

Math 259----Calculus and Analytic Geometry III Fall 2010

Time/Location: SECTION 2: M,W,F 9:00-9:50 Jepson 014, T 8:25-9:15 Jepson 122
SECTION 3: M,W,F 10:00-10:50 Jepson 103, T 9:50-10:40 Paccar 105

Instructor: Shannon Overbay

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Office/Lab Hours:

Office: 2:00-3:00 Monday, Tuesday, Wednesday

Math Lab (Herak 224): 11:00-12:00 Tuesday

Text: Essential Calculus, James Stewart (2007)

Grading System: During the course there will be five in-class examinations, four worth 100 points and one worth 50 points, plus a comprehensive final examination worth 200 points. There will also be WeBWork homework (22 assignments, 5 points each assignment) given throughout the term. The top twenty scores will be counted, contributing 100 points toward your grade. Your grade will be based on total points:

A	675-750
B	600-674
C	525-599
D	450-524
F	0-449

Pluses or minuses may be attached to these grades at the discretion of the instructor.

Makeup Examinations: Exams may be taken early if circumstances such as athletic events conflict with the normal test time. Arrangements need to be made at least one week in advance. Otherwise, the exam must be taken at the normally scheduled time. Late makeup exams are only given in case of a documented emergency.

Homework: Assigned homework has the following three purposes: (1) To specify the material students will be responsible for, (2) To provide relevant examples for class discussions and, most importantly, (3) To provide material through which the student can enhance their knowledge of the subject. "Suggested Problems" will not be collected, but will be representative of the types of problems on quizzes and exams. A listing of the suggested problems is given on the reverse side of this syllabus. WeBWork homework (webwork.gonzaga.edu) will be graded and will usually be due 1-2 times per week.

Disabled Student Services: Anyone requiring special accommodations for a documented disability should make arrangements through the DREAM (x4134) office.

Academic Honesty: Academic Honesty should be maintained at all times. Any incidents of copying or cheating will result in a failing grade. Please refer to the student handbook for a description of the Academic Honesty policy.

Attendance: Your attendance is expected. Missing more than 8 classes may result in a V grade or lowering of your course grade by one or more letter grade.

Cell Phones: Phones shall be turned off and absolutely no texting during class!

Math 259 Topics List and Suggested Problems

All ranges are odd problems only.

- 9.1 (Parametric Curves): 5-19, 22, 38ab
- 9.2 (Calculus with Parametric Curves): 3, 5, 9-15, 25, 27, 33-37, 49
- 9.3 (Polar Coordinates): 1, 3, 7-13, 14, 15, 19, 23, 25, 31, 33, 39, 47, 51, 53
- 9.4 (Areas and Lengths in Polar Coordinates): 1-7, 15, 19-23, 35
- 9.5 (Conic Sections in Polar Coordinates) (optional): 1, 3, 5

- 10.1 (Three-Dimensional Coordinate Systems): 3-15, 19, 23-29, 35
- 10.2 (Vectors): 1, 3, 9, 11, 15-19, 23, 27, 29
- 10.3 (The Dot Product): 1-11, 15, 17, 21-27, 35, 37, read 43-45
- 10.4 (The Cross Product): 1, 3, 7, 9, 13, 15, 23-29, 39, 41, 45
- 10.5 (Equations of Lines and Planes): 1-9, 15, 21-25, 31-35, 39, 43, 47-51
- 10.6 (Cylinders and Quadric Surfaces): 1-15, 19, 25, 27, 31
- 10.7 (Vector Functions and Space Curves): 3, 4, 5-9, 13-17, 20, 21, 23, 39, 40, 41, 44, 45-51, 55-61, 65, 75, 77
- 10.8 (Arc Length and Curvature): 1, 7-15, 19, 21, 25, 33, 37, 43
- 10.9 (Motion in Space: Velocity and Acceleration): 1-11, 18, 19, 29

- 11.1 (Functions of Several Variables): 4, 5, 7, 11-15, 21, 25, 33, 47, 49
- 11.2 (Limits and Continuity): 3, 5, 9, 21, 23, 27, 29
- 11.3 (Partial Derivatives): 3, 4, 5, 7-11, 21, 27, 29, 37, 42, 43, 47, 57-61
- 11.4 (Tangent Planes and Linear Approximations): 1-5, 11-15, 19-25, 32
- 11.5 (The Chain Rule): 1-9, 17, 19, 23, 33, 39, 41
- 11.6 (Directional Derivatives and the Gradient Vector): 1-5, 13-17, 21, 27, 39, 47, 49
- 11.7 (Maximum and Minimum Values): 1-5, 9, 11, 23, 25, 31-35
- 11.8 (Lagrange Multipliers): 1-7

- 12.1 (Double Integrals over Rectangles): 1, 3, 7, 9, 10, 11-15, 19, 21, 27, 33, 37
- 12.2 (Double Integrals over General Regions): 1-7, 11, 13, 17, 19, 21, 26, 31-37
- 12.3 (Double Integrals in Polar Coordinates): 1-4, 7, 9, 13-17, 21, 23, 30
- 12.4 (Applications of Double Integrals): 3-7, 11, 15
- 12.5 (Triple Integrals): 3-9, 13, 19, 25, 31, 39, 45
- 12.6 (Triple Integrals in Cylindrical Coordinates): 1, 3, 7, 9, 15-19, 23, 27, 28
- 12.7 (Triple Integrals in Spherical Coordinates): 1, 2, 3, 5-9, 10, 13-19, 20, 21, 23, 25, 31, think about 40
- 12.8 (Change of Variables in Multiple Integrals): 1, 2, 4, 5