MASTER of COMPUTER SCIENCE (MCS) DEGREE

Catalog year 2018-2019

The Master of Computer Science (MCS) at Utah Valley University (UVU) is an applied graduate program resulting in a professional degree. The Computer Science (CS) Department is offering an MCS rather than a Master of Science (MS) in Computer Science as the focus is on preparing students to enter the local, national, and global workforce as leaders and innovators rather than focusing on preparing students to conduct basic research.

Students graduating with this degree will have a broad grounding in computer science as a discipline and be well equipped to take on leadership roles in a wide range of computing technology-related industries. Student education will be focused on developing large software systems using current technologies while allowing them the freedom to explore and exploit new technologies to solve real-world problems. This program is designed to be rigorous, relevant, and practical.

REQUIRED COURSES

COURSE NO	COURSE TITLE	CREDITS
CS 6150	Advanced Algorithms	3.0
CS 6300	Software Engineering Leadership	3.0
CS 6400	Modern Databases	3.0
CS 6500	Software Architecture	3.0
CS 6510	Design and Simulation of Operating Systems	3.0
CS 6600	Graduate Project I	3.0
CS 6610	Graduate Project II	3.0
CS 6700	Advanced Mathematics for Computer Science	3.0

ELECTIVE COURSES Complete two courses from the following:
CS 6100 Database Management System Construction (3.0)
CS 6470 Machine Learning (3.0)
CS 6620 Advanced Data Mining and Visualization (3.0)
CS 6730 Advanced Embedded Systems Engineering (3.0)
CS 6800 Computer Graphics (3.0)   6.0

	Total Credits	30.0

GRADUATION REQUIREMENTS:
1. Completion of all courses with a grade of B- or better.
2. Presentation of graduate project proposal to, and accepted by, the student's Advisory Committee.
3. Completion and defense of graduate project (CS 6600 and CS 6610); defense must be accepted by the student's Advisory Committee.
4. Completion of all required courses and elective courses for a total of 30 credit hours with an average GPA of 3.0 or higher.

Advisement: make an appointment with a Computer Science advisor: online at https://fredorchard.youcanbook.me/index.jsp   or call 801 863-8648

MCS Director: Professor Curtis Welborn (801) 863-7058 Curtis.Welborn@uvu.edu

ADMISSION REQUIREMENTS FOR THE MCS:

1. Complete online application at www.uvu.edu/mcs which includes a statement of purpose (essay).
   - What we are looking for:
     - What do you hope to achieve while working on your MCS?
     - How do you see the MCS at UVU meeting your needs and interests?
     - How does your undergraduate education and/or work experience contribute to your readiness to enter and complete the MCS?
2. Pay $45 application fee. (The application and application fee differ for International Students).
3. Once you have completed the application and paid the Admission fee, you will be directed as to how to submit transcripts and letters of recommendations.
4. Provide two letters of recommendation. Name and email address of professional references will be entered in the application.
   - What we are looking for:
     - Are you self-motivated?
     - Do you have a strong work ethic?
     - Are you willing to learn and can you accept criticism?
     - Do you have strong computer science skills even if your grades don't reflect this or you don't have a degree in computer science?
     - Are you a good leader or do you prefer to follow the lead of others?
     - Do you work well in groups or do you prefer to work alone?
5. Request official transcripts to be sent to **etranscriptr@uvu.edu**. Transcripts will be evaluated based on cumulative GPA or last 60 semester credits. **To be considered official**, transcripts must be submitted to UVU directly from a college or university.
   - What we are looking for:
     - An overall grade point average of 3.0 or higher on a 4.0 scale.
     - An undergraduate degree in a computer-related field (Computer Science, Computer Engineering, Software Engineering, or a closely related field)
     - A C+ or better in the following UVU or equivalent classes:
       - CS 2300 Discrete Structures I
       - CS 2420 Introduction to Algorithms and Data Structures
       - CS 2810 Computer Organization and Architecture
       - CS 3060 Operating Systems Theory
       - MATH 1210 Calculus I
   - Students who feel they are prepared for the MCS but fail to meet all the requirements should address this issue in their statement of purpose.
6. For international students whose native language is not English, a TOEFL score of 80 iBT (550 pBT) or higher, or an IELTS band score of 6.5 or higher within the past two years, is required.
7. If you have any questions, contact the MCS Advisor (Fred Orchard fred.orchard@uvu.edu)

NOTE: Applicants found lacking some requirement may be conditionally admitted to the MCS. Conditionally admitted students will have an individualized MCS Leveling Plan (MCS LP) developed for them. Once the MCS LP has been met by the applicant, the applicant will be deemed to have the fundamental computer science background to enter the MCS. Graduate policy precludes conditionally admitted students from taking any 6000 level courses. The UVU Computer Science Department cannot waive or alter this graduate policy.