MATH 224 : Intermediate Analysis

Credits 3
Quarter Offered Occasionally
Review of double integrals in Cartesian and polar coordinates; triple integrals in Cartesian, cylindrical, and spherical coordinates; vector fields; surface integrals; Green's theorem; divergence theorem; Stokes' theorem; sequences and series; Taylor's theorem. This class may include students from multiple sections. (Quantitative Skills, Elective)
Prerequisites
2.0 or higher in MATH& 163 or equivalent
Course Outcomes

Discuss a fourth course in calculus concepts verbally, algebraically, numerically, and graphically in a group setting.
Write detailed solutions using appropriate mathematical language.
Apply appropriate mathematical concepts to various problems.
How do we achieve these goals?
For #1, small discussion groups provide students with regular opportunities to discuss and present mathematics both formally and informally.
For #2, students will be provided with regular opportunities to write detailed solutions on discussion sheets, homework, assessments/exams, computer algebra systems, etc.
We approach #3 in two stages:
Fundamentals: These are the building blocks of more complex concepts. We discuss and practice these in class.
Synthesis: At this next level, small discussion groups are used to focus on combining the building blocks into more complex techniques by breaking problems in smaller pieces, then solving each and combining the results.