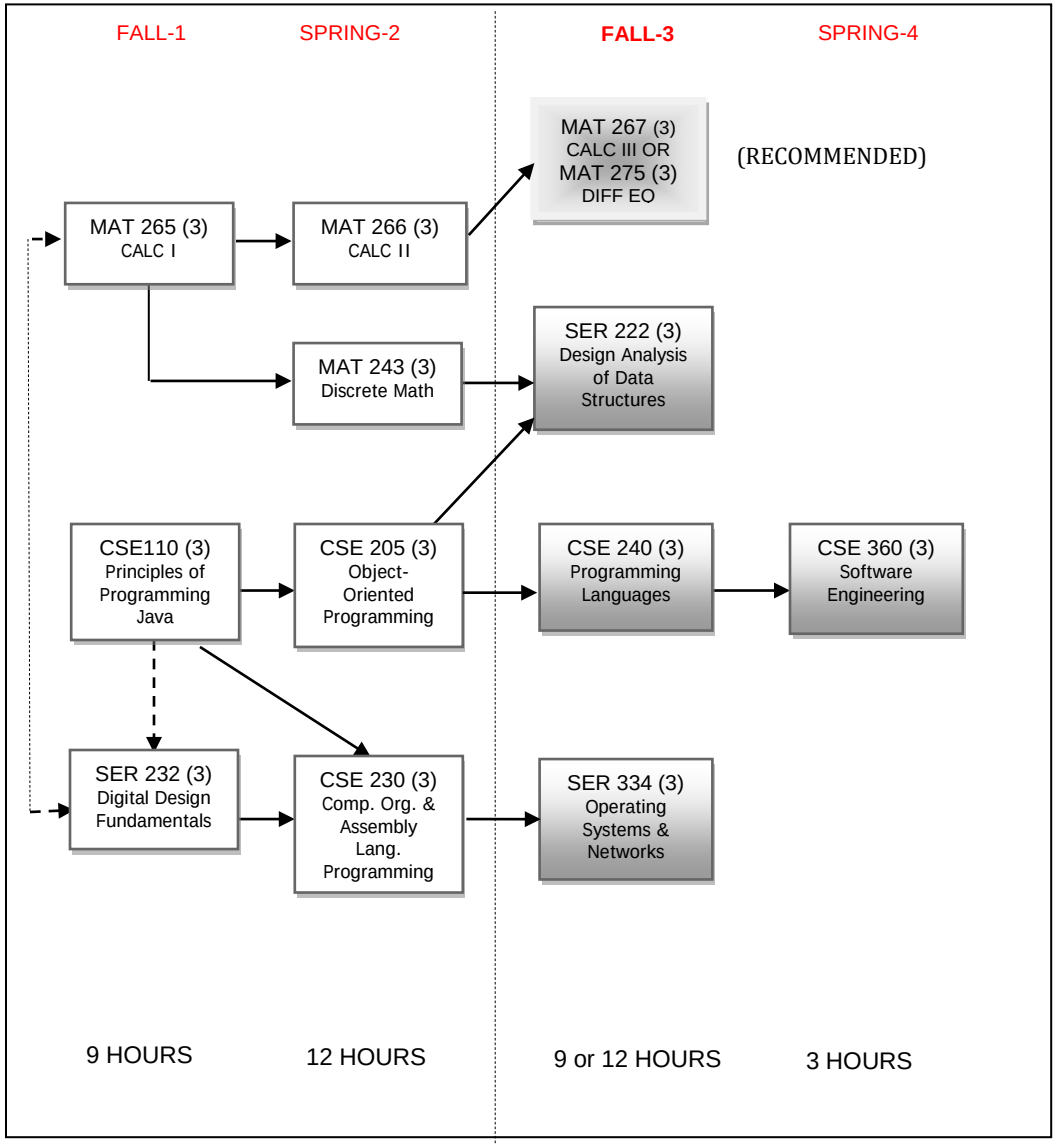
Software Engineering, MS
Prerequisite and Deficiency Courses
http://cidse.engineering.asu.edu/forstudent/prospective-students/graduate-admissions/



Notes: Shaded courses are deficiency courses. A grade of B or higher is required for deficiency courses.
Prerequisite ——→ Co-requisite - - - - - - - - - - →

Additional Admission Requirements
(See website for details)

1. Transcripts/Academic Credential
2. Official GRE Test Scores
3. Three letters of recommendation
4. Statement of Purpose
5. If applicable, English Proficiency (TOEFL)
6. GPA Requirement is 3.0 or higher in the last 60 hours of the undergraduate degree

Ready to apply?

Apply now through the Office of Graduate Education's online graduate application (https://webapp4.asu.edu/dgsadmissions/Index.jsp). Read the FAQs (https://students.asu.edu/graduate/faqs) about your graduate application.

Rev. 7/2017

Term 1:

CSE 110: Principles of Programming-Concepts of problem solving using an object-oriented programming language, algorithm design, structured programming, fundamental algorithms and techniques.

MAT 265: Calculus for Engineers I-Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.

SER 232: Computer Systems Fundamentals I-Logic design, number systems and arithmetic, boolean algebra; digital systems components, and hardware description languages.

Term 2:

CSE 205: Object-Oriented Programming & Data Structures-Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics.

CSE 230: Computer Organization & Assembly Language Programming-Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling.

MAT 243: Discrete Mathematical Structures-Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.

MAT 266: Calculus for Engineers II-Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series.

Term 3:

CSE 240: Introduction to Programming Languages-Introduces the procedural (C/C++/Python), applicative (LISP/Scheme), and declarative (Prolog) languages.

MAT 267: Calculus for Engineers III-Vector-valued functions of several variables, partial derivatives, multiple integration. **OR MAT 275: Modern Differential Equations-** Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB. (RECOMMENDED)

SER 222: Design and Analysis of Data Structures and Algorithms-Data structures and related algorithms for their specification, complexity analysis, implementation and application. Sorting and searching. Professional responsibilities that are part of program development, documentation and testing.

SER 334: Operating Systems and Networks-Fundamentals of operating systems, process management, scheduling, synchronization techniques and file management. Network technology, topologies, protocols, application control; network and operating system security.

Term 4:

CSE 360: Introduction to Software Engineering-Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues.