

GRADUATE CERTIFICATE IN SOFTWARE ENGINEERING

For more information, including advice on how to apply and obtain the certificate, please visit the department's website (<https://cs.sfsu.edu/graduate-certificates/>).

Admissions Requirements and Procedure

Selection for admission to the program will be based on applicants' academic background, work experience, and personal recommendations. We have two distinctive admissions procedures: one for matriculated graduate students at SF State and another for area professionals and non-SF State students who have completed a minimum of a Bachelor's degree from an accredited university or college with a 3.0 GPA or better.

A continuing SF State graduate student wishing to be admitted to a graduate certificate program at San Francisco State University is expected to follow the University requirements and procedures outlined herein. Such requirements and procedures may include a supplementary application, a defined set of prerequisite courses, a designated GPA, written recommendations, etc., as may be appropriate for the program in question. **To start the admission process please complete the form [Certificate Admissions Application for Continuing SF State Graduate Students](https://powerforms.docuSign.net/b79b4024-2cad-4b1e-bc17-b5f4d844d8fa?env=na3&acct=223bf8e1-bc14-478b-8607-15b5be78981f&accountId=223bf8e1-bc14-478b-8607-15b5be78981f) (<https://powerforms.docuSign.net/b79b4024-2cad-4b1e-bc17-b5f4d844d8fa?env=na3&acct=223bf8e1-bc14-478b-8607-15b5be78981f&accountId=223bf8e1-bc14-478b-8607-15b5be78981f>) and sign it with DocuSign application. Student will be then be contacted by graduate office and/or designated advisor.**

For non-matriculated SF State students, the certificate is available through application to [CalState Apply](https://www.calstate.edu/apply/) (<https://www.calstate.edu/apply/>) for any student applicant who is eligible to take the required courses and has earned a Bachelor's degree.

Program Learning Outcomes

1. Learn modern software engineering technologies used to develop, test, deploy, and manage software (SW) applications.
2. Learn best practices of modern software engineering processes and organization including those applicable to global (distributed) organization of SW projects.
3. Learn to apply modern tools for team-based SW development.
4. Learn to apply best practices of effective SE teamwork in locally and globally organized projects.
5. Learn selected advanced SE technologies and topics via elective course offerings.

Graduate Certificate in Software Engineering - 12 units

Core Requirements (6 units)

Code	Title	Units
CSC 847	Cloud and Distributed Computing: Concepts and Applications	3
CSC 848	Software Engineering	3

Core Options (3 units)

Select one:

Code	Title	Units
CSC 780	Application Development for Mobile Devices	3
CSC 867	Internet Application Design and Development	3

Elective (3 units)

Select one:

Code	Title	Units
CSC 720	Advanced Operating Systems	3
CSC 746	High-Performance Computing	3
CSC 840	Software Metrics and Quality Assurance	3
CSC 841	Computer Performance Evaluation	3
CSC 842	Human-Computer Interaction	3
CSC 846	Systems Architecture	3
CSC 847	Cloud and Distributed Computing: Concepts and Applications	3
CSC 849	Search Engines	3
CSC 868	Advanced Object Oriented Software Design and Development	3
CSC 874	Topics in Big Data Analysis	3
CSC 899	Independent Study	3