Point Loma Nazarene University

Department of Mathematical, Information and Computer Science

MTH274-1 Calculus III
Class Time MWF 8:30 – 9:35 am
Location RLC 104

Instructor Jesus Jimenez, Ph.D.
Office RS 218
Phone 619-849-2634
Email jjimenez@pointloma.edu
Office Hours MWF 1:00 pm – 3:30 pm or by appointment

Textbook Worldwide Multivariable Calculus
Author David B. Massey

Important Dates
Exam 1 **Oct 2**
Exam 2 **Oct 30**
Exam 3 **Dec 4**
Final Exam **Dec 16**

Course Description Conceptual development of the calculus of functions of more than one variable supported by the use of a symbolic computer algebra system. Limits and continuity, partial derivatives, chain rule, extreme values, Taylor's theorem, multiple integrals, line and surface integrals, Green's theorem and Stokes' theorem.

Grade Distribution

Three partial exams @ 150 points each	450
Final Exam	300
Homework	250
Total	1000

Grading Scale

	A	B	C	D	F
		>86%	>76%	>66%	<59%
	>90%	>83%	>73%	>63%	
	>88%	>80%	>70%	>59%	

Course Requirements **Prerequisites**
MTH174.

Academic Honesty PLNU catalog The Point Loma Nazarene University community holds the highest standards of honesty and integrity in all aspects of University life. Academic honesty and integrity are strong values among faculty and students alike. Any violation of the University's commitment is a serious affront to the very nature of Point Loma's mission and purpose.
Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. Such acts include plagiarism, copying of class assignments, and copying or other fraudulent behavior on examinations.
A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for a) that particular assignment or examination, and/or b) the course. The faculty member will file with the appropriate dean and the chair of the department a written report of the incident and the action taken. The college dean, after an examination of the event, will submit a report to the Provost

and the Vice President for Student Development. If either of these administrators believes other disciplinary action should be taken, consultation between the faculty member and the administrators will determine the resulting discipline.
The student or students involved in the academic dishonesty may appeal the action by talking first to the department chair, then, if necessary, to the college dean, and finally to a committee of the following: a college dean of the student's choice, the Vice Provost for Academic Administration, the Provost, and the Vice President for Student Development. The appeal decision reached by this committee is final. If a grade of "F" is received in a course due to academic dishonesty, the student may not withdraw from the course nor can the course be dropped to remove the "F" grade.

Attendance

Regular and punctual attendance at all classes in which a student is registered is considered essential to optimum academic achievement.
Therefore, regular attendance and participation in each course are minimal requirements to be met. There are no allowed or excused absences except when absences are necessitated by certain University-sponsored activities and are approved
in writing by the Provost.
Whenever the number of accumulated absences in a class, for any cause, exceeds ten percent of classes (this is equivalent to one and one-half weeks or longer in a 16-week semester course), the faculty member sends a written report to the Vice Provost for Academic Administration which may result in de-enrollment. If more than 20% (three weeks or longer in a semester-long course) is reported as missed, the student will automatically be de-enrolled. If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of "F" or "NC."
Absences are counted from the first official meeting of the class regardless of the date of the student's enrollment. A student who registers late must monitor carefully regular attendance during the remainder of the semester. Registered students who neither attend the first class session nor inform the faculty of their desire to remain on the class roll may, at the request of the instructor, be dropped from the roll. Exceptions to the foregoing attendance regulations due to extenuating circumstances may be granted only by appeal to the Vice Provost for Academic Administration. Students should consult the syllabus of each course for specific applications of and elaborations on the above attendance policy.

Homework

Homework will be assigned during the week and it will be collected the following Wednesday.

Final Exam

The Final Exam is a **COMPREHENSIVE** examination.

Resources

Library

Disabilities

In accordance with Title VI of the Civil Rights Act of 1964, Point Loma Nazarene University does not discriminate on the basis of race, color, age or national origin. Furthermore, as required by Title IX of the 1972 Education Amendments, Point Loma Nazarene University does not discriminate on the basis on sex in its educational programs, activities, or employment policies. Point Loma Nazarene University also provides equal opportunity for qualified handicapped persons in compliance with the requirements of Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990. The Associate Dean of Students/Academic Advising provides advice and support to students with disabilities. Inquiries and appeals regarding compliance with these federal requirements should be directed to the Vice President for Student Development, c/o the University.

	Day	Date	Section	
1	Wednesday	4-Sep	1.1	Euclidean space
2	Friday	6-Sep	1.2	as a Vector Space
3	Monday	9-Sep	1.3	Dot Products, Angles and Projections
4	Wednesday	11-Sep	1.4	Lines, Planes and Hyper-Planes
5	Friday	13-Sep	1.5	The Cross Product
6	Monday	16-Sep	1.6	Functions of a Single Variable
7	Wednesday	18-Sep	1.7	Multivariable Functions
8	Friday	20-Sep	1.8	Graphing Surfaces
9	Monday	23-Sep	2.1	Partial Derivatives
10	Wednesday	25-Sep	2.2	The Total Derivative
11	Friday	27-Sep	2.3	Linear Approximation, Tangent Plane and the Differential
12	Monday	30-Sep	2.4	Differentiation Rules
13	Wednesday	2-Oct	**Exam 1**	**Section 1.1 - Section 2.3**
14	Friday	4-Oct	2.5	The Directional Derivative
15	Monday	7-Oct	2.6	Change of Coordinates
16	Wednesday	9-Oct	2.7	Level Sets and Gradient Vectors
17	Friday	11-Oct	2.8	Parameterizing Surfaces
18	Monday	14-Oct	2.9	Local Extrema
19	Wednesday	16-Oct	2.10	Optimization
20	Friday	18-Oct	2.11	Lagrange Multipliers
21	Monday	21-Oct	2.12	Implicit Differentiation
22	Wednesday	23-Oct	2.13	Multivariable Taylor Polynomial and Series
23	Friday	25-Oct		Fall Break
24	Monday	28-Oct	3.1	Iterated Integrals
25	Wednesday	30-Oct	**Exam 2**	**Section 2.4 - Section 2.13**
26	Friday	1-Nov	3.2	Integration in
27	Monday	4-Nov	3.3	Polar Coordinates
28	Wednesday	6-Nov	3.4	Integration in and
29	Friday	8-Nov	3.5	Volume
30	Monday	11-Nov	3.6	Cylindrical and Spherical Coordinates
31	Wednesday	13-Nov	3.11	Surfaces and Area
32	Friday	15-Nov	4.1	Vector Fields
33	Monday	18-Nov	4.2	Line Integrals
34	Wednesday	20-Nov	4.3	Conservative Vector Fields
35	Friday	22-Nov	4.4	Green's Theorem
36	Monday	25-Nov	4.4	Green's Theorem
37	Wednesday	27-Nov		Thanksgiving Break
38	Friday	29-Nov		Thanksgiving Break
39	Monday	2-Dec	4.5	Flux through a Surface
40	Wednesday	4-Dec	**Exam 3**	**Section 3.1 - Section 4.4**

41	Friday	6-Dec	4.6	The Divergence Theorem
42	Monday	9-Dec	4.6	The Divergence Theorem
43	Wednesday	11-Dec	4.7	Stokes' Theorem
44	Friday	13-Dec	4.7	Stokes' Theorem
45	Monday	16-Dec	**Final**	**7:30 am - 10:00 am**
46	Wednesday	18-Dec		
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