

# **Analytic Geometry and Calculus II Syllabus**

**MAC2312, Summer 2021, May17 - June 18**

## **Course & Faculty Information**

**Instructor:** TBA

**Contact hour:** 75 hours

**Credit:** 5

**Office hours:** By Appointment

**Email:** TBA

## **Course Description**

This course selected topics include conics, translation and rotation of axes, techniques of integration, arc length and other applications of the definite integral, polar coordinates, indeterminate forms and improper integrals, infinite sequences and series and Taylor's Formula.

**Notes:** I will prepare a set of guided notes for each section to be used during lecture.

## **Textbook Information**

*Calculus*, 10th Edition, Ron Larson. ISBN: 1285057090

**Notes:** I will prepare a set of guided notes for each section to be used during lecture.

## **Grading Policy**

Your final grade of this course will be a weighted average on the scale listed above. The Weighted Average will be calculated as follows:

Assignments	15%
Participation	5%
Exams	50%
Final Exam	30%
<b>Total</b>	<b>100%</b>

## Grading Scale

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = Below 60%

“A” grades are given for outstanding work. You are doing extremely well. The student has exceeded expectation.

“B” grades are given for above average work. You are doing very well. Improvements will be toward higher refinements of concept.

“C” grades are given for average work. You are meeting an acceptable level or expectation. Improvements will be towards acceptable levels of project requirements.

“D” grades are given for below average work. You are under-achieving in quality and/or motivation. Improvements will be towards acceptable level of project requirements.

“F” grades are given for failure. You are not reaching the expected level for college work. Improvements are to review goals, seek assistance and increase efforts.

**Borderline grades will be determined by a student’s score on the final exam.**

## Course Outline

This is a tentative course schedule, the instructor reserves the right to make changes on it to make it better for the student’s development. Notice will be given should any changes take place.

Date	Required Readings	Assignment Due Dates
1	Course Introduction, Inverse Trigonometric Functions: Differentiation	Section 5.6
2	Inverse Trigonometric Functions: Integration	Section 5.7
3	Hyperbolic Functions	Section 5.8
4	Area of a Region Between Two Curves and Volume: The Disk Method	Section 7.1, 7.2
5	<b>Review Assignment</b>	<b>Review Assignment over sections 5.6, 5.7, 5.8, 7.1, and 7.2</b>

6	Volume: The Shell Method and Arc Length and Surfaces of Revolution	Section 7.3 and 7.4
7	Work and Basic Integration Rules	Section 7.5
8	Basic Integration Rules and Integration by Parts	Section 8.1 and 8.2
9	Trigonometric Integrals	Section 8.3
<b>10</b>	<b>Exam #1</b>	<b>Sections 5.6-5.8, 7.1-7.5, and 8.1-8.2</b>
11	Partial Fractions	Section 8.5 HW
12	Trigonometric Substitution	Section 8.4 HW
13	Indeterminate Forms, L'Hopital's Rule and Improper Integrals	Section 8.7 and 8.8 HW
14	Improper Integrals and Conics and Calculus	Section 8.8 and 10.1 HW
<b>15</b>	<b>Review Assignment</b>	<b>Review Assignment over sections 7.3-7.5, 8.1-8.5, 8.7-8.8, and 10.1</b>
16	Plane Curves, Parametric Equations, and Calculus	Section 10.2 and 10.3 HW
17	Polar Coordinates, Polar Graphs, Area, Arc length in Polar Coordinates	Section 10.4, 10.5 HW
18	Sequences, Series and Convergence	Section 9.1 and 9.2 HW
19	The Integral Test, p-series, Comparisons of Series and Alternating Series	Section 9.3, 9.4, and 9.5 HW
<b>20</b>	<b>Exam #2</b>	<b>Sections 8.4, 8.5, 8.7, 8.8, 10.1-10.4, 9.1 - 9.4</b>
21	The Ratio and Root tests, and Power Series	Section 9.6 and 9.8 HW
22	Power series and Representations of functions by Power Series	Section 9.9 HW
23	Taylor Polynomials and Approximations	Section 9.7 HW
24	Review	<b>Review Assignment</b>
<b>25</b>	<b>Final Exam Comprehensive</b>	

## **Academic Integrity**

As members of the Seminole State College of Florida community, students are expected to be honest in all of their academic coursework and activities.

Academic dishonesty, such as cheating of any kind on examinations, course assignments or projects, plagiarism, misrepresentation and the unauthorized possession of examinations or other course-related materials, is prohibited.

Plagiarism is unacceptable to the college community. Academic work that is submitted by students is assumed to be the result of their own thought, research or self-expression. When students borrow ideas, wording or organization from another source, they are expected to acknowledge that fact in an appropriate manner. Plagiarism is the deliberate use and appropriation of another's work without identifying the source and trying to pass-off such work as the student's own. Any student who fails to give full credit for ideas or materials taken from another has plagiarized.

Students who share their work for the purpose of cheating on class assignments or tests are subject to the same penalties as the student who commits the act of cheating.

When cheating or plagiarism has occurred, instructors may take academic action that ranges from denial of credit for the assignment or a grade of "F" on a specific assignment, examination or project, to the assignment of a grade of "F" for the course. Students may also be subject to further sanctions imposed by the judicial officer, such as disciplinary probation, suspension or dismissal from the College