applications, transcendental functions and their properties, sequences and series.
- **Prerequisite:** High school math. In particular, knowledge in basic algebra, trigonometry, logarithms and exponentials, and basic geometry is necessary.
- **Textbook:** *Calculus: One and Several Variable* by Salas, Etgen, and Hille, 10th edition, Wiley.
- **Office Hours:** Wednesday 15:00~17:00 (Chia-Jung) and Thursday 12:30~13:30 (Chih-Chung).

Course Policies

- **Grading Scheme:** The final average score will be chosen from the maximum of the following two schemes:

Scheme A: Homework 10%, Midterm Exams 2x30%=60%, and Final Exam 30%.

Scheme B: Homework 10%, Better Midterm Exam 30%, and Final Exam 60%.

- **Homework:** Homework assignments are generally assigned on Wednesday and collected next Friday. Please treat the assignments as practice problems for exams. They are worth much more than they seem as most exam problems are drawn from, or are disguises, of homework problems. Two lowest scores will be dropped at the end and therefore NO late assignment will be accepted under ANY circumstance. Group discussions on homework problems are highly encouraged.
- **Exams:** Two midterm exams are tentatively scheduled (i.e. subject to change) on Friday, November 7 and Friday, December 26 (both at regular class meeting times).
- **Makeup Exam:** Due to the possibility of dropping one midterm exam, makeup exam will NOT be given. The only possible exception will be participation in official competition (athletic, academic, governmental) representing the university. An official note from relevant authority must be present.
- **Academic Dishonesty:** All exams are proctored very carefully and there is no tolerance for cheating. A score of zero will be automatic on the exam when the proven guilty, and students will be further sent to relevant student discipline units for further investigations.
- **Calculators:** Due to inconsistency in technological resources, calculators or other electronic devices will never be allowed on exams. However, exam problems will be designed so that calculators will not be helpful.
- **Regrade:** Students may appeal on the grading of returned assignments/exams on the spot. However, no regrade is possible once the returned work is brought out of my sight.
- **Expected Class Conduct/Behaviors:** All students are responsible for the lecture to be conducted orderly so that students' rights to learn and my ability to teach are not compromised in any way. Attendance is assumed. When missing a class, it is students' responsibilities to catch up on materials presented or announcements made. Missing an assignment or exam because of failure to hear the announcement in class is not a valid excuse. Course related conversations should be in English when non-native Chinese/Taiwanese speakers are present.

Outline of Planned Topics

Topics	Planned Number of Lectures	Approximated Location in Textbook
Review of pre-calculus.	2	Chapter 1
Limits and continuity.	4	2.1-2.5.
Differentiation, properties, and applications.	14	Chapter 3, and 4.1-4.9.
Integration, properties, and applications.	10	Chapter 5, and 6.1-6.5.
Exponential, logarithmic functions, and inverse functions.	5	7.1-7.7.
Techniques of integration.	5	8.1-8.5.
*Indeterminate forms and improper integrals.	2	11.4-11.7.
Sequences and series.	4	11.2-11.3 ; 12.1-12.2.

*skipped for insufficient time.