

Dept Number	MATH/CS 476	Course Title	Numerical Analysis II							
Semester Hours	3	Course Coordinator	Math Department							
Catalog Description	Continuation of MATH/CS 475. Topics include: solution of ordinary differential equations; computation of eigenvalues and eigenvectors; and solution of partial differential equations. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course.									
Textbooks										
<i>Numerical Analysis</i> , Burden, Richard L. and J. Douglas Faires. Kentucky: Cengage Learning, 9 th Edition, 2010. ISBN: 9780538733519.										
References										
Course Learning Outcomes										
<ul style="list-style-type: none"> To learn the theory and practice of numerical computation. 										
Assessment of the Contribution to Program Outcomes										
Outcome →	1	2	3	4	5	6	7	8	9	10
Assessed →	X									X
Prerequisites by Topic										
MATH 305 and MATH 475 with C or better.										

Major Topics Covered in the Course

1. Numerical quadrature {10 classes}
2. Numerical solution of ordinary differential equations {12 classes}
3. The algebraic Eigen value problem {9 classes}
4. Numerical solution of elliptic BVP's {9 classes}