

Master of Computer Science Degree Requirements, Policies, and Procedures

Summary of Procedures for M.C.S. Students

- Complete every deficiency course with “B” or higher within the first two terms
- File a final plan of study (iPOS) by the end of the second semester on My ASU, or when 50% of the coursework is completed
- Submit your Project Portfolio to the Graduate Program Director along with Report of Final Master’s Culminating Experience form
- File an application for graduation with the Graduation Office of the Registrar in your last term on My ASU

Please review current [Graduate College policies and procedures](#).

Transfer of credits

A student can transfer a maximum of six hours M.C.S. degree credit from another accredited institution as specified in the ASU Graduate Catalog. Only resident graduate courses with an "A" or "B" grade are eligible for transfer. A course with a grade of "Pass", "Credit", or "Satisfactory" are not acceptable for transfer. A student who wishes to transfer credits from another institution should contact the graduate advisor in the Advising Center to initiate the transfer credit process.

Transfer between programs

Students that want to change from a Master’s to a Ph.D. in Computer Science must submit a new application with the Graduate College. Admission to the Ph.D. program can be denied. If admitted, the student is allowed to use only twelve credits from the original program to the new program.

A student who would like to switch from a Ph.D. to a Master’s or switch Master’s degree programs in Computer Science can submit a Request Change through MyASU. Nine credits are allowed to be used in the Master’s program.

Policy for Maintaining Academic Satisfactory Progress

A student who has been admitted to a graduate degree program in the School of Computing and Informatics, must maintain a 3.0 or higher grade point average (GPA):

1. in all work taken for graduate credit (courses numbered 500 or higher),

2. in the coursework in the student's approved plan of study, and
 3. in all course work taken at ASU (overall GPA) post baccalaureate.
- A. A student will be placed on academic probation if one or more of the student's GPAs listed above falls below 3.0. Students will be notified by mail when placed on academic probation.
 - B. A student will earn academic good standing by obtaining a 3.0 or better in the GPAs listed above by the time the next nine hours are completed. Coursework such as research and dissertation registration that are for Z or Y grade cannot be included in these nine hours.
 - C. A student may be recommended for dismissal from a graduate program if the student fails to increase all of the GPAs listed above to 3.0 or better by the time he/she completes at least nine credit hours as defined in section B.

A student may appeal actions concerning dismissal by petitioning the School of Computing, Informatics, and Decision Systems Engineering.

Deficiency Coursework

If a student believes that an assigned deficiency course(s) has been completed at another institution, then the student must seek approval from the course coordinator by submitting a [Deficiency Evaluation form](#). If approved, the form can be submitted to the graduate advisor.

Continuous Enrollment and Leave of Absence Policies

Once admitted to a graduate degree program, masters and doctoral students must be registered for a minimum of one credit hour (not audit) during all phases of their graduate education. This includes periods when they are engaged in research, working on or defending theses or dissertations, taking comprehensive exams, taking Graduate Foreign Language exams or in any other way using university facilities or faculty time including the term in which they graduate. This credit must appear on the Plan of Study or must be an appropriate graduate-level course (e.g. 595, 695, or 795, Continuing Registration). Courses with grades of "W" and "X" are not considered valid registration for continuous enrollment purposes.

Students planning to discontinue enrollment for a semester or more must request approval for a leave of absence. Student may petition the

Graduate College for a leave of absence for a maximum of two semesters during their entire program. A petition for a leave of absence, endorsed by the members of the student's supervisory committee and the head of the academic unit, must be approved by the Graduate College dean. This request must be filed and approved before the anticipated absence. An approved leave of absence will enable students to re-enter their program without re-applying to the university. Students who do not enroll for a fall or spring semester without an approved leave of absence by the Graduate College are considered withdrawn from the university under the assumption that they have decided to discontinue their program. Student removed for this reason may reapply for admission to resume their degree program; the application will be considered along with all other new applications to the degree program.

Final Plan of Study

A student needs to submit the final plan of study online through My ASU by the end of the second semester at ASU, or when 50% of the coursework is completed. The final plan of study (iPOS) is subject to approval by the Graduate Program Director. After approval at the School level, the final iPOS is forwarded to the Graduation Office of the Registrar for approval. Once approved by the Graduation Office, the Graduate College reviews the final plan of study for final approval. Students can review their status by logging into My ASU.

The iPOS must contain a minimum of 30 semester hours of approved graduate-level work. At least 24 of these hours must be CSE-5xx credits at ASU (a maximum of four CSE 598 courses are allowed, which cannot include courses taken at the undergraduate level). All 30 semester hours must be for formal course work (including CSE 591). No credits for CSE 590 Reading and Conference or CSE 599 Thesis are allowed on the iPOS for the M.C.S. degree.

All M.C.S. students must take at least three credit hours in each of the following three areas: Foundations, Systems and Applications. At least two out of the three area courses must be at 500 level (not CSE 598). The classes listed as 400 level must be taken as CSE 598.

List of Area Courses

1. FOUNDATIONS

CSE 450/598 Design and Analysis of Algorithms

CSE 457/598 Theory of Formal Languages

CSE 459/598 Logic for Computer Scientists I
CSE 550 Combinatorial Algorithms and Intractability
CSE 552 Randomized and Approximation Algorithms
CSE 555 Theory of Computation

2. SYSTEMS

CSE 420/598 Computer Architecture I
CSE 432/598 Operating System Internals
CSE 434/598 Computer Networks
CSE 440/598 Compiler Construction
CSE 460/598 Software Analysis and Design
CSE 462/598 Software Engineering Project II
CSE 517 Hardware Design Languages
CSE 520 Computer Architecture II
CSE 530 Embedded Operating Systems Internals
CSE 531 Distributed Operating Systems
CSE 534 Advanced Computer Networks
CSE 535 Mobile Computing
CSE 536 Theory of Operating Systems
CSE 539 Applied Cryptography
CSE 543 Information Assurance and Security
CSE 561 Modeling and Simulation Theory and Applications
CSE 563 Software Requirements and Specification
CSE 564 Software Design

CSE 565 Software Verification, Validation and Testing

CSE 566 Software Project, Process and Quality Management

CSE 591 Mobile Ad Hoc Networking and Computing

CSE 591 Wireless Networks

3. APPLICATIONS

CSE 408/598 Multimedia Information Systems

CSE 412/598 Database Management

CSE 470/598 Computer Graphics

CSE 471/598 Introduction to Artificial Intelligence

CSE 477/598 Introduction to CAGD

CSE 509 Digital Video Processing

CSE 510 Database System Implementation

CSE 511 Semi-Structured Data Management

CSE 512 Distributed Databases

CSE 514 Object-Oriented Databases

CSE 515 Multimedia and Web Databases

CSE 539 Applied Cryptography

CSE 570 Advanced Computer Graphics I

CSE 571 Artificial Intelligence

CSE 572 Data Mining

CSE 573 Advanced Computer Graphics II

CSE 574 Planning and Learning

CSE 577 Advanced Computer-Aided Geometric Design I

CSE 578 Advanced Computer-Aided Geometric Design II

CSE 591 Enterprise/Service-Oriented Computing

Courses Requiring Consent

The School offers several omnibus courses that require consent to enroll: CSE 595 Continuing Registration and CSE 584 Internship. To register for any of the above courses, a completed [form](#) signed by the Graduate Program Director must be filed with the graduate advisor to receive the override necessary to enroll.

Project Portfolio

All students admitted to the M.C.S program must complete a Project Portfolio. This entails completing a project in three Engineering 500 level courses (excluding CSE 598 courses and can include CSE 591 courses) in which a final grade of at least “B” was earned in each course, and creating a portfolio for approval by the Graduate Program Director. The Project Portfolio for students earning the concentration in Information Assurance should have significant content in IA.

Students must write the portfolio reports in a typewritten format approximately 10 pages in length. Students must include an overview on each of the three projects and what was learned during the projects. If the project was a group project, then the individual contribution of the student must be identified. The Project Portfolio may include a relevant bibliography. The faculty of the courses the student is using for the portfolio report must sign and date the portfolio cover sheet.

After the Graduate Program Director is satisfied with the student’s Project Portfolio, the [Report of Final Master’s Culminating Experience form](#) will be signed. The Project Portfolio must be submitted to the graduate advisor along with the Report of Final Master’s Culminating Experience form and the Report of Final Master’s Culminating Experience form is sent to the Graduate College for processing.

Filing for Graduation

During the final semester, a student must file an application for graduation with the Graduation Office of the Registrar on My ASU. The student’s approved final plan of study (iPOS) must be on file with the Graduate College before the student can apply for graduation.

T/RA Requirements

Students who have assistantships through the Ira A. Fulton Schools of Engineering are required to register for no more than and no less than 12 credit hours. These hours must be 500 level courses (audit courses are not permitted and a maximum of 9 hours of CSE 580 Practicum is permitted). All international students must pass the Interview or SPEAK test with a score of 55 to be fully certified.

Internship Programs

CSE 584 Internship (CPT)

Curricular Practical Training (CPT) is a type of off-campus employment authorization for F-1 international students who must complete an internship course in order to graduate from their current degree program.

Internship may be necessary if the student needs practical engineering experience to complete qualifications for an advanced degree, needs industrial experience to gain the ability to perform required degree research, or needs the use of unique industrial facilities not available on campus to complete research study. Students must complete two semesters at ASU before becoming eligible for CPT Internship.

The student's faculty advisor determines this need in consultation with the Graduate Program Director. Internship cannot be added to a final plan of study (iPOS) once all coursework has been completed and approved by the Graduate College.

CSE 584 CPT Internship registration is for one credit hour per semester. Internship for the master's degree is limited to no more than two semesters and a single summer session. Internships may be part-time (20 hours per week) or full-time (40 hours per week). An international student having 12 months or more of full-time internship will become ineligible for Optional Practical Training (OPT).

Internship is only available to full-time, on-campus students. Full-time is defined as having completed nine credit hours or more for the semester preceding the internship. Students must receive all approvals from their faculty advisor and from the Graduate Program Director. All application materials for internship must be completed by the last day of regular registration for any semester.

During any regular semester (fall or spring), a student on an internship must be registered full-time. Internship (CSE 584) credit counts toward this requirement.

For a summer internship the student needs to register for only one credit hour of internship.

An approved plan is required before starting the internship by filling out the [Internship Application](#) and submitting the form to the graduate advisor. Internship is not permitted for Master's degree students after all classes for the plan of study have been completed.

The Graduate Program Director evaluates all requests for internship credit.

After the internship period ends, a minimum five page report is required before a grade and credit is given. The final report will be submitted to the Industrial supervisor for comments, then to the faculty advisor for a grade assignment, and then to the graduate advisor. The student must submit the report by the end of the following term at the latest (i.e. end of Fall term for Summer internship) or the grade will be a failing grade ("E").

CSE 584 Embedded Systems Internship

The Consortium for Embedded Systems internship program provides real-world work experience in embedded systems for graduate students. Students may work as interns for a maximum of three semesters.

Students must work 20 hours per week at the industry member site during spring and fall semesters and 40 hours per week during summer session.

Students must be registered for 12 credit hours during the semester they complete the internship, 3 credits of which are CSE 584 Embedded Systems Internship. Graduate students cannot use this Internship for their degree program and put it on the Plan of Study.

Students will submit an [Application for Embedded Systems Internship form](#), a resume and an unofficial transcripts to Dr. Karamvir Chatha. If hired for the internship, the student will submit the application form to the CIDSE Advising Center in Brickyard Engineering, Ste. 208 for an override to enroll.

CSE 584 Internship (Hourly)

This internship program is designed to provide CSE graduate students an industrial internship experience in computer science industries and related sectors that **(a)** provides the intern direct exposure to real world professional activities, **(b)** enhances their personal and professional skills, and **(c)** increases the likelihood of professional employment opportunities in their major.

CSE 584 Internship (Hourly Worker) registration is for one credit hour per semester. A student can register for 1 credit hour of Internship during any semester (spring, 8-week summer session, or fall). A student must work 20 hours/week during a spring or fall semester, and 40 hours/week during an 8-week summer session. The summer work can (and normally will) extend beyond the 8-week summer session to cover the entire 12 weeks of the summer break, but the requirement for credit includes only the 8 weeks of the 8-week summer session.

Internship is only available to full-time, on-campus students. Full-time is defined as having completed nine credit hours or more for the semester preceding the internship. Students must receive all approvals from faculty internship coordinator. All application materials for internship must be completed by the last day of regular registration for any semester.

During any regular semester (fall or spring), a student on an internship must be registered full-time. Internship (CSE 584) credit counts toward this requirement. For a summer internship the student needs to register for only one credit hour of internship.

An approved plan is required before starting the internship by filling out the [Application for CSE 584 Internship form](#) and submitting the form to the faculty internship coordinator. Internship is not permitted for Master's degree students after all classes for the plan of study have been completed.

After the internship period ends, a minimum five page report is required before a grade and credit is given. The final report will be submitted to the Industrial supervisor for comments, then to the faculty internship coordinator. The student must submit the report by the end of the following term at the latest (i.e. end of fall term for summer internship) or the grade will be a failing grade ("E").

Graduate students cannot use this Internship for their degree program and put it on the Plan of Study.

If you have any questions on these policies and procedures, contact Dr. Hasan Davulcu, Internship Coordinator, at (480) 965-6385 or by email at: cidse.internships@asu.edu

Questions

If you have any questions on these policies and procedures, contact the CIDSE | Advising Center at (480) 965-3199 or by email at cidse.advising@asu.edu.