Course Section: Math 251 Section 1 and Section 2

Class Meeting Days and Times: Section 1: 10-10:50 (Cook 317) and Section 2: 11-11:50 (Cook 317)

Instructor: Dr. Wei-Chi Yang

Office Location: WR 203

Office Phone Number: (540) 831-5232

Office Hours: MWF 1-2 pm

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Catalog Entry

MATH 251 Calculus and Analytic Geometry III & IV
Three hours lecture, three hours credit for each course (3:3).

Prerequisite: MATH 152, MATH 251 is prerequisite for MATH 252.

The first part of this course covers sequences and series, Taylor and power series, parametric curves, geometry higher dimensional spaces, vector-valued functions. The second part deals with functions of several variables, discussion of limits, continuity, and differentiability, multivariable optimization, iterated integrals and applications to volumes, line integrals and Green’s Theorem.

Mathematical software packages such as Maple and graphing calculators will be used as illustrative and problem solving devices.

Course Content:

Detailed Description of Content of Course

The following topics will be covered in MATH 251:

- Sequences, convergence
- Series, geometric series and telescoping series
- Convergence tests for series
- Taylor and power series
- Parametric Curves, polar coordinates
- Vectors in two and three dimensions, dot and cross products
- Lines planes and surfaces
- Cylindrical and spherical coordinates
- Vector-valued functions, tangent and normal vectors, arc length

**Required Textbook:** See Bookstore for details.

**Assessment Measures**

Assessment measures include a final examination and include the following:

in-class tests, quizzes, and maybe in-class presentations.

**Method of Evaluation:**

Grading: The following grading scale will be used:

- 90-100 = A
- 80-89 = B
- 70-79 = C
- 60-69 = D
- 0-59 = F

Tests and Exams: No makeup exams will be allowed unless a proper document is provided.
Quizzes (20%); Tests (60%); Final (20%)

Homework: Homework will not be counted toward your final grade. However, if I collect and grade your homework, it will be counted as bonus toward your grade. In addition, most questions on quizzes and tests will be from homework assigned in class. Attendance: ** I will choose to take the attendance once in a while. Those who miss a class will lose some points from a quiz or a test and those who show up will get extra credits toward a quiz or a test.

**Students with Disabilities:** If you are seeking academic accommodations under the Americans with Disabilities Act, you must register with the Disability Resource Office (DRO). Submit disability documentation to the DRO in the lower level of Tyler Hall Suites 54-69, by fax to 540-831-6525, or
by email to dro@radford.edu. Once documentation is received and reviewed, a Disability Services Specialist (DSS) will contact you for an interview. You will be notified via RU email when your accommodation package is complete. Meet with each course professor, during his or her office hours, to discuss the accommodations and return signed documents to the DRO. For additional information and disability documentation guidelines, visit www.radford.edu/dro or call 540-831-6350.

**Honor Code** All tests and the final must be pledged. The Honor Code will be strictly enforced in this course.