

# Whitewater University of California

## Graduate Degree in Computer Science Engineering

### Master Degree in CSE

awarded upon successful completion of all graduation requirements.

**CIP Code(s): 11.0199 Computer and Information Sciences**



## Objectives

### • Start Your Engineer Career

- The Master of Science in Computer Science Engineering program is designed to provide breadth of understanding in the core topics of computer science, in-depth advanced material, and a range of topics in the research areas of the faculty. A balance of theory and practice is presented, preparing students to perform cutting edge research as well as training students to become practicing computer scientists or software engineers in business, industry, or government. A thesis/capstone is required to prepare students for doctoral studies or other research-oriented career paths.



**Info@wuca.us**



**(408) 913-9393**



**www.WUCA.us/ms-in-cse**



**21609 Stevens Creek Blvd.,  
Cupertino, CA 95014**

## Expected Education Outcomes

- an ability to apply knowledge of computing, mathematics including discrete mathematics as well as probability and statistics, science, and engineering;
- an ability to design and conduct experiments, as well as to analyze and interpret data;
- an ability to identify, formulate, and solve engineering problems;
- an ability to use the techniques, skills, and modern engineering tools necessary for practice as a CSE professional;
- an ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;
- an ability to apply design and development principles in the construction of software systems of varying complexity.

### “Notice to Prospective Degree Program Students”

This institution is provisionally approved by the Bureau for Private Postsecondary Education to offer degree programs. To continue to offer this degree program, this institution must meet the following requirements:

- Become institutionally accredited by an accrediting agency recognized by the United States Department of Education, with the scope of the accreditation covering at least one degree program.
- Achieve accreditation candidacy or pre-accreditation, as defined in regulations, by April 9, 2021, and full accreditation by April 9, 2024.

If this institution stops pursuing accreditation, it must:

- Stop all enrollment in its degree programs, and
- Provide a teach-out to finish the educational program or provide a refund.

An institution that fails to comply with accreditation requirements by the required dates shall have its approval to offer degree programs automatically suspended.

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### Program Outlines: Requirements for Graduations

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Foundation	Hours	Units
• CSE430 Computer Architecture	45	3
• CSE450 Operation System	45	3
• CE450 Fundamentals of Embedded Engineering	45	3
<b>Computer Science (select any 4 courses)</b>		
• CS500 Advanced Structured Programming and Algorithms	45	3
• CS510 Advanced Unix/Linux Programming	45	3
• CS515 Network Security	45	3
• CS520 Data Modeling and Implementation	45	3
• CS560 Advanced Internet Programming and Design	45	3
• CS570 Introduction to Machine Learning and Data Mining	45	3
<b>Computer Engineering (select any 4 courses)</b>		
• CE520 Real-time Systems and Programming	45	3
• CE530 Embedded Design in Network Environment	45	3
• CE535 Embedded Software Design in Linux	45	3
• CE540 Advanced Digital System Design with FPGA	45	3
• CE550 Parallel Computer Architecture and Programming	45	3
<b>Capstone</b>		
• CSE580 Independent Studies (1-4 units)	45	3
• CSE590 Capstone & Thesis	45	3
• CSE595 Internships	45	3
<b>Prerequisites:</b>		
• CE300 Introduction to Circle Analysis	45	3
• CS300 Program Design and Analysis in C Language	45	3
• CS310 Object-Oriented Programming C++CS320 Introduction to Unix/Linux	45	3
• CS330 Introduction to Networking	45	3
• CS340 Java and Internet Applications	45	3

**Total Semester Credits Required: 36;**  
**length of program is 14 months**