

THE BADGE ADVANTAGE



WSU's NEW online **Advanced MatLab Badge** course provides an understanding of Matlab tools for the simulation of dynamic systems, design of controllers and optimization of goals subject to constraints. Specific topics that will be covered include the Matlab tools for the following: ordinary differential equation, two-point boundary value problem, constrained non-linear optimization, curve-fitting, controllability and observability of linear systems, classical control techniques, linear quadratic regulator, simulink modeling, animation and file-based input-output. The course will provide an initial review of Matlab programming basics.

The Advanced MatLab Badge course is designed for people who want to solve engineering problems using MatLab, specifically related to control, optimization and simulation of dynamic systems.

STUDENTS IN THIS BADGE COURSE WILL:

1. Demonstrate ability to simulate the behavior of dynamic systems
2. Demonstrate ability to optimize an objective function subject to engineering constraints
3. Demonstrate ability to analyze the stability, controllability and observability of linear time-invariant systems
4. Demonstrate ability to design controller for multivariable linear systems
5. Demonstrate ability to create animations of a dynamic system

**Students will need access to the MatLab software for this course*

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ADVANCED MATLAB



COST

The tuition and fees for this 0.5 credit hour badge is \$200.

SCHOLARSHIP OPPORTUNITY

Enroll in a Wichita State Badge course by **Friday, September 15** to be eligible for a \$50.00 scholarship that can be applied to the cost of a badge course. Limit one scholarship per student.

NO TEXTBOOK PURCHASE IS REQUIRED.

** A one-time \$10 application fee is required if you have not previously enrolled at Wichita State University.*

 badges.wichita.edu

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WICHITA STATE
UNIVERSITY

WORKFORCE, PROFESSIONAL
AND COMMUNITY EDUCATION