

Master of Software Engineering (MSE)

Graduate Students' Handbook

**Department of Computer Science
221 Wing Technology Center | University of Wisconsin – La Crosse
1725 State Street, La Crosse WI 54601 USA
608.785.6805 | compsci@uwlax.edu**

Revised: September 2020

TABLE OF CONTENTS

Introduction	3
Graduate Catalog	3
MSE Degree Requirements	3
Tuition Waivers & Graduate Assistantships	4
University Email	5
Registration.....	5
Textbooks	5
Academic Calendar.....	5
Academic Misconduct.....	5
Research and Travel Grants.....	6
Graduate Retention and Probation Standards	6
Capstone Project	7
Software Development Internship (CS 795).....	10
Continuous Enrollment Requirement	11
Seven-Year Completion Policy	11
3-Minute Thesis	12
Graduation.....	12
Curricular Practical Training (CPT) (International students only).....	12
Graduate Program Directors.....	12
Murphy Library – Graduate Study Carrels	13
Campus Computer Labs	13
Career Services	13
Graduate Student Organization	14

Introduction

Welcome to the Master of Software Engineering (MSE) program at the University of Wisconsin-La Crosse (UWL). We are glad that you have chosen our program for your graduate studies.

This handbook is created for MSE students to provide more detailed information about the Computer Science Department at the University of Wisconsin-La Crosse, and to offer insights into some policies and procedures regarding graduate studies at UWL.

Graduate Catalog

The Graduate Catalog contains UWL rules, policies, regulations, course listings and programs. Ultimately it is your responsibility to become acquainted with the Graduate catalog. It can be found at <http://catalog.uwlax.edu/graduate/> .

The Office of Graduate Studies whose website is given below is also an important resource for graduate students. <https://www.uwlax.edu/graduate-studies/>

It is good to keep yourself informed while you are enrolled at UWL.

Master of Software Engineering Degree Requirements

Core Courses: (15 credits)

CS 555	Fundamentals of Information Security	3 credits
CS 741	Software Engineering Principles	3 credits
CS 743	Software Verification and Validation	3 credits
CS 744	Software Project Management	3 credits
CS 746	Software Modeling and Analysis	3 credits

Electives (three courses at 500-700 level) 9 credits

Capstone Project Work: (12 credits) 12 credits
CS 798 Software Development Project

Total Credits 36 credits

Elective Course Offerings

All elective courses are 3 credits unless indicated. They are usually offered on an alternating year basis.

CS 502	Web Application Development
CS 510	Free and Open Source Software Development
CS 518	Mobile App Development
CS 519	Topics in Computer Science (1-3 credits)
CS 521	Programming Language Concepts
CS 531	Introduction to Robotics
CS 541	Operating System Concepts
CS 542	Structure of Compilers
CS 543	Topics in Operating systems
CS 549	Advances in Software Engineering
CS 551	User Interface Design
CS 552	Artificial Intelligence and Pattern Recognition
CS 553	Introduction to the Theory of Computation
CS 554	Digital Image Processing
CS 556	Secure Software Development
CS 557	Machine Learning
CS 561	Introduction to Data Science
CS 564	Advanced Database Management Systems
CS 570	Parallel and Distributed Computing
CS 571	Data Communications
CS 572	Internet of Things
CS 575	Computer Graphics and Modeling
CS 576	Data Visualization
CS 750	Topics in Software Engineering
CS 751	Seminar in Software Engineering
CS 752	Independent Study (1-3 credits)
CS 795	Software Development Internship (1 credit)

* See graduate catalog for listing of courses with descriptions.

Tuition Waivers and Graduate Assistantships

Out-of-state tuition waivers are available on a competitive basis. Wisconsin has tuition reciprocity with Minnesota. Graduate students under contract programs are not eligible for tuition waivers. If you receive a waiver one year, it does not guarantee another one for the future. It is your responsibility to apply for it again every year.

The Graduate Studies Office maintains a [list of financial aid options available at UWL](#). All university graduate assistantship position postings can be found at the [Human Resources](#) office web site. Application instructions vary depending upon the specific posting.

University Email

The official mode of communication at UW-La Crosse is your university email. Please check it daily. Information regarding your tuition bills, grades, department/program information, etc. will be sent to your university email only.

Registration

You will be notified by the Records and Registration office when registration is coming up for the next semester. This information is also listed on the university academic calendar. It is your responsibility to look at the course timetable to see what courses are available, read course descriptions and discuss with Professor Kasi Periyasamy, MSE Program Director, about any questions you have prior to the date of registration. Some elective courses may fill up fast and so you may want to know which courses to take prior to the time of registration.

** Contract students will receive notification from the computer science department on the process to register since it is slightly different from that for regular students.

Textbooks

Textbook Rental is only available to undergraduate students. However, there are some options available for graduate students to purchase books through the university bookstore. Check out their website at <https://www.uwlax.edu/textbook-rental/graduate-students/>

Academic Calendar

Academic calendar is important for you because it provides information on when classes start and end, last day to add and/or drop classes, final exams, etc. It is located on your student center in WINGS or <https://www.uwlax.edu/records/dates-and-deadlines/>.

Academic Misconduct

Academic misconduct is a violation of the UWL student honor code. <http://catalog.uwlax.edu/undergraduate/academicpolicies/studentconduct/>. Academic misconduct is unacceptable. All work handed in for a class must be the students' own individual work. Plagiarism or cheating in any form may result in failure of the assignment or exam, failure of the course, and may include harsher sanctions. Refer to the Student Handbook at <http://www.uwlax.edu/Student-Life/Student-handbook/> for a detailed definition of

academic misconduct. For helpful information on how to avoid plagiarism, go to <http://libguides.uwlax.edu/content.php?pid=363671>. You may also visit the Student Life Office if you have questions about plagiarism or cheating incidents. I encourage you to discuss any concerns regarding plagiarism or cheating with the student life office directly and well before any assignments are handed in. Failure to understand what constitutes plagiarism or cheating is not a valid excuse for engaging in academic misconduct.

Research and Travel Grants

Research, Service and Educational Leadership Grants - The Office of Graduate Studies provides funding on a competitive basis to support graduate student research, service, and educational leadership projects. More information and procedures to apply for these grants can be found at <https://www.uwlax.edu/graduate-studies/current-graduate-students/grants/research-service-and-educational-leadership-rsel/>.

Professional Travel Funds - The Office of Graduate Studies and the Graduate Student Organization (GSO) have professional travel funds available to qualified graduate students to present at and/or to attend professional conferences. More information and procedures to apply for travel grants can be found at <https://www.uwlax.edu/graduate-studies/current-graduate-students/grants/professional-travel/>.

Graduate Retention and Probation Standards

All graduate students, including those registered as Graduate Non-Degree Special Students are expected to meet and maintain the academic standards below.

GOOD STANDING

1. Students admitted unconditionally who maintain at least a 3.00 cumulative GPA will be in good standing.
2. Students admitted on probation who achieve and maintain at least a 3.00 cumulative GPA upon completion of nine graduate credits will be in good standing.
3. Students who have been on probation and subsequently achieve and maintain at least a 3.00 cumulative GPA will be returned to good standing.

PROBATION

1. Students admitted unconditionally who have a cumulative GPA less than 3.00 upon completion of nine graduate credits, or anytime after, will be placed on probation. Such students must raise their cumulative GPA to at least 3.00 within the next nine credits or two terms (whichever comes first) in order to continue in graduate study.
2. Students admitted on probation must have at least a 3.00 cumulative GPA after completing nine graduate credits in order to continue in graduate study.
3. Students who have been on probation and subsequently removed from probation will be returned to probationary status if their cumulative GPA falls below 3.00. Such students must raise their cumulative GPA to at least 3.00 within the next nine credits or two terms (whichever comes first) in order to continue in graduate study.

DISMISSAL

1. Students admitted unconditionally, who subsequently were placed on probation, will be dismissed from graduate study if their cumulative GPA is below 3.00 after completing nine graduate credits or two terms (whichever comes first) while on probation.
2. Students admitted on probation will be dismissed from graduate study if their cumulative GPA is below 3.00 after completing nine graduate credits.
3. Students will be dismissed from graduate study if their semester GPA is less than 3.00 at any time while on probation after completing the initial nine credits.
4. Students who earn a 'D' or 'F' in a graduate course will be dismissed from graduate study.

Capstone Project – From Initiation to Completion

The capstone is a 12 credit software development project that each MSE student is required to complete in order to graduate. The capstone project proposal must be approved by the Graduate Faculty in the department before starting the project in the subsequent semester. Email notifications will be sent by the department to all graduate students regarding the deadline for submitting the capstone proposals. Proposals are due on November 15 and April 15 each year. It is important to start thinking about possible projects early in your academic

career since it does take multiple semesters to finish, write the report and present.

Capstone Project Proposal

Following are the steps to follow to get your capstone project proposal to be accepted by the committee:

- 1) Find a capstone project – This may take some time, so do not wait until the last minute. You may bring one from your work place if you are employed. Otherwise, you should check with the faculty members in the department for a possible capstone project.
- 2) Write a formal proposal - a template for writing the capstone proposal is available on the department web page (go to www.cs.uwlax.edu --> Programs --> Graduate MSE-->Sample Capstone Proposal). Make sure that you first check your proposal with the faculty member from whom you got the project idea. Then, submit the proposal to the MSE Program Director.
- 3) Prepare slides for a 10 minute presentation. You will be required to give a formal presentation before the committee (consisting of all CS faculty members).
- 4) Once the committee approves your proposal, choose an adviser if you haven't already.
- 5) You need to get authorization from your adviser EVERY SEMESTER to register for the capstone course (CS 798).

If you are a full-time or international student and need to maintain full time status of 9 credits every semester, make sure that you are planning ahead.

Please note that you do not need to register for capstone project in the summer term. You could do some work in the summer and get the credits in fall term. You should discuss this with your adviser regarding the number of credits you register each semester and the milestones for your project.

Registration for Capstone Credits

Your adviser will also have to give you online authorization every semester to register for “CS 798 – Software Development Project” since it requires instructor consent. Your adviser will let you know which section of CS 798 to register. Each semester’s work must be completed before registering

for the next semester of capstone credits.

Written Capstone Project Report

You are required to write a formal report (somewhat similar to a thesis) on your capstone project. A sample capstone project report and the formatting guidelines you need to follow can be found on the Computer Science Department web page www.cs.uwlax.edu -->under "Programs" -->"Graduate MSE-> Capstone Report Template".

Final Presentation (Oral Exam) of Capstone Project

All oral exams are expected to be scheduled and completed prior to the last day of classes. Please plan accordingly.

Those students completing capstone projects should work with their adviser to determine when they will be done. Once the final presentation takes place, there may still be some edits to be completed as indicated by the examiners. Do not plan to leave the university until all edits have been completed and the final report has been sent to the MSE Program Director.

Committee Selection

The oral exam requires an examination committee consisting of three faculty members of whom one is the adviser of the project, the second is chosen from the CS department and the third is generally chosen from the CS department but can also come from another department or outside the campus. The chair of the committee is the student's primary adviser.

Project adviser

- needs to select committee members and inform the student so they can arrange the date and time of exam with committee members. Let Becky know so that she can reserve a room for the examination. (*The MSE program director may be consulted, if necessary.*)
- should contact Becky with information regarding the exam. All oral defense/presentations must be posted on campus. This notice should include; the name of student, the program (software engineering), title of project, time, date, location and adviser.
- is responsible to correct draft versions of the manuscript before the student makes the final copy and submits it to the examination committee.
- It is highly recommended the student submit the final manuscript to the examination committee **at least two weeks** prior to the scheduled oral exam.

Oral Exam

Project Adviser (committee chair) will be responsible for conducting the oral examination. He/she will introduce the project title, candidate, and examiners and may briefly introduce an outline of the oral exam.

The student will have a maximum of 45 minutes to present the project. During this time, the student is expected to describe his/her work and may demonstrate the product. In some cases, there may not be any product to demonstrate (example: a project on verification or testing). Since it may not be possible to demonstrate the entire product within the given time limit, the student (and the adviser) may choose to demonstrate only some of the important functionalities of the product.

After the presentation, questions can be directed to the student in the following order:

- Examination committee members will ask questions about the project, background information, the presentation and demonstration.
- The project sponsors may comment on the usefulness of the project to them, clarify information or ask some questions.
- The general audience will be given a chance to ask questions, if time permits.

The examination committee will then go into a closed session to decide whether or not the student passed the oral exam. If the student passes the exam, the examination committee will sign the signature page that is included in the original capstone project report.

After the Oral Exam

Project adviser

- Is responsible for getting signatures of exam committee members on the signature page and returning to the MSE Program Director/Department
- is responsible for preparing form and getting signature on the Grant of Permissions form. Final form should be returned to MSE Program Director/Department.
- Is responsible for preparing assessment form and getting feedback/completion from committee members and should be returned to the MSE Program Director/Department.
- is responsible for submitting final grade or a change of grade as appropriate.

Student is responsible for collecting all copies of the report from the examiners, make all revisions suggested by the examiners, and then submit the final copy to

the their adviser for final approval. Adviser will forward final copy to MSE Program Director.

Software Development Internship

This is an academically relevant field experience in government, industry, business or community agencies. Students must have their internships approved and be advised by the Computer Science Department. Determination of relevancy shall be made by the Career Services Office with the advice and consent of the Computer Science Department. The experience will be supervised closely by the intern's on-site supervisor, by the Career Services Staff, and by the student's faculty internship adviser. Students must be on their internship worksite during the semester for which they are registered for academic credit. Students should contact the Career Services Office. Repeatable for credit – maximum 2. **Internship does not count for credit towards the MSE Program.** Prerequisite: Student must have completed 9 credits and have a 3.5 or higher GPA.

All international students interested in an internship must meet the prerequisites mentioned above. When they find an internship, they can sign up for internship credit (CS 795) through the UWL Career Services office. They need to get approval for Curricular Practical Training (CPT) from the Office of International Education & Engagement. Eligibility and instructions on how to apply for CPT can be found on the OIEE website at <https://www.uwlax.edu/international-education/international-student-services/immigration-information/f-1-students/>

Continuous Registration Requirement:

The Graduate Council has a continuous registration policy for students completing a thesis, seminar paper, or other culminating graduate projects. The purpose of this policy is to provide continued access to university faculty, technology, facilities, and the library. Below are the links to each type of registration that may be required for you.

[GRC 799 Continuous Registration \(0 cr.\) - For students with continuous registration](#)

[GRC 798 Interrupted Registration \(0 cr.\) - For students with interrupted registration](#)

[GRC 795 Extended Continuous Registration \(0 cr.\) - For students who have enrolled twice in GRC 799](#)

<http://catalog.uwlax.edu/graduate/academicpolicies/registrationschedules/#continuous-registration>

Seven -Year Completion Policy

Students must complete all degree requirements within 7 years from the time of initial enrollment in the graduate program and apply for graduation in order to have the degree awarded. There is an appeal process if completion does take longer than 7 yrs. Please see the graduate catalog for further details.

3-Minutes Thesis

The Graduate Studies office organizes an event called “3-Minutes thesis” in the spring term. The purpose of this event is to help graduate students present their thesis (or capstone projects) to general audience (particularly for people outside their discipline) within THREE minutes. Top three presenters will be awarded cash prizes. It is a national competition and so winners of this event will participate at the state and possibly at the national level. Watch for information on this event from Graduate Studies and/or from the department.

Graduation

Students must file a completed "Intent to Graduate" form online via the WINGS Student Center immediately following registration for the final semester or summer term in residence. December graduates and winter intersession should file by May 1. May and summer graduates should file by December 1.

Attendance at commencement ceremonies is optional. Students who are enrolled in GRC 798, GRC 799, or any other course in the semester in which the degree will be awarded can electronically apply for graduation through the WINGS Student Center. Students who have completed all required GRC 798 or GRC 799 enrollments in a prior semester must contact directly the Office of Records and Registration (117 Graff Main Hall) to apply for graduation.

* Completion means that the student may have pending incompletes in courses; it also means that students may have pending PR grades in their thesis, seminar paper, culminating project credits, but that they no longer have any other courses yet to register for.

Curricular Practical Training (CPT) - *Applies only to international students*

You will find further information on the Office of International Education website or contact them directly with questions.

cs.uwlax.edu/programs/graduate-mse

University Graduate Director

MSE Program Director

Kasi Periyasamy
MSE Program Director
Computer Science Department
222 Wing Technology Center
University of Wisconsin-La Crosse
La Crosse WI 54601
Telephone: 608-785-6823
Email: kperiyasamy@uwlax.edu

Meredith Thomsen
University Graduate Director
223 Graff Main Hall
University of Wisconsin-La Crosse
La Crosse WI 54601
Telephone: 608-785-8124
Email: gradstudies@uwlax.edu
<http://www.uwlax.edu/graduate-studies/>

Campus Services

Murphy Library Graduate Carrels

Private study carrels are available in the lower level of Murphy Library for graduate students working on theses, seminar papers, and other research projects. Carrels are assigned on a semester by semester basis. Carrel assignments are restricted to graduate students the first weeks of Fall and Spring term. Thereafter, graduate or undergraduate students will be assigned in the order of application date. Application forms are available online.

<https://www.uwlax.edu/murphylibrary/services/forms/study-carrel-request/>

Campus Computer Labs

The computer science lab is located in Wing 16. This lab does have iMac computers available to use during designated hours which will be posted at the lab. An account will need to be created for any graduate student interested in using these computers. Please let Professor Kasi or Becky know if you are interested. This space is also available to use with your own laptop as well whenever it is open.

Career Services

Career Services encourages you to come to their office early and to use their services throughout your academic career for the best career preparation. As a graduate student, all of the services are available to you. Please register with the Career Services office to take advantage of the resources available.

Career Services is available to all students and alumni of the University of Wisconsin-La Crosse. Located in the Centennial Hall, room 1140, the center is open from 7:45am to 4:30pm, Monday through Friday; after hours appointments are available. Appointments can be made by calling (608) 785-8514, or emailing career@uwlax.edu. The center's staff can assist you in determining career goals, gaining work experiences relevant to your major, and in developing a job campaign strategy.

Campus Organizations

Graduate Student Organization (GSO)

Purpose

- Create a collective identity for graduate students at the University of Wisconsin-La Crosse.
- Act as a focal point for communication among graduate students, faculty, and administration.
- Promote the intellectual development, professional development, and social interaction of graduate students through sponsorship of graduate activities.
- Foster the development of graduate studies at the University of Wisconsin-La Crosse.

Membership

Membership is open to all UW-La Crosse graduate students, regardless of age, race, creed, color, handicap, gender, sexual orientation, developmental disability, national origin, ancestry, marital status, arrest record, or conviction. There are no annual membership dues.

Leadership Team

The leadership of GSO consists of one or more chairpersons who coordinate the activities of the organization. Chairpersons are currently enrolled graduate students and are appointed at the end of the previous academic year. Any graduate student member is invited to join the leadership team if interested. Terms of office are for one year.

Meetings and Events

Meetings and/or events are held at various times throughout the semester. Generally, one or two events are coordinated each semester to bring students from all programs together. Any suggestions for potential events/programs/meetings should be directed to the GSO email account, gso@uwlax.edu or one of the co-chairs.