# Master's Degree Program Guide



# Computer Science and Engineering Department

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#### Preface

This guide is not an official publication, and the contents herein are not official policy of The University of Texas at Arlington or of The University of Texas System. In all matters, the Rules and Regulations of the Regents of The University of Texas System, The Handbook of Operating Procedures of The University of Texas at Arlington, and the Graduate Catalog of The University of Texas at Arlington shall supersede the content of this guide.

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# **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 herein 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 degree related information will be sent to that address.

For the rest of this guide, The University of Texas at Arlington shall be stated as UTA and Computer Science and Engineering shall 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 ensure 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. While the GRE is not required for admission, applicants with GRE scores of at least 305 will be given admission priority. It is strongly recommended that all applicants submit a GRE score as GRE is used for qualification for GTA positions, the 30 hour plan and scholarship opportunities.
- 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 MS applicants.

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**

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

In addition to meeting the standard admission requirements, an international student whose native language is not English is required to meet English proficiency requirements by taking the TOEFL or IELTS, or Duolingo English proficiency exam. 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 achieve these standards may be required 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 you want to take the course at a particular time or with a particular professor, you would need 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 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

# The 36 Hour Non-Thesis Degree Plan

All CSE master's students are admitted under the 36 hour non-thesis degree plan by default. The non-thesis degree plan is intended to serve the needs of students who have experience doing projects but who do not wish to do a thesis.

# The 30 Hour Non-Thesis Degree Plan

In order to qualify for the 30 hour non-thesis degree plan, students must meet three requirements upon admission or before the first day of class of their first semester as a CSE student at UTA. There are no exceptions to these requirements.

# For CS:

- 1. The student must have been admitted unconditionally or provisionally to the CSE Department.
- 2. The student must have a GRE with a total score of 305 or greater <u>and</u> a quantitative score of at least 160 <u>and</u> a verbal score of at least 145.

3. The student must have taken and passed the equivalents of CSE 5330 Database I, CSE 5324 Software Engineering I, and CSE 5344 Networks I in their undergraduate study.

# For CpE:

- 1. The student must have been admitted unconditionally or provisionally to the CSE Department.
- 2. The student must have a GRE with a total score of 305 or greater <u>and</u> a quantitative score of at least 160 <u>and</u> a verbal score of at least 145.
- 3. The student must have taken and passed the equivalents of CSE 3323 Electronics, CSE 3442 Embedded Systems, and CSE 5366 Signal Processing in their undergraduate study.

#### For SE:

- 1. The student must have been admitted unconditionally or provisionally to the CSE Department.
- 2. The student must have a GRE with a total score of 305 or greater <u>and</u> a quantitative score of at least 160 <u>and</u> a verbal score of at least 145.
- 3. The student must have taken and passed the equivalents of CSE 5324 Software Engineering I, CSE 5325 Software Engineering II, and CSE 5330 Database I in their undergraduate study.

Upon qualification for the 30 hour plan, the student is not allowed to take the graduate level equivalent of the undergraduate courses which qualified them for the 30 hour plan as listed in each section above. For CS students, the prohibited courses are CSE 5330, 5324 and 5344. For CpE students, the prohibited courses are CSE 3323, 3442 and 5366. For SE students, the prohibited courses are CSE 5324, 5325 and 5330. If a student takes a prohibited course, the course cannot be used to satisfy degree requirements.

If a newly admitted student believes they qualify for the 30 hour plan they must send an email to CSEGradAdvising@uta.edu with their name, ID number, and a request to be placed on the 30 hour plan.

# MS CS and MS CpE Thesis Degree Plans

Students on either the MS CS or MS CpE thesis degree plans 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 to the student's supervising committee and 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 consult their supervising professor when choosing coursework.

# **General Degree Requirements for all MS degrees**

- a) No graduate level course in which the final grade was D or F may be used to satisfy a degree requirement.
- b) A cumulative grade point average of 3.0 (out of 4.0) must be achieved on all coursework attempted at UTA as well as in the specific courses considered as being in the major.
- c) Grades in all courses, including deficiency/leveling courses, count in the student's UTA cumulative GPA.

# **Foundation Courses**

A student entering a CSE MS 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 will count towards the degree and is part of the 36 hour plan.

CSE 5400 is a leveling course that will be assigned to all CpE students. This course is designed to ensure that all CpE students have the necessary computer hardware background required to be successful in the CpE program. A five hour exam is held the week before the Fall and Spring semesters begin. If a student passes the exam, then they can be considered for the 30 hour plan and will not be required to take CSE 5400.

Students requesting to change between Master of Science 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 (each course name is followed by the UTA course number) 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 (each course name is followed by the UTA course number) 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<sup>1</sup>:

- 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)

<sup>&</sup>lt;sup>1</sup> 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 of the following 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 choose 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**

In some cases, students are allowed to take a course from outside of CSE and use it toward their degree.

- Students on the 36 hour non-thesis plan can take one course outside of CSE and use it as a breadth course.
- Students on the 30 hour non-thesis plan cannot take any courses outside of the CSE department.
- Students on the 30 hour thesis plan can take one course outside of CSE and use it as an elective with consent of their thesis supervisor only.

Please check the CSE Graduate Program Information site (https://mavsuta.sharepoint.com/sites/CSEGradProgInfo) for the latest listing of eligible courses.

# **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 degrees in Computer Science and Computer Engineering 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. Note: This is not a complete list of courses in each specified field. Courses offered vary significantly from semester to semester, so students are advised to review course listings each semester to determine courses available in their chosen specialty areas. If a student is in doubt about the specialty area of a specific course, the student should email CSEGradAdvising@uta.edu.

# 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.

- 1. 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 below.
- Regular registration will open several months before the beginning of a specific term. Once registration opens,
  graduate students can enroll in graduate courses, and undergrads in undergraduate courses. If you do not get
  the exact courses you want when registration opens, DO NOT PANIC. 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. If a graduate student needs an undergraduate course, the student must wait until the Open Enrollment period has begun. A CSE advisor will assist a graduate student with registering for undergraduate courses. Contact an advisor for assistance at CSEGradAdvising@uta.edu.
- 4. Regular registration continues until the day before classes start.
- 5. Late registration runs for about one week and begins during the first week of class. 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 <a href="mailto:swap">swap</a> option in MyMav to change courses, <a href="mailto:instead of drop/add">instead of drop/add</a> actions. Advisors can assist students as needed during this time.
- 6. <u>CSE department policy states that students cannot swap or add CSE courses after late registration.</u> CSE students can only drop courses after late registration. After late registration, a student can only be enrolled with advisor assistance. Registration during this time period is limited to new students who were unable to arrive at UTA during regular registration or late registration.
- 7. 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 at that time.
- 8. Students are responsible for knowing course 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.

Registration Begins for Fall Term - Regular Session
Registration Ends for Fall Term - Regular Session
First day of classes
Late registration
Labor Day holiday
Census date
Last day to drop classes; submit requests to advisor prior to 4:00 pm
Registration begins for the next term
No Classes Scheduled
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

# **Example Registration Calendar**

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

**Registration Begins** 

**Regular Registration Ends** 

Late Registration - students can swap or drop classes, however, additional fees may be charged

CSE department policy states that students cannot swap or add CSE courses after late registration. CSE students can only drop courses after late registration.

Census Day - The day UTA sends reports to the State of Texas

Last day to drop - students can drop a course up until this date with the assistance of an advisor

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.

# **Your Degree MAP**

The Degree MAP is what advisors review to be sure students are on track with their courses and verify degree and graduation requirements. Ultimately, however, it is the Office of Records 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 Graduate Program Information site (https://mavsuta.sharepoint.com/sites/CSEGradProgInfo)

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.

# 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

# **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, Master's students must have completed at least half of the courses required for their degree, and must 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, and 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 to start after current

enrollment has been completed. PhD students must have unconditionally passed their Diagnostic Evaluation, have an overall GPA of at least 3.0 and must obtain supervisor approval to participate in the CPT.

# **Assistantships**

The CSE department is required to hire PhD students who need support as Graduate Teaching Assistants (GTA) before hiring master's level students. MS students are not eligible for GTA positions in their first semester at UTA. 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 out to the CSE student listservs with eligibility information and online application instructions. Students may only submit one application per semester. Students chosen for a position will receive an email with further instructions.

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 May Scholar Shop.

# **On Campus Employment**

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