

# Course Outline

## MATH 1172, Calculus II

**Instructor:** Maria Grazia Viola

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**Office Hours:** Monday 2:00-4:00, Tuesday 2:00-3:00, or by appointment.

**Lectures and Lab:** Lectures on Tuesday and Thursday 11:30-1:00 by Zoom, Lab on Monday 11:30-12:30 by Zoom.

**Text:** Calculus, one and several variables, Tenth edition, by Salas, Hille, Etgen.

### Course Outline:

- **Integration (Chapter 5):** the area problem, definite integral of a continuous function, basic rules of integration, the fundamental theorem of calculus, area between two graphs, indefinite integral, u-substitution.
- **Some applications of the integral (Chapter 6):** area, volume, work.
- **The transcendental functions (Chapter 7):** one-to-one functions, inverse functions, logarithms, exponentials, inverse trigonometric functions.
- **Technique of integrations (Chapter 8):** integration by parts, integration of trigonometric functions, trigonometric substitutions, partial fractions.
- **Sequences, Indeterminate forms (Chapter 11):** sequences, limit of sequences, indeterminate forms, improper integrals.
- **Infinite series (Chapter 12):** infinite series, divergence test, the limit comparison test, the root test, the ratio test, absolute and conditional convergence, Taylor polynomial and Taylor series.

**Grading System:** The final grade will be determined by two midterms, the homework and the final. The weight of each component is as it follows:

Homework Grade 15%

Midterm I 20%

Midterm II 25%

Final 40%

**Exam Schedule:** The first midterm will be on February 8, 2021, while the second midterm will be on March 16, 2021.

**Homework:** You will have a homework assignment due every week. Part of the homework will be on WeBWorK. I will also assign 3-4 problems from

the textbook which you will work by hand. The solution will have to be upload in D2L to be graded. The homework assignment will be due on Tuesday.

**No late assignment will be accepted. NO EXTENSION will be given.** I will drop one homework assignment (the lowest) when computing your homework grade. If you cannot do an assignment, that is the assignment which will be dropped.

The Math tutorial service (LUMAC) offered through the Department of Mathematical Sciences is available on-line and it can help you with your math questions. Students will be informed of the hours LUMAC is in service during the winter semester as soon as the new schedule is announced.

IF YOU WORK ALL THE ASSIGNED HOMEWORK PROBLEMS, YOU SHOULD DO WELL IN THE COURSE. WITHOUT PRACTICING THE MATERIAL COVERED IN CLASS IT WILL BE VERY UNLIKELY THAT YOU WILL RECEIVE A GOOD GRADE.

**Make-up policy:** A make-up midterm will be given only with well documented valid university excuses (sickness, etc). A make-up midterm must be written by the student within two weeks of the date of the original midterm.

**This is a general outline. Any communication or change regarding this outline, the time of exams as well as other matters concerning the course will be announced in the lecture.**