



MATH 021: Calculus II

Term: Summer, 2019

Time: Monday – Friday, 5 Weeks

Class Sessions per Week: 5

Class Session Length (minutes): 150

Total Contact Hours: 60

Credit Hours: 4

Course Description

Calculus I and II together construct a general introduction to calculus. Topics in Calculus II cover logarithmic, exponential, and trigonometric functions; growth and decay, inverse trigonometric functions, related rates; basic techniques of integration related to area and volume, polar coordinates; parametric equations; sequences and series; Taylor's series with the remainder; the mean value and inverse function theorem, elementary transcendental functions, and methods of integration.

Prerequisite: MATH 011 or equivalent 1st year calculus course.

Textbook(s)

Calculus: Early Transcendentals, 8th Edition by James Stewart

Grading

Mid-Term Exam	25%
Assignments	25%
Final Exam	50%
Total	100%

A: 90-100 A-: 85-89 B+: 82-84 B: 78-81 B-: 75-77 C+: 72-74 C: 68-71 C-: 64-67 D: 60-63
F: <60

Schedule

WEEK 1

The basic problem: Finding area under a curve. Summing infinitesimal rectangles

Tuesday: Fundamental Theorem of Calculus

Anti-derivatives, Substitution

Integration by parts

Area between curves, volume of revolution by slicing



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Volume of revolution by shells

Arc length,

WEEK 2

Surface Area

Trigonometric integrals

Trigonometric substitution

Partial fractions

MID-TERM Exam

WEEK 3

Improper integrals

Approximate integration

Sequences

Series

Geometric series test

Integral and comparison tests

WEEK 4

Ratio and root tests

Power series, interval of convergence

Taylor and MacLauren series

Taylor polynomials and error estimates

WEEK 5:

Reading Day

Review Session

Final Exam

Policies

Exam and Attendance

No make-ups for missed exams. If legitimate absence, midterm exam can be excused. Attending all class meetings is required. Students are responsible for missing class by any reason. We will be covering a lot of material quickly so it is detrimental to miss even a day.

Academic Honesty

Xihua University expects all students to do their own work. Instructors will fail assignments that show evidence of plagiarism or other forms of cheating, and will also report the student's name to the University administration. A student reported to the University for cheating is placed on disciplinary probation; a student reported twice is suspended or expelled.

Special needs

Students with disabilities and special needs should consult with the professor early in the semester. Recording of lectures is permitted.