Master of Software Engineering

About This Program

The purpose of the Master of Software Engineering program is to facilitate the student's continued professional and scholarly development. The program is designed to extend the student's knowledge in the field of software engineering.

Competencies

1. Upon completion, students will demonstrate mastery of advanced software engineering topics.
2. Upon completion, students will understand software system design and development as well as web and mobile application development.
3. Upon completion, students will understand multiple programming languages such as C/C++/C# and Java.

Admissions Criteria

The CSE graduate admissions committee bases its admission decision on the following criteria (in no specific order):

- An undergraduate degree, preferably in an area related to computer science, computer engineering, or software engineering.
- An overall GPA of 3.0 or higher in undergraduate coursework.
- A 3.2 grade point average (on a 4.0 scale) on the last two years of undergraduate coursework. In particular, performance on Computer Science/ Computer Engineering/Software Engineering related courses are emphasized.
- Relevance of the student's degree (background) to the CSE curriculum.
- Rigor of the student's bachelor's degree. A three-year degree is not considered rigorous. Note: International applicants with a "3+2" master's degree will be evaluated as equivalent to a 4-year bachelor's degree.
- Reputation of the University/College from which the student has received his/her previous degrees.
- A sum of verbal plus quantitative scores of at least 305 on the GRE. Additionally:
  - GRE quantitative score of at least 160
  - GRE verbal score of at least 145
  - The department does not require the advanced computer science test. A passing score on the Engineering in-Training (EIT) exam is also given consideration for admission decisions.
- Students may be accepted with a GRE score of ~~300,~~ but may be required to complete additional coursework for their Master's degree (see degree requirements found later in this document). In this case:
  - GRE quantitative score of at least 155
  - GRE verbal score of at least 145
- Students may also be accepted with up to three deficiency courses~~,~~ but may be required to do additional coursework for their master's degree (see degree requirements found later in this document).
- International Applicants 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) and score at least 6.5 in all areas.

Note:

- Applications with significant mathematics deficiencies may be deferred/denied pending completion of the required courses.
- We neither require nor review letters of recommendation or ~~a~~ statements of purpose from Master's applicants.
- Students with (or completing in the near future) a BS awarded by the CSE department at UTA or a comparable degree from another accredited U.S. university who have a GPA of at least 3.2 should contact the graduate advisor regarding a GRE waiver. UTA CSE students with a GPA of at least 3.5 should contact the graduate advisor regarding nomination for Advanced Admission (i.e. admission without application and fee). Baseline criteria for GRE waiver and Advanced Admission are established by the Graduate Dean and can be found in the current version of the UTA Catalog.

The above criteria are used as follows in relevance to the three possible admission decisions, ~~i.e.,~~ *Unconditional Status,Probationary Status, and Denied*.

UNCONDITIONAL ADMISSION

Applies to an applicant who meets the first six criteria above to a degree satisfactory to the graduate admissions committee.

PROBATIONARY ADMISSION

Applies to an applicant who meets at least five of the six criteria to a degree satisfactory to the graduate admissions committee and whose record shows promise for success in the program or to an applicant who does not fulfill all the deficiency course requirements.

DENIAL OF ADMISSION

Applies to an applicant who does not meet five of the first six criteria to a degree satisfactory to the graduate admissions committee.

WAIVER OF GRADUATE RECORD EXAMINATION

Upon recommendation of the Graduate Advisor, outstanding UT Arlington graduates may qualify for waiver of the requirements for the Graduate Record Examination (GRE). To qualify, the applicant must meet the following minimum requirements:

- The student must have graduated from a commensurate bachelor's degree program at UT Arlington no more than three academic years prior to admission to the graduate program (as measured from the start of the semester for which admission is sought). A commensurate bachelor's degree program is one that is a normal feeder program for the master's degree program to which the student seeks admission. Undergraduate students in their final year of study are also eligible; in such cases, admission with the GRE waiver is contingent upon successful completion of the bachelor's degree.
- The student's UT Arlington grade-point average must equal or exceed 3.0 in the following calculations:
    - As ~~as~~ calculated for admission to the Graduate School;
    - Overall; in ~~in~~ the major field; and
    - In all upper-division work.

Applicants qualifying for waiver of GRE who do not qualify for advanced admission, must comply with all other requirements for admission, i.e., submitting the application for admission, paying fees, providing official transcripts from other institutions, and meeting any requirements established by the admitting graduate program. The GRE waiver must be recommended by the Graduate Advisor at the time of admission. The waiver of GRE program applies to applicants for master's degree programs only. Some programs may require higher grade-point averages to qualify, and some will not waive the GRE under any circumstances.

Additionally, some programs may waive the GRE requirement for non-UT Arlington graduates who seek admission as a master's student and meet qualifications listed in those programs' specific admission requirements. Such waivers are not offered by all graduate programs.

Curriculum

The Master of Software Engineering provides professional development in software engineering. The program requires 30 credit hours. It includes a 2-course sequence devoted to implementation of a software project.

Foundations		
CSE 5305	FOUNDATIONS OF GRADUATE LEVEL STUDIES IN COMPUTER SCIENCE [1]	
CSE 5311	DESIGN AND ANALYSIS OF ALGORITHMS	3
CSE 5324	SOFTWARE ENGINEERING: ANALYSIS, DESIGN, AND TESTING	3
CSE 5325	SOFTWARE ENGINEERING: MANAGEMENT, MAINTENANCE, AND QUALITY ASSURANCE	3
Specialization		
Choose three from the following:		9
CSE 5321	SOFTWARE TESTING	
CSE 5322	SOFTWARE DESIGN PATTERNS	
CSE 6321	ADVANCED AUTOMATION TESTING	
CSE 6323	AGILE SOFTWARE DEVELOPMENT	
CSE 6329	SPECIAL TOPICS IN ADVANCED SOFTWARE ENGINEERING	
Select two from the following:		6
CSE 6324	ADVANCED TOPICS IN SOFTWARE ENGINEERING	
CSE 6332	CLOUD COMPUTING & BIG DATA	
CSE 6363	MACHINE LEARNING	
CSE 6388	SPECIAL TOPICS IN ADVANCED INFORMATION SECURITY	
Electives		
Select two electives in consultation with an advisor. One of these courses may be from outside CSE.		6
Total Hours		**30**

[1]   This is a leveling course that will be assigned to any SFWE student who is missing foundation course(s) from their undergraduate degree. This course is designed to ensure that all SFWE students have the necessary background required to be successful in the SFWE program.

Program Completion

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.

Advising Resources

Graduate students should consult a graduate advisor as needed

Location:

Engineering Research Building 6th Floor

Email:

csegradadvising@uta.edu

Phone:

N/A

Web:

Graduate Advising (https://www.uta.edu/academics/schools-colleges/engineering/academics/departments/cse/students/graduate-advising/)