

Calculus Syllabus (2101019) - 2025Fall

Mon, Wed 10:15-11:30 @Common 203

TA Recitation : Thu 12:10-1:00 @Common 203

Instructor: Prof. Chi-Jen Wang Email: cjwang@ccu.edu.tw

Office: MATH 438

Office Hours: MW 9:10-10:00

TA Recitation: Thu 12:10-1:00 • TA : Mr. Tsai 蔡閔任

Course Website: <https://ecourse2.ccu.edu.tw/>

Textbook: Calculus: Early Transcendental by James Stewart, Daniel Clegg, and Saleem Watson, 9th Edition. Cengage Learning. ISBN-13: 978-626-7533-06-2

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Objectives: To enable students to clearly understand the basic concepts, rules, and requirements of mathematical proofs of calculus. Through the introduction of various examples, students can have a better understanding of calculus so that they can have a sufficient and solid mathematical foundation when studying professional courses in science and engineering related fields.

Through practical calculations of calculus, cultivate students' ability to use calculus to solve related mathematical problems and the requirement of mathematical rigor.

Contents: (1) Functions (2) Limits (3) Differentiation and its Applications (4)

Antiderivative and Integrals (5) Applications and Techniques of Integration.

Attendance: Attendance is required for all lectures and recitation meetings. The student who misses a class meeting is responsible for any assignments and/or announcements made. Temporary class leave needs to inform the instructor in advance and submit the absent excuse form on school's student_off system within 7 days.

For exam leave, the request form must be completed two weeks in advance except the extended emergency, and approved by the course instructor before a make up exam can be taken. The absent without excuse form will lead 0.5 points deducted from their course grades in the category of Attendance. Office Hours are for asking questions related to the course and not for re-teaching content.

Grading Scale:

Category	Points	Notices
Exams	70	5 Exams, 14 points each
HW Presentation	4	
Online homework	15	Weekly online HW, 1 point each

Attendance	11	
Total points	100	

Exams: There will be four exams administered during recitation on the following Thursdays: Oct 16, **Nov 6**, Nov 26, Dec 11. And the last exam will be on Monday Jan 5th 2026.

Calculator: You can use a scientific calculator (NOT a Tablet, Phones, nor Smart Watches) with the exponential & logarithmic functions during the exam.
The calculator which can find the derivative, or integrate a function is not allowed.

HW Presentation: On non-exam Thursdays, students will present assigned questions in HW. The presentation schedule will be in order of student CCU ID number. 4 points will be awarded if the solving steps are successfully explained. If one student's HW presentation fails, the other students can answer and receive points.

Online homework: Online homework assignments will be due at midnight on the date listed on webassign.net. Please work ahead on the homework and keep up with the pace of the lectures. Late homework is never accepted for any reason.

Academic Honesty: Any cheating behavior must be reported to departments. CCU Academic Honor Code will be strictly adhered to in this class.

Learning Disability: It is the right of any student with a certified learning disability to request necessary accommodation. Such requests must be made well in advance of the time that the accommodation is required, ideally in the first or second week of class, and a letter of documentation from CCU's Resource Classroom must be presented at the time of any request. <https://specialedu.ccu.edu.tw/>

Resources: 1. Instructor/TA office hours.
2. Math Help Room · M-F, 12-2&4-6 @ Math 202.

Week	Date	Topics	Notice
1	Sep 8-12	1.4-1.5 Functions and Models	HW1
2	Sep 15- 19	2.1-2.3 Tangent Line and Limits	HW2
3	Sep 22-26	2.4-2.6 Definition of a Limit, Continuity, and Limits at Infinity.	HW3
4	Sep 29-Oct 3	2.7-2.8 Rate of Change and Derivative as a Function	No Class on Sept 29
5	Oct 6- 10	3.1-3.2 Derivative of Functions, Product and Quotient Rules	No Class on Oct 6 HW4
6	Oct 13- 17	3.3-3.5 Derivative of Trigonometric Functions, Chain Rule, and Implicit Differentiation	Test 1 on Oct 16 HW5
7	Oct 10- 24	3.6-3.8 Derivative of Logarithmic Functions, Exponential growth and decay	HW6
8	Oct 27- 31	3.9-3.11 Related rates, Linear Approximations, and Hyperbolic Functions	HW7
9	Nov 3- 7	4.1-4.2 Maximum and minimum Mean Value Theorem	Test 2 on Nov 6 HW8
10	Nov 10- 14	4.3-4.5 Shape of a Graph, Indeterminate forms, Curve Sketching	HW9
11	Nov 17- 21	4.6-4.7 Graphing and Optimizations.	HW10
12	Nov 24- 28	5.1-5.2 Antiderivative, Areas and Definite Integrals	Test 3 on Nov 26 HW11
13	Dec 1- 5	5.3-5.5 Fundamental Theorem of Calculus, Indefinite Integrals, Substitution Rule	HW12
14	Dec 8- 12	6.1, 7.1 Areas and Integration by Parts	Test 4 on Dec 11 HW13
15	Dec 15- 19	7.1-7.2 Integration by Parts and Trigonometric Integrals	HW14
16	Dec 22- 26	7.3-7.4 Trigonometric substitution, Partial Fractions	No Recitation on Dec 25 HW15
17	Dec 29- Jan 02	7.5-7.6, 7.8 Integration Strategy and Tables, Improper integrals	Online Class on Dec 31 No Recitation on Jan 1
18	Jan 5- 9	Final Week	Test 5 on Jan 5 Makeup Test on Jan 7

Any change will be announced on ecourse2.ccu.edu.tw