ACCELERATED COMPUTER SCIENCE, M.S.

Program Differentiation

The Accelerated Computer Science M.S. is curricularly identical to the Computer Science M.S. program, with the exception that some graduate coursework can be completed as an LMU Computer Science B.S. student. As such, this program is available solely to these students. The Accelerated Computer Science M.S. program fulfills identical objectives and requirements as the standard Computer Science M.S. program, with the following logistic differences:

1. Up to two (2) courses of the Computer Science M.S. requirements (3–8 units) may be fulfilled by a student before receiving the Computer Science B.S. degree
2. A recent Computer Science B.S. recipient may begin their graduate studies in the term immediately following the undergraduate program
3. As a result of the first two items, it is thus possible for an Accelerated Computer Science M.S. student to complete the program within one (1) calendar year after graduating with the Computer Science B.S.

All other aspects of the program are identical to the Computer Science M.S., as seen below.

Program Details

Department: Computer Science
Modality: In-Person
Concentrations: n/a
Semester hours: 30
Total years: 1-3

The graduate program in Computer Science is designed to provide theoretical knowledge as well as practical applications in the areas of software architecture, artificial intelligence, cybersecurity, and computer networks (to name a few). In this program, students are given an opportunity to continue their education on a part-time or full-time basis, and can conduct research under the guidance of a faculty advisor. Upon graduation from the program, students will be conferred the degree of Master of Science (M.S.) in Computer Science.

Program Educational Objectives

The Computer Science graduate program educational objectives are:

1. The development of in-depth expertise for a successful career and/or a successful undertaking of further graduate level studies in computer science and related fields.
2. The ability to meet the challenges of the future through continuing professional growth.
3. An appreciation of societal and environmental impact surrounding computing-related decisions and applications.

As indicated in the Overview, the Accelerated Computer Science M.S. program has identical curriculum and objectives as the Computer Science M.S. program, and as such its student outcomes are also the same.

Student Outcomes

Upon successful completion of the Computer Science graduate program, students will be able to:

1. Demonstrate technical skill in advanced computer programming and applications.
2. Demonstrate deep technical computing skills in at least one specialty area within computer science.
3. Apply system design and integration skills to effectively construct software-intensive systems throughout their life cycle.
4. Conduct graduate level research with adequate research skills including information literacy and self-learning.
5. Utilize project management skills to effectively manage complex software development and integration activities.
6. Apply state-of-the-art technologies in computing.

Accelerated M.S. in Computer Science Degree Program

Only LMU students in their senior year of the Computer Science, Computer Engineering, or Electrical Engineering major, with a GPA of 3.0 or greater, are eligible to apply. Students will continue with the graduate-level portion of this program immediately following completion of their undergraduate degree.

Admission Requirements

- A completed online application (the application fee will be waived)
- Unofficial LMU transcripts
- A personal statement (1–2 pages) that explains how the Accelerated Computer Science M.S. Program fits into your career development

Note: Students are required to apply for admission consideration before starting their final undergraduate semester at LMU. Please refer to our graduate website for admission deadlines. The student's final undergraduate semester at LMU should match the admission entry term that is selected on the graduate application. Interested applicants must meet and follow application deadlines.

Accelerated M.S. in Computer Science Degree Program Graduation Requirements

As mentioned in the Overview, the Accelerated Computer Science M.S. program has the same curriculum as the Computer Science M.S. program. That curriculum is repeated below. The accelerated aspect of this program is reflected in the order and timing of how this curriculum is fulfilled:

1. One Frank R. Seaver College of Science and Engineering 500/5000-level course taken as an undergraduate may count toward the M.S. degree. This course can be double-counted for the B.S. degree and the M.S. degree.
2. One additional Frank R. Seaver College of Science and Engineering 500/5000-level course may be taken that counts towards the M.S. degree and not the B.S. degree (i.e., this course appears in the student's M.S. degree audit *only*, and is not included in the B.S. degree audit at all). This potentially reduces the total number of additional semester hours after earning the B.S. degree to 22–24.
    a. In order to take full advantage of the program's benefits, students should consult their academic advisors to ensure that their course plans meet the above criteria.

   b. These courses must be identified by the student and confirmed by the Seaver Graduate Program office *before* the student's undergraduate degree is awarded. Degree awarding closes a student's undergraduate record and precludes adjustments and transfers after this takes place.
3. The student should take two courses at the 500/5000- or 600/6000-level during the summer following the senior year.
4. Once the undergraduate degree is awarded and the student is considered a graduate student, If a 500/5000-level course is cross-listed with a 600/6000 level course, graduate students must enroll in the 600/6000-level course.
5. 500/5000-level courses already completed for the B.S. degree cannot be retaken.
6. Because the thesis option requires at least two (2) semesters to complete, accelerated M.S. students selecting the thesis option must do so before the fall semester after graduation with consent from the academic advisor in order to graduate within one calendar year of the B.S. degree.

The standard Computer Science M.S. requirements are repeated below because the Accelerated Computer Science M.S. requirements are identical, differing only in terms of timing.

M.S. in Computer Science Degree Program Graduation Requirements

A degree candidate is required to complete, with a cumulative grade point average of at least B (3.0), a program of study comprising a minimum of thirty (30) or more semester hours of graduate-level coursework (i.e., 500/5000-level or 600/6000-level courses), with a cumulative grade point average of at least B (3.0). Additional prerequisite (undergraduate) courses may be required as deemed appropriate by the advisor in consultation with the department. Of the graduate-level coursework, at least fifteen (15) semester hours are to be in 600/6000-level courses. Students must achieve a grade of B (3.0) or better in all 500/5000-level courses. Applicable courses generally include both courses offered by this department, as well as appropriate courses from mathematics, electrical engineering, or other disciplines. At least twenty-four (24) semester hours must be comprised of CMSI courses.

500/5000-level courses taken as an undergraduate may not be repeated for graduate credit. If a 500/5000-level course is cross-listed with a 600/6000-level course, graduate students must enroll in the 600/6000-level course.

The program of study must include the following courses: (1) CMSI 583 Computability and Complexity, (2) CMSI 585 Programming Language Foundations, and (3) either CMSI 694 Graduate Capstone Project or two or three Master's Thesis courses (CMSI 695 Master's Thesis I, CMSI 696 Master's Thesis II, CMSI 697 Master's Thesis III). One or more of the 500/5000-level required courses may be waived if the student demonstrates satisfactory completion of a similar course. Waived courses will be replaced by electives at the 500/5000 or 600/6000 level.

Curriculum

During the first semester of attendance, the student should prepare a program of study with a faculty advisor. The 30 semester hours of required coursework is allocated as follows:

Code	Title	Semester Hours
CMSI 583	Computability and Complexity	3
CMSI 585	Programming Language Foundations	3
Elective		3
Elective		3
Elective		3
Elective		3
Elective		3
Select one of the following options:		*9*
Option 1		
Elective		
Elective		
CMSI 694	Graduate Capstone Project	
Option 2		
Elective		
CMSI 695	Master's Thesis I	
CMSI 696	Master's Thesis II	
Option 3		
CMSI 695	Master's Thesis I	
CMSI 696	Master's Thesis II	
CMSI 697	Master's Thesis III	
Total Semester Hours		**30**

Master's Thesis Option

Preparation of a master's Thesis is optional and can fulfill up to a maximum of nine (9) semester hours of elective course requirements. The student electing the thesis option (option 2 or option 3 above) must obtain a thesis advisor and the thesis must conform to the Frank R. Seaver College of Science and Engineering requirements. With direction from the academic advisor, a thesis committee will be formed. Typically, the thesis committee consists of the student's thesis advisor, a full-time faculty member from the student's department, and a third member from other than the student's department. The thesis is a report on the results of the student investigation of a problem in computer science under the supervision of the thesis committee, which approves the subject and plan of the thesis and reads and approves the complete manuscript.