Software Engineering, MS

TSSERMS

Program Description

Degree Awarded: MS Software Engineering

The MS program in software engineering focuses on developing advanced knowledge and abilities in the design and application of software. The program involves the application of engineering principles to software development including design methodologies, operation principles and maintenance and testing approaches. The Master of Science program in software engineering builds upon the BS program in software engineering and is aimed at developing professional skills in this discipline as well as providing opportunities for students to engage in and develop research abilities.

At a Glance

- **College/School:** Ira A. Fulton Schools of Engineering
- **Location:** Polytechnic campus

Accelerated Degrees

This degree is also offered in an accelerated format with:

Software Engineering, BS

Acceptance to the graduate program requires a separate application. During their junior and senior years, eligible students will be advised by their academic departments to apply.

Degree Requirements

- 30 credit hours and a thesis, or
- 30 credit hours including the required capstone course SER 517
**Required Core (12 credit hours)**
SER 501 Advanced Data Structures and Algorithms (3)
SER 502 Emerging Languages and Programming Paradigms (3)
SER 515 Foundations of Software Engineering (3)
SER 516 Software Agility (3)

**Electives (12-15 credit hours)**

**Culminating Experience (3 or 6 credit hours)**
SER 517 Software Factory I (3) or
SER 599 Thesis (6)

**Additional Curriculum Information**
Students should see the academic unit for a list of approved electives.

For the culminating experience, students have the choice of completing the capstone course (SER 517) or a thesis (SER 599). Completion of 30 credit hours of coursework is required for all culminating experience options.

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**Admission Requirements**

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in information technology, computer science, applied computing, engineering or a closely related field from a regionally accredited institution (or international equivalent).

Applicants must have a minimum of a 3.00 cumulative GPA (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum of 3.00 cumulative GPA (scale is 4.00 = "A") in an applicable master's degree.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. GRE test scores
4. professional resume
5. personal statement
6. proof of English language proficiency
**Additional Application Information**
An applicant whose native language is not English (regardless of current residency) must provide proof of English proficiency.

If the student is assigned any deficiency coursework upon admission, those classes must be completed with a grade of "B" (3.00) or higher within two semesters of admission to the program. Deficiency courses include:

- CSE 240 Introduction to Programming Languages
- CSE 360 Introduction to Software Engineering
- SER 222 Design and Analysis of Data Structures and Algorithms OR CSE 310 Data Structures and Algorithms
- SER 334 Operating Systems and Networks OR CSE 330 Operating Systems

**Contact Information**

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