

5 Year Roadmap

Semester 1	
Courses	Units
CHEM180	3
MATH226	4
ENGR100	1
ENGR101	1
ENGL114	3
US History or Gov.	3
SEMESTER 2	
MATH227	3
PHYS220/2	4
ENGR271	1
Oral Comm.	1
GE Elective	6
SEMESTER 3	
MATH228	4
PHYS230/2	4
ENGR102	3
ENGR200	3
ENGL214	3
SEMESTER 4	
MATH245	3
PHYS240/2	4
ENGR235	3
ENGR201	3
ENGR205	3
SEMESTER 5	
ENGR300	3
ENGR304	3
ENGR309	3
ENGR434	3
GE Electives	6

SEMESTER 6	
ENGR302	1
ENGR323	3
ENGR429	3
ENGR430	3
ENGR436	3
GE Elective	3
SEMESTER 7	
ENGR425	3
ENGR427	3
ENGR431	3
ENGR696	1
ENGR800	3
ENGR461	3
SEMESTER 8	
GE Elective	3
ENGR697	2
ENGR610	3
ENGR426 ^G	3
ENGR801 ^G	3
ENGR899 ^G	3
SEMESTER 9	
ENGR833 ^G	3
Graduate Elective ^G	2
ENGR897 (Research) ^G	3
SEMESTER 10	
ENGR836 ^G	3
Graduate Elective ^G	2
ENGR898 (Research) ^G	3

^G Graduate Requirement

SFSU Scholars Program - CE

Provides **Civil Engineering** undergraduate students with an accelerated pathway to a graduate degree in Structural/Earthquake Engineering!



Explore. Experiment. Excel.

“It is evident that the exploding body of science and engineering knowledge cannot be accommodated within the context of the traditional four year baccalaureate degree.”

-National Academy of Engineering report
The Engineer of 2020

The National Council of Examiners for Engineering and Surveying, defines the minimum educational requirements for engineering licensure as a bachelor's degree in engineering from an accredited institution and either a master's degree or the equivalent through 30 additional credits of graduate level courses of STEM topics.



Program Overview

The blended program provides motivated students with an accelerated route to an MS in Structural/Earthquake Engineering with the simultaneous conferring of both BS and MS degrees.

Program Highlights

- Graduate school application fee waived
- Access to graduate courses as an undergraduate
- Paying undergraduate tuition for graduate level courses
- Teaching Associate positions available at graduate student status

Eligibility & Requirements for Admission

1. Current Undergraduate Civil Engineering Student
2. Minimum Overall GPA of 3.0
3. Must complete ENGR323 Structural Analysis with a B- or higher grade
4. Must NOT have started ENGR696 Senior Design Project



For more information



Got Questions?

For additional information, please visit:
bit.ly/2wLaWvr

Contact Information:

Professor Cheng Chen
Graduate Program Coordinator for
Structural/Earthquake Engineering
Email: chcsfsu@sfsu.edu
Phone: (415) 338-7740

Faculty Mentors

Name: Cheng Chen
Email: chcsfsu@sfsu.edu

Name: Zhaoshuo Jiang
Email: zsjiang@sfsu.edu

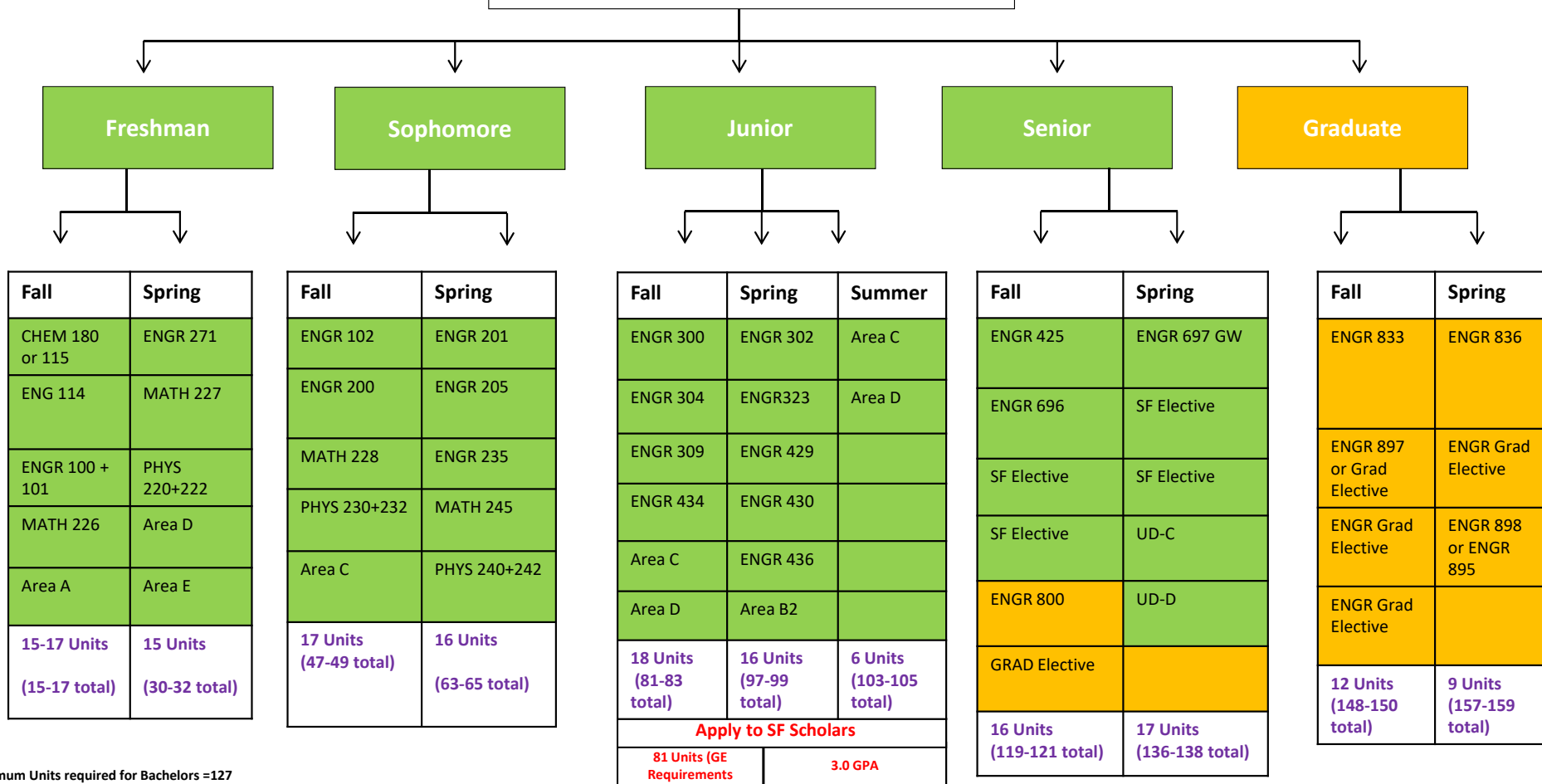
Name: Wen Shen Pong
Email: wspng@sfsu.edu

**Bold= must take courses
& pass before applying**

Green= Undergraduate courses
Orange= Graduate Courses

SF State Scholars *Tentative* Engineering Roadmap

****Students must meet with their advisor prior to registering for courses. This roadmap is designed for general planning ONLY! Roadmaps for more than 5 years plan may vary please consult with your department.**



Minimum Units required for Bachelors =127
Minimum Units required for Masters = 330

Civil Engineering Scholars

San Francisco State Newsletter

Volume 1 | Issue No. 2 | MAY 2020

EXPLORE

EXPERIMENT

EXCEL

FALL 2020 SCHOLARS RECRUITMENT ONGOING

Students—of Junior or Senior standing—that have maintained an excellent academic record with a 3.0 GPA or higher qualify for a 4+1 program that provides an accelerated pathway to obtaining a Master of Science degree in Structural/Seismic Hazardous Design. This blended program makes it possible to obtain a post-baccalaureate degree within a year of receiving a bachelor's degree through the integration of the two programs' curriculum. Students enrolled in the Scholars program shall receive mentoring from a Civil Engineering professor at SFSU, who will guide them through their civil engineering-related research. Furthermore, the opportunity to begin research early allows students to push their limits in critical thinking and decision-making, while allowing the exploration of areas of personal interest within civil engineering.

*The student-researcher can explore, experiment,
and excel with results of their own.*



PAVE THE WAY

Congratulations are in order, as the first civil engineer SF Scholar recruits—Cielo Martinez, Arturo Dominguez, and Charlie Vidal—will successfully transition to graduate student's status this Fall 2020! Martinez is focused on developing coupled beam moment frames with post-tension elements to analyze self-centering behavior. Dominguez is working on seismic performance of tiny homes through the evaluation of a replica of Oakland's Tuff shed as well as a model built upon the International Residential Code. Vidal is aiming to improve many health applications such as post-surgery monitoring by measuring floor vibrations to predict walking patten, or gait.

Pictured on the left: Fall 2019 recruits with Professors Weshen Pong, Tim D'Orazio, and Cheng Chen.



Pictured Above: SF Scholars Workshop with Professors Zhaoshuo Jiang, Jenna Wong, and Cheng Chen.

The more I study, the more insatiable do I feel my genius for it to be.

-Ada Lovelace

THE POWER OF ALUMNI CONNECTIONS

SF State engineer alumni, Anton Megevand, now a manager at Inspection Services, Inc. laboratory in Berkeley offered SF Scholars the opportunity to utilize the lab's services in the exploration of their individual civil engineer-related research. Along with supervised—but complete—access of equipment, Megevand's company offered to provide basic training on equipment use. Pushing their limits, scholars working on senior projects and independent research alike prepare to construct their own test plans to be executed with guidance from Anton and his colleagues.



Pictured above: Alan Garcia, Brandon Romero, Maria Salvador, Cielo Martinez, and Loren Rae Abrea—accompanied by Dr. Cheng Chen—after their tour of ISI laboratory facility on February 28, 2020.

SPRING 2020 SCHOLARS AND THE FOCUSES OF THEIR RESEARCH

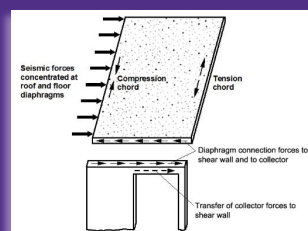
“Creating a stable structure that combines a typical seismic tower design and its loadings, as well as added weights of green roofs in various locations.”

Jenika McClay
Advisor: Jenna Wong



“Implementing local, municipal, building, and planning codes in the seismic performance of single-/multi-family accessory dwelling units in San Francisco due to the potential load increase of the structure.”

Arten Chan
Advisor: Jenna Wong



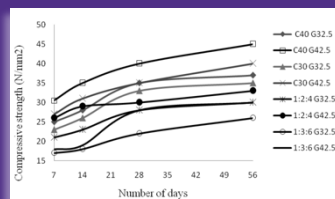
“Analyzing the viability of 3D-printed homes composed of the concrete reduced to a fluid-like paste while meeting the American Concrete Institute's building codes.”

Johnny Chan
Advisor: Jenna Wong



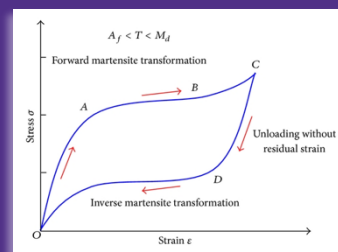
“Exploring the use of sea water and sea sand—in lieu of fresh water and river sand—in concrete and its effects on short- and long-term effects variables such as durability and compressive strength.”

Loren Rae Abrea
Brandon Romero
Advisor: Cheng Chen



“Exploring the functional properties of nickel titanium shape memory alloy including shape recovery and dissipated energy due to cyclic loading.”

Maria Salvador
Alan Garcia
Advisor: Cheng Chen



PROFESSOR'S CORNER

A FEW WORDS OF ADVICE

With the Spring 2020 semester underway, SF State's engineering professors offer civil engineer students a few pieces of advice during monthly SF Scholars meetings and workshops.

February 5, 2020

"The best way to get your ideas and proposals across is through a clear and organized technical presentation."

Jenna Wong on preparing technical presentations



While hosting a workshop focused on technical presentations, Professor Jenna Wong emphasized the importance of understanding one's target audience. In doing so, aspects such as template and timeline choice are determined for you. Aside from these technical details, Professor Wong equally emphasized the significance of delivering a concise presentation with confidence.

April 1, 2020

"Apply to as many as you can."

Zhaoshuo Jiang on completing scholarship applications

SF Scholar Monthly Meeting (04/01/2020)

Applying Scholarships (SFSU)

Zhaoshuo Jiang, Ph.D., P.E., LEED AP

Assistant Professor
School of Engineering
San Francisco State University

Professor Zhaoshuo Jiang's presentation encouraged scholars with helpful information regarding the daunting task of scholarship applications. Professor Jiang's tips ranged from composing a quality application designed around versatility to reaching out to organizations hosting a scholarship with any qualification concerns.

ANNOUNCEMENTS!

Jenika McClay was recently awarded a scholarship through the Structural Engineers Association of California (SEAOC). Congratulations Jenika!

Due to the ongoing threat of COVID-19 on public safety, the annual workshop—originally scheduled for April 17th—has been postponed, with a new date to be determined once the shelter-at-home order has been lifted.

The first remote monthly Scholar meeting was hosted through Zoom on April 1st. SF Scholar monthly meetings will continue to be online through the summer break; the date of the summer meeting is still to be determined.

The COVID-19 crisis has put us all in front of big challenges, some of us even more so than others. It is important to remember that you are not alone. SF State has enabled professors, health counselors, and campus resources to be easily accessible. If you or anyone you know is in need of extra support or just need to talk to someone, please reach out.

Issue edited by – Loren Rae Abrea, Maria Salvador

Looking for more information?

Professor Cheng Chen
1600 Holloway Ave., Science Building 251D
San Francisco, CA 94132
chcsfsu@sfsu.edu
(415) 338-7740



**SAN FRANCISCO
STATE UNIVERSITY**