COMPUTER SCIENCES FOR PROFESSIONALS, CAPSTONE CERTIFICATE

The Professional Capstone Certificate Program (PCP) offered by the University of Wisconsin–Madison Department of Computer Sciences is designed for students who want to learn the fundamentals of computer science. Students use this capstone certificate to gain programming skills to transfer into more technical positions, for promotion, or as a way to prepare for graduate programs. Depending on the student's background, the program can be completed in four to six semesters. A few courses are offered off-campus during evening hours each semester.

After completing the capstone certificate, students may be interested in other professional master's degree programs (https://www.cs.wisc.edu/our-graduate-degrees-programs/).

HOW TO GET IN

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ADMISSIONS

Adult Career and Special Student Services (ACSSS) is the admitting office for all University Special students. However, the Department of Computer Sciences (http://www.cs.wisc.edu/academics/graduate-programs/) makes the final admission decision upon review of all applicant materials.

- Fall Deadline: June 1
- Spring Deadline: October 15
- Summer Deadline: February 15

Applications received after the deadline will be reviewed on a rolling basis.

Please contact pcp-admissions@cs.wisc.edu (pcp-admissions@cs.wisc.edu?subject=PCP%20application%20question) for assistance with applying.

Admission Requirements
- Have a bachelor's degree from an accredited institution
- Preferred minimum bachelor's degree GPA of 3.0
- Submit evidence of English language proficiency, if applicable.
  - Minimum TOEFL: 92 internet (iBT)
  - Minimum IELTS: 7.0
  - IELTS Indicator: 7.0
  - Duolingo English Test: 125

Prerequisites
Applicants must have completed two introductory courses, COMP SCI 200 Programming I OR COMP SCI 220 Data Science Programming I, **AND** COMP SCI 300 Programming II for at least three credits and received a grade of "C" or higher in each course, before taking the four courses needed to complete the certificate.

If applicants have not completed these courses, or equivalent coursework or demonstrated sustained professional experience in computer programming, they must complete these two prerequisite courses before enrolling in the Computer Sciences Professional Capstone Certificate Program.

The equivalent of COMP SCI 200/COMP SCI 220 and COMP SCI 300, if taken elsewhere, will be considered for fulfilling the Professional Capstone Certificate Program course prerequisites. In addition, any successful completion of COMP SCI 300 at UW–Madison will also count as a completion of COMP SCI 200/COMP SCI 220. Any applicant with a preliminary Computer Science background that is equivalent to COMP SCI 200/COMP SCI 220 may consider starting with COMP SCI 300 to prepare for the coursework in the certificate program.

Applicants to the Computer Sciences for Professionals program are also recommended to have completed prior Calculus and/or Linear Algebra coursework.

APPLICATION STEPS
An online application for admission (http://continuingstudies.wisc.edu/advising/apply.htm) as a University Special student, selecting UNCS Capstone Certificate and the program: Computer Science for Professionals.

ENROLLMENT
Admitted applicants receive a formal letter of admission to UW–Madison from Adult Career and Special Student Services along with general enrollment information.

The Department of Computer Sciences will send an email to admitted applicants with specific information pertaining to enrollment in courses and completion of the capstone program.

Additional detail about the enrollment process is provided on the ACSSS enrollment page (https://acsss.wisc.edu/enrollment/).

REQUIREMENTS

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

REQUIRED COURSES
Designed for the working professional, several courses are offered in the evening, off campus, each semester.

Students must complete **4** courses 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/L I S 472	Introduction to Web Development	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	3
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.

LEARNING OUTCOMES

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1. Recognize and apply the core principles of Computing (abstractions and algorithms) to solve real-world problems.
2. Use fundamental and detailed knowledge, skills, and tools (e.g., specific algorithms, techniques methods, etc.) of computer science and develop the ability to acquire new knowledge, skills, and tools.
3. Design and implement software.
4. Can solve problems by applying a broad toolbox of knowledge and techniques