SEMINOLE STATE COLLEGE
OF FLORIDA

Analytic Geometry and Calculus III Syllabus

MAC2313, Summer 2019, June 24 - July 26

Course & Faculty Information

Lecturer: TBA

E-mail: TBA

Time: Monday through Friday

Teaching hours: 60 (2.4 contact hours each day)

Office hours: By appointment

Credits: 4

Course Description

Vectors and the geometry of three-dimensional space. Vector-valued functions. Real-valued functions of many variables and optimization. Multiple integrals. Vector fields, Green's, Stokes', and the divergence theorems.

Textbook Information

Larson/Edwards Calculus 11th Edition

Selected Sections of chapters 11, 12, 13, 14 and 15

Grading Scale:

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = Below 60%

Assignments and Graded Work

Attendance: Students are expected to be in class every day for the full class period. We will be covering a lot of material very quickly, so if you get behind it will be very difficult to catch up.

- **Homework**: Homework from the textbook will be assigned frequently. Students are expected to complete each homework assignment and are encouraged to work together on these assignments. The homework itself will not be graded, but problems from the homework assignment will be used for mid-week quizzes.
- **Mid-Week Quizzes:** Each Wednesday (except the last week. The quiz will be given on Tuesday for the 5^{th} week) a quiz will be given at the end of the class. The quizzes will contain questions from the homework assignments. The main goal of the quizzes is to prepare students for weekly exams. There will be 5 quizzes.
- **Weekly Exams**: Each Friday (except the last one) we will have a test on the topics of the week. The tests will be given during the second half of the class and a review by TA will be given during the first part. There will be 4 such tests.
- **Final Exam**: The all-inclusive final exam will be given on July 26, 2018. This exam will include every section we have studied during the semester. Solutions to the final exam will be given during the last class of the semester on Friday.

Your course grade will be based on the following criterion.

Mid-Week Quizzes: 30%

Weekly Tests: 40%

Final exam: 30%

Course Topics

Date	Sections	Assignments
06/24	11.1: Vectors in the plane 11.2: Space coordinates and vectors in space 11.3: The dot product of two vectors	Homework 1
06/25	11.4: The cross product of two vectors in space 11.5: Lines and planes in space	Homework 2
06/26	11.7: Cylindrical and spherical coordinates 12.1: Vector-valued functions, 12.2: Differentiation and integration of vector valued functions	Quiz 1
06/27	12.3: Velocity and acceleration, 12.4: Tangent and normal vectors	Homework 3

	12.5: Arc length and curvature	
06/28	Review	Test 1
07/01	13.1: Intro. To functions of several variables 13.2: Limits and continuity 13.3: Partial derivatives	Homework 4
07/02	13.4: Differentials 13.5: Chain rules for multivariable functions	Homework 5
07/03	13.6: Directional derivatives and gradients 13.7: Tangent planes and normal lines	Quiz 2
07/04	13.8: Extrema of functions of two variables 13.9: Applications of extrema	Homework 6
07/05	Review	Test 2
07/08	13.10: Lagrange multipliers	Homework 7
07/09	14.1: Iterated integrals and area in the plane 14.2: Double integrals and the volume	Homework 8
07/10	14.3: Change of variables(polar coordinates) 14.4: Center of mass and moments of inertia	Quiz 3
07/11	14.5: Surface area 14.6: Triple integrals and applications	Homework 9
07/12	Review	Test 3
07/15	14.7: Triple integrals in other coordinates 14.8: Change of variables (Jacobians)	Homework 10
07/16	15.1: Vector fields	Homework 11
07/17	15.2: Line integrals 15.3: Conservative vector fields and independence of path	Quiz 4
07/18	15.4: Green’s Theorem 15.5: Parametric surfaces	Homework 12
07/19	Review	Test 4
07/22	15.6: Surface integrals	Homework 13

	15.7: Divergence theorem	
07/23	15.8: Stokes' theorem	Quiz 5
07/24	Review	
07/25	FINAL EXAM	
07/26	Solutions & further discussions	

Make-Ups:

This class will go by very quickly. I strongly recommend that you never miss class, since it will be very hard to make up the material you missed and, since mathematics is cumulative, you will run the risk of getting hopelessly behind. If you miss a test you will have the opportunity to have the final exam replace the missed or lowest scoring test.

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.