

Graduate Certificate in System Modeling and Analysis

The System Modeling and Analysis Graduate Certificate prepares students to work as

- System Analyst who is responsible for designing, building, and maintaining models, and models for system analysis and optimization
- Systems Test Engineer who is responsible for building models for system verification and testing
- System Engineer who will develop and document technical aspects of a system in any life cycle phase (concept, design, implementation, operation, maintenance)

Students master the following skill set essential to this industry role:

- Discrete-time simulation and models for system analysis and optimization
- System dynamic models for system analysis and optimization
- Model-based system design, architecting, and engineering
- Digital model development and management across system life cycle

The Graduate Certificate in System Modeling and Analysis will be awarded upon successful completion of the 9-credit curriculum below. The courses are not listed in sequential order. All course work should be completed within two years of starting the certificate program. Students should e-mail questions to EngHelp@psu.edu.

9-Credit Required Curriculum			
Course #	Course Title	Semester Completed	Grade
SYSEN 532	Simulation in Systems Engineering: Discrete-Time Systems		
SYSEN 534	Simulation in Systems Engineering: Continuous-Time Systems		
SYSEN 880	Systems Architecture and Models		

Note: Students must maintain a minimum grade point average of 3.0 (B) throughout the program. Courses may be applied to master's programs if admitted as a degree-seeking student. If degree-seeking, you must formally apply for degree admission. Up to 15 credits earned may be transferred to a master's degree, subject to restrictions outlined in [GCAC-309 Transfer Credit](#). Completing this certificate does not guarantee admission to a degree program. To be awarded the graduate certificate, students must successfully complete 9 credits of course work. Students must complete each course with a grade of C or better, and an overall grade-point average of 3.0 in the certificate courses.

Questions & Advising - Students should contact EngHelp@psu.edu with any questions. After successfully completing the required course work, please submit a Graduate Certificate Completion Form found at <http://greatvalley.psu.edu/form/graduate-certificate-completion-form>.