

# COMPUTER SCIENCES FOR PROFESSIONALS, CAPSTONE CERTIFICATE

## REQUIREMENTS

- Must have a minimum GPA of 2.000
- Courses must have a grade of C or better to be accepted

Those totally new to computer sciences will begin with two introductory courses, COMP SCI 200 Programming I OR COMP SCI 220 Data Science Programming I AND COMP SCI 300 Programming II, followed by four fundamental courses to complete the program. Those with a basic background to computer sciences will skip the introductory courses. Designed for the working professional, several courses are offered in the evening, off campus, each semester.

## FUNDAMENTAL COURSES

Take **four** from the following list, for a total of **12 credits**:

Code	Title	Credits
COMP SCI/ E C E 354	Machine Organization and Programming	3
COMP SCI 400	Programming III	3
COMP SCI 407	Foundations of Mobile Systems and Applications	3
COMP SCI/ E C E 506	Software Engineering	3
COMP SCI/E C E/ M E 532	Matrix Methods in Machine Learning	3
COMP SCI 536	Introduction to Programming Languages and Compilers	3
COMP SCI 537	Introduction to Operating Systems	4
COMP SCI 540	Introduction to Artificial Intelligence	3
COMP SCI 542	Introduction to Software Security	3
COMP SCI/ E C E 552	Introduction to Computer Architecture	3
COMP SCI 559	Computer Graphics	3
COMP SCI 564	Database Management Systems: Design and Implementation	4
COMP SCI 570	Introduction to Human-Computer Interaction	4
COMP SCI 571	Building User Interfaces	3
COMP SCI 577	Introduction to Algorithms	4
COMP SCI 640	Introduction to Computer Networks	3
COMP SCI 642	Introduction to Information Security	3

## MINIMUM REQUIREMENTS FOR CAPSTONE CERTIFICATE COMPLETION

- Students must earn a minimum grade of C in each course used to meet Capstone Certificate requirements.
- Courses in which a student elects the pass/fail or audit option will not count toward completion of Capstone Certificate requirements.
- All of the Capstone Certificate credits must be earned "in residence" (which includes on campus and distance-delivered courses) at UW-Madison.
- All of the Capstone Certificate credits must be earned while enrolled in the Capstone Certificate program.

Individual Capstone Certificate programs may have additional requirements for completion, which will be listed above as/if applicable.