

# SOFTWARE ENGINEERING CERTIFICATE

Program Website: <https://www.towson.edu/fcsm/departments/computerinfosci/grad/software-engineering-certificate.html>

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The Graduate Certificate in Software Engineering covers the study, design, development, implementation and support of computer-based information systems. This program provides graduate-level education in IT for students preparing to enter the high-tech work force and those already in the work force who wish to update and enhance their skills. The course of study can be completed as a stand-alone graduate certificate or applied to the M.S. degree program in Applied Information Technology. The program is intended for students who have a bachelor's degree in information technology, computer science, computer information systems or a related field, who will enter the program for advanced studies. The program may also be of interest to persons who:

- Do not have a bachelor's degree in the field, but are currently employed in the IT field and are seeking additional academic studies for professional growth or to advance their careers.
- Have a bachelor's degree in a discipline other than IT who are seeking preparation for careers in this field.

## Requirements

### Admission Requirements

Application deadlines and a full listing of materials required for admission can be found on the website.

### Certificate Requirements

Code	Title	Units
<b>Required Courses</b>		
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE	3
AIT 624	SOFTWARE ENGINEERING FUNDAMENTALS	3
AIT 725	CASE STUDIES IN SOFTWARE ENGINEERING	3
<b>Select at least two of the following:</b>		<b>6</b>
AIT 641	SOFTWARE REQUIREMENTS ENGINEERING	
AIT 642	SOFTWARE TESTING AND MAINTENANCE	
AIT 643	ENTERPRISE ARCHITECTURE	
<b>Total Units</b>		<b>15</b>

This graduate certificate requires some in-person coursework outlined on the Course Schedule.

## Learning Outcomes

1. Understand the information technology infrastructure and its place and value in today's business.
2. Work effectively in teams and communicate effectively, both orally and in writing.
3. Use their proficiency to solve a variety of problems.
4. Prepare, present and develop proposals and solutions for today's governmental and industrial needs.