Master's Degree Program Guide

Computer Science and Engineering Department

The University of Texas at Arlington

500 UTA Boulevard
Engineering Research Building, Room 640
Box 19015
Arlington, Texas 76019-0015

817-272-3785
cse.uta.edu

TABLE OF CONTENTS

PURPOSE OF THIS GUIDE

This guide will answer most of the common questions asked about the master's degree programs offered by the Computer Science and Engineering Department at the University of Texas at Arlington. It supplements the UTA Graduate Catalog with specific information about the program. Nothing in this guide is intended to conflict with information in the UTA Catalog.

All students are expected to be familiar with the information presented in this guide before seeking advice from the Graduate Advisor. Also, all students should check their UTA email account frequently as advising related information will be sent to that address.

For the rest of this guide, The University of Texas at Arlington will be stated as UTA and Computer Science and Engineering will be stated as CSE.

GRADUATE ADVISOR

A CSE Graduate Advisor will serve as the point of contact to answer questions and help resolve academic issues regarding the CSE graduate program degree requirements, policies, and procedures.

STUDENT RESPONSIBILITY

The student is responsible for seeking academic advice, for enrolling in appropriate courses to insure progress toward a degree, for timely completion of his or her academic program, for familiarity with the appropriate catalog, and for maintaining University standards. Assistance from an academic advisor is not a substitute for the personal responsibility of the student. More details can be found at http://catalog.uta.edu/academicregulations/studentresponsibility/

MASTER'S PROGRAM GENERAL REQUIREMENTS

Entrance Requirements

To begin a graduate degree program, an applicant must submit a completed application and fee to the UTA Graduate Admissions Office. In addition, the applicant must request that Graduate Record Examination (GRE) scores and official transcripts of all work beyond high school be sent directly to the Graduate Admissions Office. When all application materials have all been collected by Graduate Admissions, the information is forwarded to the CSE department for evaluation. The CSE department's decision is then communicated to Graduate Admissions with the final decision being sent via email from Graduate Admissions to the applicant.

If there is a delay in receiving materials, the application may be deferred until all required materials are available. The applicant is notified of the deferral by the Graduate Admissions Office via email.

Admission to CSE master's programs is based on the applicant's perceived ability to successfully complete graduate work in computer science as shown by the applicant's test scores and transcripts. Students who do not have a sufficient background in computer science, but meet the other admission criteria, may be admitted to the master's programs on a probationary basis pending completion of specified leveling courses.

Present departmental requirements for the master's programs include:
1. An undergraduate degree, preferably in an area related to computer science, computer engineering, or software engineering.
2. A 3.2 grade point average (on a 4.0 scale) in the last two years of undergraduate coursework. In particular, overall performance in the Computer Science/Computer Engineering/Software Engineering Foundation courses is emphasized.
3. Relevance of the student's previous degree(s) to the CSE curriculum.
4. Rigor of the student's bachelor's degree. A three-year degree is not considered sufficiently rigorous. International applicants with a "3+2" Master's degree will be evaluated as equivalent to a 4-year Bachelor's

degree.
5. Reputation of the University/College from which the student has received his/her previous degrees.
6. A sum of verbal plus quantitative scores of at least 305 on the GRE. Including:
    a. GRE quantitative score of at least 160
    b. GRE verbal score of at least 145
7. SE and CS Students may be accepted with only three of the six required foundation courses but may be required to complete CSE 5305 as part of their MS degree. CpE students may also be accepted with only three of the five required foundation courses but may be required to complete CSE 5400.
8. International applicants and applicants whose native language is not English will need to take the Test of English as a Foreign Language (TOEFL) and score at least 83 with no area score of less than 20 or take the International English Language Testing System (IELTS) exam and score at least 6.5 in all areas or take the Duolingo exam and score at least 105.

Applications with significant mathematics deficiencies may be deferred/denied pending completion of required courses as determined by the CSE department.

For master's applications, only the following are required: application, fee, transcripts from all higher education institutions attended, and test scores. Test scores include GRE scores, and for those whose native language is not English, TOEFL or IELTS or Duolingo scores. CSE also accepts Duolingo scores but encourages students to take the TOEFL or IELTS test if they wish to seek possible departmental funding or scholarships. The CSE department neither requires nor reviews letters of recommendation, statements of purpose, or any other supplemental materials from master's degree applicants. Applicants may write Graduate Admissions at utagradadmissions@uta.edu with any English proficiency questions.

An applicant who does not achieve the stated English proficiency standards may be required to take the Graduate English Skills Program (GESP) qualifying exam upon arrival at UTA to determine the need for additional English language courses after admission. Students whose native language is not English cannot be appointed to teaching assistantship (GTA) duties or have any teaching responsibility without a qualifying score on an accepted English proficiency test or successful completion of assigned GESP requirements.

Facilitated Admission
UTA undergraduate CSE students interested in continuing into the CSE master's program who have a GPA of at least 3.5 should contact a graduate advisor regarding Facilitated Admission. More information on Facilitated Admission is available upon request to CSEGradAdvising@uta.edu.

International Student Admission
Applicants to CSE must have earned an appropriate degree to indicate that they are academically prepared and qualified to begin graduate studies. International applicants to CSE must have earned a degree equivalent to an accredited US university bachelor's degree. Three-year degrees are not accepted.

Please note some international students may not have to show proof of English proficiency for admission. Students should contact UTA Graduate Admissions at utagradadmissions@uta.edu if they have questions about English proficiency requirements.

If English proficiency test scores are required, the applicant can satisfy the requirement by taking the TOEFL, IELTS, or Duolingo English proficiency exam and obtaining the appropriate scores for admission purposes. The CSE standard for the TOEFL is a score of at least 83 overall, with a score of at least 20 in each individual TOEFL evaluation area. For those who take the IELTS test, a score of at least 6.5 in all areas is required. For the Duolingo exam, CSE requires a total score of at least 105. An applicant who does not meet these requirements may have to participate in the Graduate English Skills Program (GESP).

Students whose native language is not English cannot be appointed to teaching assistantship duties (GTA) or have any teaching responsibility without either a US bachelor's degree or a qualifying score on the TOEFL or IELTS test. The Duolingo test does not satisfy the English proficiency requirement for a GTA positions.

Full Time Enrollment

Full time enrollment is 9 hours for Fall, Spring terms, and 6 hours in Summer terms. US Citizens and Legal Permanent Residents are not required to be enrolled full time, but other factors may require full time enrollment such as financial aid agreements, etc. International students must be enrolled full time during every Fall and Spring term. If an international student is graduating and needs only 3 or 6 hours of coursework to complete their degree in a Fall or Spring term, the student must register for the needed courses and submit the Full Time Waiver form to the Office of International Education.

Course Numbering

UTA courses are numbered with a four-digit course number followed by a three digit section number. Courses with numbers in the 1000s, 2000s, 3000s, and 4000s are undergraduate courses. Graduate level classes are those numbered in the 5000s and 6000s. There is one 7000 level class, but it is exclusively for PhD students.

The first digit of the course number designates the level of the course. The second digit of the course is the number of credit hours the course provides. So, CSE 5311 is a 5000 level graduate course that counts for 3 hours of coursework. The section number of the course is what designates that course's particular time slot or professor, etc. If there are multiple sections of a course and a student wants to take the course at a particular time or with a particular professor, the student needs to know the section number of the course to register properly (i.e., CSE 5311-003).

Degrees and Degree Requirements

Students with an undergraduate degree in Computer Science, Computer Engineering, Software Engineering, or a degree from a directly related field, or who have completed the foundation courses specified in the Foundation Courses section of this guide may select a program leading to one of the following three degrees:

   a) Master of Science in Computer Science (MS CS)
   b) Master of Science in Computer Engineering (MS CpE)
   c) Master of Software Engineering (M SE)

MS CS, MS CpE, and M SE Non-Thesis Degree Plans

Prior to the Fall 2024 term, all CSE master's students were admitted under the CSE 36 hour non-thesis degree plan by default. If a student's cumulative GRE score and prior coursework do not satisfy unconditional admission requirements, or a student's admission decision is probationary, then the student will be required to take two CSE courses in addition to the 30 hours of other required course work for a total of 36 hours of coursework for the degree. These two additional courses can be any CSE 5000 or CSE 6000 level regularly scheduled courses.

Beginning in the Fall 2024 term, all CSE master's students are admitted under the CSE 30 hour non-thesis degree plan by default.

MS CS and MS CpE Thesis Degree Plans

Students on either the MS CS or MS CpE thesis degree plan must complete 30 semester hours of graduate coursework made up of 24 hours of coursework and 6 hours of thesis. The thesis must be defended orally in front of the student's supervising committee and sometimes other members of the university community. The finalized thesis document must be submitted to the UTA Central Library for archiving.

The thesis plan requires courses as well as in-depth research of particular subject and the completion of a thesis

document. The thesis plan is the preferred option when a student wants to continue into PhD studies. A thesis takes at least two semesters to complete.

If a student wants to switch to the thesis plan, they must first find a professor willing to be their thesis supervisor. When such an agreement is reached, the professor emails CSEGradAdvising@uta.edu alerting the advisors of the decision. Upon receipt of the professor's email, an advisor will change the student to the thesis degree plan. Thesis students should also select their coursework that fulfills the degree plan but also in consultation with their supervising professor.

General Degree Requirements for all MS degrees

1. Only courses with earned grades of C or better can be used to satisfy degree requirements. No graduate level course in which the final grade was D or F may be used to satisfy a degree requirement. Courses in which a student earned a C, D, or F might be eligible for grade forgiveness under the Graduate Grade Forgiveness policy found in the UTA catalog.

2. Students must maintain a cumulative and major GPA of at least 3.0 in all coursework.

3. Grades in all courses count in the student's UTA cumulative GPA unless a course is repeated and grade forgiveness is applied.

Foundation Courses

A student entering a CSE master's program is required to have undergraduate preparation equivalent to a bachelor's degree in Computer Science (CS), Computer Engineering (CpE), or Software Engineering (SE), including at least four semesters of specified math courses. CS and SE students without the proper academic background, as determined by the graduate advisor at the time of the admission review, will be required to complete CSE 5305. CpE students without the proper academic background, as determined by the graduate advisor at the time of the admission review, will be required to complete CSE 5400.

CSE 5305 is a leveling course that will be assigned to any CS or SE student who is missing foundation course(s) from their undergraduate degree. This course can be used to satisfy one of the two breadth course requirements.

CSE 5400 is a leveling course that will be assigned to any CpE students who are missing foundation course(s) from their undergraduate degree. This course is designed to ensure that all CpE students have the necessary computer hardware background required to be successful in the CpE program. This course can be used as an Embedded Specialty area course or to satisfy one the two breadth course requirements.

Students requesting to change between CSE degree plans in Computer Science, Computer Engineering, and Software Engineering are required to have completed the foundation courses specified below.

Required foundation courses for Computer Science and Software Engineering are:
1. C Programming (CSE 1320)
2. Computer Organization (CSE 2312)
3. Discrete Structures (CSE 2315). Please note that even though you may have taken "advanced" mathematics for an engineering degree, it is our experience that non-CS students have minimal exposure to the topics in this course.
4. Theoretical Computer Science (CSE 3315)
5. Algorithms & Data Structures (CSE 3318)
6. Operating Systems (CSE 3320)

Required foundation courses for Computer Engineering are:
1. C Programming (CSE 1320)
2. Computer Organization (CSE 2312)

3. Circuits and Systems (CSE 2440)
4. Digital Logic Design (CSE 2441)
5. Embedded Systems I (CSE 3442) or Introduction to Computer Engineering (CSE 5400)

The following courses constitute the Mathematics requirements[1]:
1. Calculus I (MATH 1426)
2. Calculus II (MATH 2425)
3. Linear Algebra (MATH 3330)
4. Probability and Statistics (MATH 3313), or Engineering Probability (IE 3301)

[1] Applicants missing a full-semester course equivalent to any of the four specified mathematics courses may be deferred until those courses are completed. Most applicants with an engineering or science background tend to satisfy the mathematics requirements.

Core Courses
All CS master's students are required to take:
 CSE 5311: Design and Analysis of Algorithms
And one of the following courses:
 CSE 5301: Data Analysis and Modeling Techniques
 CSE 5306: Distributed Systems
 CSE 5317: Design and Construction of Compilers
 CSE 5350: Computer Architecture II
 CSE 5351: Parallel Processing

All SE master's students are required to take:
 CSE 5311: Design and Analysis of Algorithms
 CSE 5324: Software Engineering I
 CSE 5325: Software Engineering II

All CpE master's students are required to take two courses from the following list of courses:
 CSE 5301: Data Analysis and Modeling Techniques
 CSE 5306: Distributed Systems
 CSE 5311: Design and Analysis of Algorithms
 CSE 5317: Design and Construction of Compilers
 CSE 5342: Embedded Systems II
 CSE 5350: Computer Architecture II
 CSE 5351: Parallel Processing
 CSE 5354: Real-time Operating Systems (or CSE 6351 when cross-listed)

Breadth Courses
Breadth courses are defined as any graduate level CSE course that is not used in a student's specialty field of study. These courses are intended to broaden the student's degree plan into areas beyond the specific focus of the specialty tracks. Both thesis option students and non-thesis option students must take two breadth courses. Breadth courses cannot be from the same specialty area as either of the student's two specialty areas, nor can they be from the same specialty area as each other.

Taking Courses Outside of CSE
CSE master's degree students are allowed to take one course from an approved list from outside of the CSE department and use it toward their degree. Please check the CSE Info Site for the latest listing of approved courses. For non-thesis students, the approved course can count for a breadth requirement. For thesis students, the course can count for an elective requirement but only with consent from their supervising professor.

Elective Courses for thesis option students only

Thesis degree plan elective courses can be any graduate-level course, in any area that is directly related to the degree program or thesis research with consent of their thesis supervisor only.

Specialty Area Requirements

Master's CS and CpE degrees require the completion of two "specialty areas". A "specialty area" is defined as a sequence of three courses, with at least one 6000-level course in a specific subject area. The specialty requirements are as follows:

- Thesis students must choose one specialty area and complete the corresponding courses

- Non-thesis students must choose two specialty areas and complete the corresponding courses

- Students in the Computer Engineering (CpE) degree plan must select either Embedded Systems or Systems/Architecture as one of their two specialty areas

Some courses are listed in multiple specialty areas. Students who take such courses must choose which specialty area they want to use the course under. A single course cannot be used to fulfill multiple degree requirements.

The current specialty areas and associated courses are listed below. Not all the courses listed are taught each semester. Students are advised to review course listings as soon as the semester schedule is released to determine courses available in their chosen specialty areas.

Big Data Management/Databases/Cloud Computing:
> CSE 5330 - Database Systems
> CSE 5331 - DBMS Models and Implementation Techniques
> CSE 5333 - Cloud Computing
> CSE 5334 - Data Mining
> CSE 5335 - Web Data Management
> CSE 5339 - Special Topics in Database Systems
> CSE 5362 - Social Networks and Search Engines
> CSE 6331 - Advanced Topics in Database System
> CSE 6332 - Cloud Computing and Big Data
> CSE 6339 - Special Topics in Advanced Database Systems
> CSE 6363 - Machine Learning

Embedded Systems:
> CSE 5342 - Embedded Systems II
> CSE 5352 - IoT and Networking
> CSE 5354 - Real-time Operating Systems
> CSE 5355 - Electromechanical Systems and Sensors
> CSE 5356 - System on Chip (SoC) Design
> CSE 5357 - Advanced Digital Logic Design
> CSE 5358 - Microprocessor Systems
> CSE 5372 - RISC Processor Design
> CSE 5373 - General Purpose GPU Programming
> CSE 6351 - Advanced Topics in Computer Engineering
> CSE 6353 - Computer Engineering System Design

Imaging/Health Informatics/Bioinformatics:
> CSE 5348 - Multimedia Systems

CSE 5365 - Computer Graphics
CSE 5366 - Digital Signal Processing
CSE 5370 - Bioinformatics
CSE 5379 - Special Topics in Bioinformatics
CSE 5389 - Special Topics in Multimedia, Graphics, and Image Processing
CSE 6366 - Digital Image Processing
CSE 6367 - Computer Vision
CSE 6379 - Advanced Special Topics in Bioinformatics
CSE 6389 - Special Topics in Advanced Multimedia, Graphics, and Image Processing

Intelligent Systems/Robotics:
CSE 5301 - Data Analysis and Modeling Techniques
CSE 5334 - Data Mining
CSE 5355 - Electromechanical Systems and Sensors
CSE 5360 - Artificial Intelligence I
CSE 5361 - Artificial Intelligence II
CSE 5362 - Social Networks and Search Engines
CSE 5364 - Robotics
CSE 5365 - Computer Graphics
CSE 5367 - Pattern Recognition
CSE 5368 - Neural Networks
CSE 5369 - Special Topics in Intelligent Systems
CSE 5383 - Introduction to Unmanned Vehicle Systems
CSE 5384 - Unmanned Vehicle System Development
CSE 6363 - Machine Learning
CSE 6366 - Digital Image Processing
CSE 6367 - Computer Vision
CSE 6369 - Special Topics in Advanced Intelligent Systems

Networks/IoT/Communications:
CSE 5344 - Computer Networks
CSE 5345 - Fundamentals of Wireless Networks
CSE 5346 - Networks II
CSE 5347 - Fundamentals of Blockchain & Cryptocurrency Technologies
CSE 5349 - Special Topics in Networking
CSE 5352 - IoT and Networking
CSE 5366 - Digital Signal Processing
CSE 5376 - Digital Communication Systems
CSE 5377 - Wireless Communication Systems
CSE 6344 - Advanced Topics in Communication Networks
CSE 6345 - Pervasive Computing & Communications
CSE 6347 - Advanced Wireless Networks & Mobile Computing
CSE 6348 - Advances in Sensor Networks
CSE 6349 - Special Topics in Advanced Networking
CSE 6350 - Advanced Topics in Computer Architecture
CSE 6388 - Advanced Information Security

Security/Privacy:
CSE 5380 - Information Security I
CSE 5381 - Information Security II
CSE 5382 - Secure Programming

CSE 5388 - Special Topics in Information Security

CSE 6348 - Advances in Sensor Networks

CSE 6350 - Advanced Topics in Computer Architecture

CSE 6388 - Advanced Special Topics in Information Security

CSE 6389 - Special Topics in Advanced Multimedia, Graphics, & Image Processing

Software Engineering:

CSE 5320 - Special Topics in Software Engineering

CSE 5321 - Software Testing

CSE 5322 - Software Design Patterns

CSE 5323 - Software Engineering Processes

CSE 5324 - Software Engineering: Analysis, Design, and Testing

CSE 5325 - Software Engineering: Management, Maintenance, and Quality Assurance

CSE 5326 - Real-Time Software Design

CSE 5327 - Telecommunications Software Development

CSE 5328 - Software Engineering Team Project I

CSE 5329 - Software Engineering Team Project II

CSE 5335 - Web Data Management

CSE 5382 - Secure Programming

CSE 6321 - Advanced Automation Testing

CSE 6323 - Agile Software Development

CSE 6324 - Advanced Topics in Software Engineering

CSE 6329 - Special Topics in Advanced Software Engineering

CSE 6332 - Cloud Computing and Big Data

Systems/Architecture/Languages:

CSE 5306 - Distributed Systems

CSE 5307 – Programming Language Concepts

CSE 5317 - Design and Construction of Compilers

CSE 5333 - Cloud Computing

CSE 5348 - Multimedia Systems

CSE 5350 - Computer Architecture II

CSE 5351 - Parallel Processing

CSE 5354 - Real-time Operating Systems

CSE 5358 - Microprocessor Systems

CSE 5359 - Special Topics in Systems and Architecture

CSE 5372 - RISC Processor Design

CSE 5373 - General Purpose GPU Programming

CSE 5383 - Introduction to Unmanned Vehicle Systems

CSE 5384 - Unmanned Vehicle System Development

CSE 6306 - Advanced Topics in Operating Systems

CSE 6348 - Advances in Sensor Networks

CSE 6349 - Special Topics in Advanced Networking

CSE 6350 - Advanced Topics in Computer Architecture

CSE 6351 - Advanced Topics in Computer Engineering

CSE 6352 - Fault-Tolerant Computing

CSE 6353 - Computer Engineering System Design

CSE 6359 - Advanced Topics in Systems and Architecture

Data Analytics/Algorithms/Theory:

CSE 5301 - Data Analysis and Modeling Techniques

CSE 5307 - Programming Language Concepts
CSE 5311 - Design and Analysis of Algorithms
CSE 5314 - Computational Complexity
CSE 5315 - Numerical Methods
CSE 5316 - Modeling, Analysis, and Simulation of Computer Systems
CSE 5317 - Design and Construction of Compilers
CSE 5318 - Applied Graph Theory and Combinatorics
CSE 5319 - Special Topics in Theory and Algorithms
CSE 6311 - Advanced Computational Models and Algorithms
CSE 6314 - Advanced Topics in Theoretical Computer Science
CSE 6319 - Special Topics in Advanced Theory and Algorithms

HOW REGISTRATION WORKS FOR GRADUATE LEVEL CSE STUDENTS

Students are responsible for reviewing the registration dates and deadlines on the online UTA Academic Calendar. CSE Advisors can only enroll students in CSE department courses.

1. Students should check the academic calendar to see when Regular Registration begins. Please note that summer terms are shorter in duration than fall and spring terms, therefore the summer timeline of events is more compressed than noted in the example calendar below.

2. Regular registration will open several months before the beginning of a specific term. Once registration opens, graduate students can enroll in graduate courses. Some courses fill up quickly. After the start of registration, student schedules will shift and change so there is a chance seats will open in various high-demand courses or under certain professors.

3. Regular registration continues until the day before classes start.

4. Late registration begins during the first week of class and continues for about one week. Students registering during this time may be obligated to pay late registration fees. If students want to change courses during this time, it is strongly recommended that students use the **swap** option in MyMav to change courses, **instead of drop/add** actions. Advisors can assist students as needed during this time.

5. CSE department policy states that students cannot swap or add CSE courses after late registration. CSE students can only drop courses after late registration. After late registration, a student can only be enrolled or dropped with advisor assistance. Enrollment during this time period is limited to new students who were unable to arrive at UTA during regular registration or late registration.

6. Note that there is also a Last Day to Drop. This date is generally about two months after Census. Students will need advisor assistance to drop through the last day to drop. Students can only drop classes after the Last Day to Drop by submitting documentation and obtaining the appropriate permissions.

7. Finally, students are responsible for knowing tuition and fee payment deadlines and should review the tuition refund schedule before dropping courses after the start of the term. Any and all fee questions should be directed to Student Accounts at studentaccounts@uta.edu or by visiting their office on the first floor of University Administration Building.

Example Registration Calendar

This is an example of an Academic Calendar for a Fall term:

Registration Begins for Fall Term - Regular Session	Registration Begins
Registration Ends for Fall Term - Regular Session	Regular Registration Ends
First day of classes	
Late registration	Late Registration - students can swap or drop classes, however, additional fees may be charged
Late registration	
Late registration	
Late registration	
Late registration	
Late registration	
Late registration	CSE department policy states that students cannot swap or add CSE courses after late registration. CSE students can only drop courses after late registration.
Labor Day holiday	
Census date	Census Day - The day UTA sends reports to the State of Texas
Last day to drop classes; submit requests to advisor prior to 4:00 pm	
	Last day to drop - students can drop a course up until this date with the assistance of an advisor
Registration begins for the next term	
No Classes Scheduled	If a student needs to drop after the last day to drop, special assistance and paperwork is needed and is only to be done in emergency situations.
Thanksgiving holidays	
Thanksgiving holidays	
Last day of classes	
Final exams	
Final exams	
Final exams (dept.)	
Final exams	
Final exams	
Final exams	
Commencement Ceremonies	
Commencement Ceremonies	
Commencement Ceremonies	

The Degree MAP

The Degree MAP is what advisors review to be sure students are on track with their courses and to verify degree and graduation requirements. Ultimately, however, it is the Office of the Registrar that uses the MAP to determine eligibility for the awarding of a graduate degree.

Due to the almost infinite number of course combinations that can be used to satisfy a UTA CSE degree, MyMav cannot possibly slot all the courses for all students the way the students think they should be slotted. As such, CSE graduate students should not rely on the Degree Progress Module in MyMav. Instead, students should use the degree plan worksheet found on the CSE Info Site.

Students may review their degree MAP with a graduate advisor as needed. Students who wish to switch from the default non-thesis plan to the thesis plan may contact an advisor at CSEGradAdvising@uta.edu for information and instructions.

Transfer Credit

Students who plan to transfer courses from another institution must file a formal request with their graduate advisor. The maximum amount of credit that may be considered for transfer is nine credit hours, however, often only six credit hours are approved. Approval is at the discretion of the graduate advisor. Students may write to an advisor at CSEGradAdvising@uta.edu for information and instructions.

FUNDING OPPORTUNITIES

Internships

US Citizens, Legal Permanent Residents, and H-1/H-4 visa holders do not need to do anything special regarding internships. If such a student receives an internship offer, they may choose to accept it but should keep a balance with school and work so as to succeed in earning their degree.

In order to be eligible for an internship, international master's students must have completed at least half of the courses required for their degree and have a cumulative GPA of at least 3.0. However, students who are enrolled in coursework that, upon successful completion, will meet the halfway point of completion, whose GPA is at least 3.0, and whose CPT start date is after the end of the current term of enrollment, may be approved for the CPT that is to start after current enrollment has been completed.

Assistantships

The CSE department is required to hire PhD students who need support as Graduate Teaching Assistants (GTA) before hiring master's level students. Master's students are not eligible for GTA positions in their first semester at UTA. However, it is extremely rare for master's students to receive department support by way of a GTA even after their first semester.

Each semester, when the hiring committee for GTA positions is ready to begin accepting applications, an email is sent to the CSE student listservs with eligibility information and application instructions. Students may only submit one application per semester. Students chosen for a position will receive an email with further instructions and information.

The CSE department also has a limited number of Graduate Research Assistant (GRA) positions. Professors select their own GRAs, and PhD students are selected first.

Scholarships

If a relevant CSE Department scholarship opportunity becomes available, an email is sent to the CSE student listservs

with information and instructions. Students can also find scholarship opportunities in the online Mav Scholar Shop.

On Campus Employment

Students may apply for on campus employment via the Handshake portal managed by the UTA Career Center.

Regarding the Master of Software Engineering Degree and the SEI Curriculum

Comparing the UTA Curriculum to the SEI Curriculum

Software Engineering Institute (SEI) (http://www.sei.cmu.edu) is a DoD-supported organization whose primary mission is to advance the state of the practice of software engineering by accelerating the transition of promising new methods and technologies from concept demonstration to routine use.

The UTA program includes all the necessary courses and content specified in the SEI M.SwE degree program, but the material is packaged somewhat differently. A mapping of the UTA curriculum into the SEI curriculum is provided below.

UTA Course	SEI Course
CSE 5324 Software Engineering: Analysis, Design, and Testing	Software Systems Engineering, Software Analysis, System Design Principles
CSE 5325 Software Eng. Management, Maintenance, and Quality Assurance	Software Project Management part of Software Creation and Maintenance
CSE 5326 Real Time Systems Design	Advanced System Design Principles, Software Analysis
CSE 6324 Advanced Topics in Software Engineering	Software Analysis, Verification & Validation, Software Engineering Seminar