

MATH 6910R - Corequisite Support for Advanced Engineering Mathematics 1

Fall 2026 Syllabus, Section 01, CRN 43909,

Credit hours: 1

Instructor

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Public Instructor Information

Instructor Title: Dr. Jozsef Z. Jalics

Instructor Professional Qualifications: *Ph. D., Mathematics, The Ohio State University*

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Course Description

6910R. Corequisite Support for Advanced Engineering Mathematics 1. This course is intended to provide corequisite support for students concurrently enrolled in MATH 6910 (Advanced Engineering Mathematics). Emphasis will be placed on a just-in-time review of topics in calculus, differential equations, linear algebra, and logic to facilitate a smoother transition to graduate level mathematics. Students who are a few years removed from a differential equations course are especially encouraged to enroll. Grading is S/U. Does not count for graduate credit. Prereq.: MATH 3705. Coreq.: MATH 6910. 1 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Advanced Engineering Mathematics, 10th Edition	Erwin Kreyszig	

Additional Optional Course Materials:

Nonlinear Dynamics and Chaos. Steven H. Strogatz

Differential Equations, Dynamical Systems, & an Introduction to Chaos. Hirsch, Smale, and Devaney

Partial Differential Equations: An Introduction. Walter A. Strauss.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Ch. 1-2, 4	Linear and nonlinear systems of O.D.E.s and bifurcations	
8/31	Ch. 1-2, 4	Linear and nonlinear systems of O.D.E.s and bifurcations	
9/7	Ch. 1-2, 4	Linear and nonlinear systems of O.D.E.s and bifurcations	
9/14	Ch. 1-2, 4	Linear and nonlinear systems of O.D.E.s and bifurcations	
9/21	Ch. 1-2, 4	Linear and nonlinear systems of O.D.E.s and bifurcations	
9/28	Ch. 5	Power series solutions of differential equations	

10/5	Ch. 5	Power series solutions of differential equations
10/12	Ch. 5	Legendre and Bessel differential equations
10/19	Ch. 5	Legendre and Bessel differential equations
10/26	Ch. 11	Fourier Analysis
11/2	Ch. 11	Fourier Analysis
11/9	Ch. 11	Boundary value problems and eigenfunction expansions
11/16	Ch. 11	Boundary value problems and eigenfunction expansions
11/23	Ch. 12	Partial differential equations
11/30	Ch. 12	Partial differential equations
12/7	Final Exam week	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.