UC San Diego

Structural Engineering

JACOBS SCHOOL OF ENGINEERING

Structural Engineering Graduate Handbook 2025 - 2026

Department of Structural Engineering

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TABLE of CONTENTS

GRADUATE STUDENT AFFAIRS CONTACT LIST

Dear Graduate Student,

Welcome to the Department of Structural Engineering at the University of California San Diego! Please review this Graduate Handbook to inform yourself about the program requirements and important information to know.

If you have any questions or concerns, please contact Graduate Academic Advisor: Leslie Verfaillie. She will be your main point of contact and resource.

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THE STRUCTURAL ENGINEERING PROGRAM

The Department of Structural Engineering at the University of California San Diego offers a unique program that crosses different engineering disciplines, including civil, geotechnical, mechanical, aerospace, biological, and marine/offshore engineering, with a focus on structural design and analysis, structural materials, computational mechanics, solid mechanics, and structural health monitoring/nondestructive evaluation. This cross-disciplinary yet focused structural engineering approach allows not only diversity in the selection of graduate courses but also a diversity of employment opportunities across the engineering spectrum.

The program is tailored towards the common needs and reliance of different engineering fields on the knowledge and advances in materials engineering, classical structural mechanics theories, computational and numerical analysis tools, experimental structural analysis, and structural health monitoring for applications ranging from nano-structures to large-scale civil infrastructure systems. While providing training on the fundamentals, the program offers specialization within a chosen area through a sequence of discipline specific courses. In particular, the Structural Engineering program offers the opportunity for further education in one or more of the following primary research areas that are intimately tied to the current research activities in the Department:

(1) Earthquake Engineering
(2) Advanced Structural Systems
(3) Geotechnical Engineering
(4) Structural Health Monitoring, Prognosis and Validated Simulations
(5) Computational and Data-Driven Structural Engineering
(6) Advanced Composites and Materials

Unique education and research opportunities are provided by faculty expertise across a range of specialties in materials and structural systems of different types and scales, and through the specially designed laboratories including the world-renowned Charles Lee Powell Structural Research Laboratories. This unique facility consists of a set of large-scale testing laboratories where full-scale structural systems ranging from bridges and buildings, ship hulls and deck structures, to aircraft wings and structural systems can be tested using state-of-the-art computer-controlled equipment. The Structural Systems Laboratory houses a 15-m tall reaction wall and a 37-m long strong floor, while the Structural Components Laboratory has a 9-m tall by 19-m wide strong wall with a 14.3 by 21.3-m strong floor, and the Composites Structures Laboratory has a 9-m tall by 5.5-m wide strong wall with a 14.3 by 7.2-m strong floor. The facility also includes a high-capacity shake table and a geotechnical laboratory including a centrifuge and soil boxes.

The research facilities also include state-of-the-art nano-materials characterization facilities, polymer and composite characterization and processing laboratories, composites and aerospace structures laboratories, non-destructive evaluation laboratories, structural dynamics laboratory, a unique 6-DOF seismic response modification device test facility, and other unique facilities. The Englekirk Structural Engineering Center is equipped with the world's first outdoor shake table adjacent to the country's largest soil-structure interaction test facility, allowing researchers to perform dynamic earthquake safety tests on full-scale structural systems. It also houses a blast simulator, which is the world’s first facility designed to study structural response to, and damage caused by, bomb blasts without creating actual explosions. Besides enabling one-of-a-kind experiments, the laboratory facilities enable the validation of sophisticated design and analysis models, which are subsequently used for design, numerical prediction, and detailed parametric studies. Thus, a complete systems approach from materials development and large-scale experiments to implementation of sensor networks and development of design recommendations and nonlinear analytical models is typical for research projects in the Department.

Close industrial ties exist between UCSD Structural Engineering faculty and the civil, aerospace, and marine engineering communities. The program is also strengthened by close ties with UCSD's Scripps Institution of Oceanography, the California Space Institute, the San Diego Supercomputer Center, the Environmental Sciences Initiative, and the Los Alamos National Laboratory (LANL). The Department is responsible for a significant portion of the UCSD/LANL Research and Educational Collaboration, a program unique in the Nation that combines UCSD and LANL expertise in specific research areas. These collaborations, in combination with the Powell Structural Research Laboratories, provide a unique research environment for graduate students and faculty alike.

MASTER OF SCIENCE (M.S.) DEGREE PROGRAM

The M.S. degree program is intended to provide students with additional fundamental knowledge, as well as specialized advanced knowledge, in selected structural engineering aspects over and above the undergraduate degree coursework. In addition to the mainstream M.S. degree in Structural Engineering, there are two Structural Engineering M.S. degree specializations in Structural Health Monitoring and Non-Destructive Evaluation (SHM &NDE) and Geotechnical Engineering. The requirements for these M.S. degree specializations are listed in separate sections of this handbook. Two M.S. degree plans are offered for all degree programs, which are the M.S. Thesis Plan and the M.S. Comprehensive Examination Plan.

The M.S. Thesis Plan is designed for those students with an interest in research prior to entering the structural engineering profession or prior to entering a doctoral degree program. The M.S. Thesis Plan involves course work and research leading to the completion and defense of a master's thesis. The default method for the doctoral and master's committee to conduct graduate examinations is when the student and all members of the committee are physically present in the same room. It is expected that there will be synchronous participation by all committee members in the scheduled exam. If a committee member must be absent for the scheduled exam, it is permissible for one absent committee member to examine the candidate on a separate date. The committee chair, or one co-chair, must participate synchronously in the scheduled exam. Special arrangements may be approved by the GAC chair on a case by case basis.

The M.S. Comprehensive Examination Plan focuses on coursework. The student selects any two "Core Electives" courses for the MS Comprehensive Plan. In the selected core course, the instructor chooses one problem on the midterm exam, final exam, or project/long homework to be the Comprehensive Exam problem. A separate Pass/Fail score is assigned to this problem. The problem may still count toward the total exam score of the course. Minimum passing score is 60/100. A passing score must be obtained in both courses.

The department also offers a seminar course each quarter that emphasizes the latest research topics and industry practices in structural engineering (SE 290). M.S. students must complete three quarters of SE 290 to meet graduation requirements, but they do not have to be taken consecutively. Students are strongly recommended to take SE 290 every quarter. Students who cannot fulfill the SE 290 requirement in any quarter must be enrolled in an alternate structured seminar course/program, which must be approved by the SE Graduate Affairs Committee.

A Faculty Mentor will be assigned for each M.S. student. The names of the assigned Faculty Mentor will be shared before or at Graduate Orientation and can be found on the Department Website. The Faculty Mentor will assist students with their academic plans and any other questions they may have.

M.S. STRUCTURAL ENGINEERING SE75

M.S. students must complete 48 units of credit for graduation. For the M.S. Comprehensive Examination Plan, all 48 units of credit must consist of regular graduate courses (equivalent to 12 four-unit courses). All 48 units of the M.S. Comprehensive Examination Plan courses must be taken for a letter grade. Up to eight units of approved upper division undergraduate courses can be used for the M.S. Degree. For the M.S. Thesis Plan, 36 units (9 four-unit courses) from regular courses are required and must be taken for a letter grade, in addition to 12 units of graduate research for the master's thesis (SE 299) which are taken for S/U grade. In addition to the 48 units, students must complete three quarters of SE 290 to meet graduation requirements, but they do not have to be taken consecutively. Students are strongly recommended to take SE 290 every quarter. Units obtained in SE 290 and SE 299 may not be applied towards course work requirements. No more than four units of SE 296 (independent study) may be applied toward course work requirements and only with prior written approval of the SE Graduate Affairs Committee (GAC).

For both M.S. plans, students are required to complete a minimum of two focus sequences. Any three of the courses listed under a specific topic area constitute a focus sequence. For both M.S. plans, students are required to complete a minimum of two sequences from the following focus areas:

1) Structural Analysis
2) Structural Design
3) Computational Mechanics
4) Earthquake Engineering
5) Geotechnical Engineering
6) Advanced Composites
7) Solid Mechanics
8) Structural Health Monitoring and Nondestructive Evaluation

A sequence is typically composed of three preapproved courses from the same focus area. The use of non–preapproved courses must be approved in advance by the Graduate Affairs Committee on a case-by-case basis. To meet the specific needs of some students, other focus areas may be developed by a student in consultation with his or her Faculty Mentor, but these must be pre-approved by the SE Graduate Affairs Committee. To allow for greater flexibility in the program, the remaining coursework credits required may be earned by completing additional focus sequences, parts of focus sequences, or other appropriate courses. Students may elect to take other appropriate technical electives (with the written approval of their Faculty Mentor and the SE Graduate Affairs Committee).

Comprehensive Plan M.S. in Structural Engineering

The amount of courses for the M.S. Comprehensive Plan is 12: 3 in 1 focus area, 3 in 2nd focus area, 4 Technical Electives, and 2 Core Courses:

Requirement	**Comprehensive option (units)**
Core Courses	Two Core Courses **(8)**
SE Focus Area 1	Three from Focus Area 1 **(12)**
SE Focus Area 2	Three from Focus Area 2 **(12)**

Technical Electives	Four from Technical Electives **(16)**
Total units	**48**

Technical Electives:
Technical Electives can be any Science, Mathematics, or Engineering graduate course or approved SE upper division undergraduate courses.

Core Courses:
M.S. students will be required to complete two out of seven core course electives. The core courses are, SE 201A, SE 202, SE 203A, SE 241, SE 271, and SE 233 (or SE 276A)*.
If using a core course for a focus area, then a 5th Technical Elective is required. If using both core courses for two focus areas, then six Technical Electives are needed. There must be 48 unique units.

* Can only count either SE 233 or SE 276A as a core course, but not both.

In the core courses the instructor selects one problem on the midterm or final exam (could be project/long HW) to be the "comprehensive exam" problem. A separate Pass/Fail score is assigned to this problem. (Problem may still count toward the total exam score.) Minimum passing score is 60/100. Any two courses from "Core Electives" may be selected for the MS Comprehensive Plan. A passing score must be obtained in both courses.

Sample course plans for students enrolled in the M.S. Comprehensive Plan are as follows:

Four-Quarter Plan: Civil (Design/Earthquake)

Fall 2025	**Winter 2026**	**Spring 2026**	**Fall 2027**
SE 203A (Core)	SE 207 (Design)	SE 206 (Elective)	SE 201A (Core)
SE 212 (Design)	SE 242 (Elective)	SE 221 (Earthquake)	SE 241 (Elective)
SE 220 (Earthquake)	SE 222 (Earthquake)	SE 151B (Design)	SE 285 (Elective)
SE 290 (Seminar)	SE 290 (Seminar)	SE 290 (Seminar)	SE 290 (Seminar)

Three-Quarter Plan: Aero (Aerospace/Computational Mechanics)

Fall 2025	**Winter 2026**	**Spring 2026**
SE 276A (Comp. Mech.)	SE 252 (Aerospace)	SE 260B (Aerospace)
SE 201A (Core)	SE 260A (Aerospace)	MAE 232C (Comp. Mech.)
SE 271 (Elective)	SE 276B (Comp. Mech.)	SE 206 (Elective)
SE 233 (Core)	SE 201B (Elective)	SE 268 (Elective)
SE 290 (Seminar)	SE 290 (Seminar)	SE 290 (Seminar)

***Students taking the Solid Mechanics focus sequence are required to take SE 271 and two of the following courses: SE252, SE270, SE 207, SE 234, SE 272, and SE 273 (at least one of SE272 and SE273 must be selected).*
**SE 207 Topics in Structural Engineering will be acceptable to use towards a focus sequence requirement pending petition and approval of the Graduate Affairs Committee (GAC).*

Thesis Plan M.S. in Structural Engineering

The thesis defense is the final examination for students enrolled in the M.S. Thesis Plan and must be conducted after completion of all coursework. Upon completion of the research project, the student writes a thesis that must be successfully defended in an oral examination and public presentation conducted by a committee composed of three faculty members. A complete copy of the student's thesis must be submitted to each committee member a minimum of two weeks prior to the defense. The M.S. Thesis Exam Guide, a step by step instructional guide can be found on the SE Website.

Requirement	**Thesis option (units)**
Thesis Research	SE 299. Graduate Research **(12)**
SE Focus Area 1	Three from Focus Area 1 **(12)**
SE Focus Area 2	Three from Focus Area 2 **(12)**
Technical Electives	Three from Technical Electives **(12)**
Total units	**48**

M.S. SPECIALIZATION: STRUCTURAL HEALTH MONITORING & NON-DESTRUCTIVE EVALUATION SE81

The M.S. in Structural Engineering with specialization in Structural Health Monitoring and Non-Destructive Evaluation (SHM&NDE) trains students in highly interdisciplinary knowledge that incorporates three integrated and broad technology areas: (1) sensing technology; (2) data interrogation; and (3) modeling and analysis. The intersections and integration of these technology areas are fundamental to supporting structural health monitoring and nondestructive evaluation, which may be defined as the process of making an uncertainty-quantified assessment, based on appropriate analyses of *in situ* measured data, about the current ability of a structural component or system to perform its intended design function(s) successfully. This discipline within structural, civil, mechanical, and aerospace engineering is a fundamental capability that supports "design-to-retirement" life cycle management of systems.

Two degree options in SHM&NDE are offered: M.S. Thesis option and M.S. Comprehensive Examination option. Students in either plan must complete 36 units of credit for graduation. For both options, students must complete two core courses, SE 263 Non-destructive Evaluation and SE 265 Structural Health Monitoring Principles (8 total units). In addition to these core courses, the M.S. SHM&NDE Thesis plan involves regular coursework (20 units) and graduate research (8 units) leading to the completion and defense of a master's thesis. Correspondingly, the M.S. Comprehensive Examination plan involves regular coursework (24 units) and a mentored independent study (SE 296) capstone course. The deliverables will be delivered to the SE 296 Faculty Mentor, assessed by the Faculty Mentor, and both the deliverables and assessment will be submitted to the Graduate Affairs Committee for final approval.

All students in this degree program, for both degree options, must register in SE 290, Graduate Seminar, for any two quarters while enrolled in the program.

Because of the inherent interdisciplinary nature of the MS SHM&NDE program, research within SE 296 or SE 299 may be conducted at outside locations (industry or government facilities). In this case a scientist or engineer on location, with an adjunct faculty appointment at UC San Diego, will be identified as the SE 296 mentor or the SE 299 adviser and who will also be a member of the thesis committee. The students in the UCSD/LANL Research and Educational Collaboration are SE81 degree students. While taking classes and researching remotely at LANL, they are still expected to complete the SE81 degree requirements.

The comparative distribution of units for each of the two degree options is shown in the tables below.

Comprehensive Plan M.S. in SHM&NDE

For the M.S. Comprehensive option, the four-unit independent study (SE 296) must be conducted as a capstone experience project. This project is intended to provide a mentored project whereby students integrate knowledge learned from their technology areas into solving a problem from structural health monitoring/prognosis or nondestructive evaluation. The specific deliverables associated with the capstone project experience will be proposed by the student together with the SE 296 Faculty Mentor and will be approved by the Graduate Affairs Committee by the end of the quarter preceding the one in which the student intends to register in SE 296. Email the Academic Advisor to process the request.

Requirement	Comprehensive option (units)
Core courses	SE 263. Non-destructive Evaluation (**4**) SE 265. Structural Health Monitoring Principles (**4**)
Capstone experience	SE 296. Independent Study or approved equivalent (**4**)
Focus sequence 1	One from Focus Area 1 (**4**)
Focus sequence 2	Two from Focus Area 2 (**8**)
Focus sequence 3	Two from Focus Area 3 (**8**)
Technical elective	One from Technical Elective (**4**)
Total units	**36**

Thesis Plan M.S. in SHM&NDE

For the M.S. Thesis option, the eight-unit graduate research (SE 299) culminates with the preparation of a written research thesis. The thesis must be successfully defended in an oral examination and public presentation conducted by a committee composed of three faculty members. The committee will consist of three faculty members, one with expertise in each of the three focus areas. A complete copy of the student's thesis must be submitted to each member of the MS thesis committee at least two weeks prior to the defense.

Requirement	Thesis option (units)
Core course	SE 263. Non-destructive Evaluation (**4**) SE 265. Structural Health Monitoring Principles (**4**)
Thesis research	SE 299. Graduate Research (**8**)
Focus sequence 1	One from Focus Area 1 (**4**)
Focus sequence 2	Two from Focus Area 2 (**8**)
Focus sequence 3	Two from Focus Area 3 (**8**)
Total units	**36**

Many courses currently offered within the Jacobs School of Engineering may be grouped into the three focus areas comprising each technology area described above, as shown in the following list:

A. Sensing Technology (Focus Area 1)

SE 252. Experimental Mechanics and NDE	SE 268. Structural System Testing and Model Correlation
SE 264. Sensors and Data Acquisition for Structural Engineering	CSE 237A. Introduction to Embedded Computing
SE 266. Smart and Multifunctional Materials	ECE 257B. Principles of Wireless Networks

B. Data Interrogation (Focus Area 2)

SE 282. Diagnostic Imaging	MAE 283A. Parametric Identification: Theory and Methods
SE 267. Signal Processing & Spectral Analysis	CSE 254. Statistical Learning
SE 268. Structural System Testing and Model Correlation	CSE 255. Data Mining and Predictive Analytics
ECE 251A. Digital Signal Processing I	CSE 250A. Principles of Artificial Intelligence: Probabilistic Reasoning and Learning
ECE 251B. Digital Signal Processing II	CSE 251A. Principles of Artificial Intelligence: Learning Algorithms
ECE 251C. Filter Banks and Wavelets	ECE 271A. Statistical Learning I
ECE 253. Fundamentals of Digital Image Processing	ECE 271B. Statistical Learning II
ECE 254. Detection Theory	

C. Modeling and Analysis (Focus Area 3)

SE 201A. Advanced Structural Analysis	SE 236. Wave Propagation in Continuous Structural Elements
SE 202. Structural Stability	SE 253A. Mechanics of Laminated Composite Structures I
SE 203A. Structural Dynamics I	SE 254. FRPs in Civil Structures
SE 205. Nonlinear Mechanical Vibrations	SE 260. Aerospace Structural Mechanics I
SE 206. Random Vibrations	SE 262. Aerospace Structures Repair
SE 224. Structural Reliability and Risk Analysis	SE 268. Structural System Testing and Model Correlation
SE 233. Computational Techniques in Finite Elements or SE 276A. Finite Elements in Solid Mechanics I	SE 269. Validation and Verification of Computational Models I
SE 235. Wave Propagation in Elastic Media or MAE 238. Stress Waves in Solids	SE 270. Fracture Mechanics and Failure Mechanisms [1–2]

In addition, the technical elective course required for the Comprehensive option may be chosen from any of the focus area lists above (provided it is not being counted as a focus area requirement), or from this additional pre-approved list of courses:

CSE 251C. Machine Learning Theory	MAE 272. Imperfections in Solids
ECE 251D. Array Processing	MAE 273A. Dynamic Behavior of Materials
ECE 255A. Information Theory	SE 204. Advanced Structural Dynamics
ECE 272A. Stochastic Processes in Dynamic Systems	SE 234. Plates and Shells
ECE 275A. Parameter Estimation	SE 253B. Mechanics of Laminated Composite Structures II
MAE 208. Mathematics for Engineers	SE 276B. Finite Elements in Solid Mechanics II

M.S. SPECIALIZATION: GEOTECHNICAL ENGINEERING SE82

The Geotechnical Engineering M.S. degree program is intended to provide students with additional fundamental knowledge as well as specialized advanced knowledge in geotechnical engineering over and above that available in the B.S. degree in Structural Engineering at UC San Diego (SE 181, SE 182, and SE 184). Students seeking to pursue the M.S. in geotechnical engineering should have an undergraduate degree in Structural or Civil Engineering. Furthermore, students are required to take SE 181 (Geotechnical Engineering) and SE 182 (Foundation Engineering), or their equivalents at another university, as a prerequisite to pursuing the M.S. degree in geotechnical engineering. Exceptions to this will not be granted, though SE 182 may be taken concurrently with other M.S. coursework with instructor and advisor approval. The M.S. degree program includes required core courses and technical elective courses. M.S. students must complete 48 units of graduate course credit for graduation (12 courses). Students must obtain approval from their advisor and the SE Graduate Affairs Committee on proposed coursework to complete the degree.
Two M.S. degree plans are offered – the M.S. Comprehensive Examination Plan and the M.S. Thesis Plan. The M.S. students in Geotechnical Engineering must complete 48 units as a part of their degree. Comprehensive students are required to complete the 4 core courses, and must take at least 4 geotechnical electives. The remaining 4 courses can be geotechnical or structural engineering electives as well as geology courses offered by Scripps Institution of Oceanography. Thesis students also must complete 48 units. They are required to to complete the 4 core classes, 3 Geotechnical Electives, and 3 research classes. The remaining two classes can be geotechnical or structural engineering electives as well as geology courses offered by Scripps Institution of Oceanography.

In addition to the 48 units, students must complete three quarters of SE 290 to meet graduation requirements, but they do not have to be taken consecutively. Students are strongly recommended to take SE 290 every quarter.

Comprehensive Plan M.S in Geotechnical Engineering

The M.S. Comprehensive Examination Plan requires 48 units (12 courses) of regular coursework. In the core courses the instructor selects one problem on the midterm or final exam (could be project/long HW) to be the "comprehensive exam" problem. A separate Pass/Fail score is assigned to this problem. (Problem may still count toward the total exam score.) Minimum passing score is 60/100. A passing score must be obtained in all four courses.

Requirement	**Comprehensive option (units)**
Core Courses	SE 241 Advanced Soil Mechanics (**4**) SE 242 Advanced Foundation Engineering (**4**) SE 183/250 Stability of Earth Slopes & Retaining Walls (**4**) SE 248 Engineering Properties of Soils (**4**)
Geotechnical Technical Electives	Four Geotechnical Electives **(16)**
Other Technical Electives	Four from Other Technical Elective **(16)**
Other Graduation Requirements	3 quarters or more of SE 290

Total units	**48**

Thesis Plan in M.S. Geotechnical Engineering

The M.S. Thesis Plan is designed for students with an interest in research prior to entering a professional career or a doctoral degree program. For this plan, 36 units (9 courses) of regular coursework are required, along with 12 units of graduate research (SE 299) for work on an M.S. thesis. The thesis defense is the final examination for students enrolled in the M.S. Thesis Plan and must be taken no later than the end of the 8th week of the quarter for which the student intends to graduate. The thesis must be defended in a public presentation with an oral examination conducted by a committee composed of three faculty members. A complete copy of the thesis must be submitted to the committee at least two weeks prior to the defense.

Requirement	**Thesis option (units)**
Core Courses	SE 241 Advanced Soil Mechanics (**4**) SE 242 Advanced Foundation Engineering (**4**) SE 183/250 Stability of Earth Slopes & Retaining Walls (**4**) SE 248 Engineering Properties of Soils (**4**)
Geotechnical Technical Electives	Three Geotechnical Electives **(12)**
Other Technical Electives	Two from Other Technical Elective **(8)**
Thesis Research	SE 299. Graduate Research **(12)**
Total units	**48**

Core Courses

M.S. students in geotechnical engineering must complete the following four core courses:

SE 241 Advanced Soil Mechanics	SE 183/ 250 Stability of Earth Slopes & Retaining Walls
SE 242 Advanced Foundation Engineering	SE 248 Engineering Properties of Soils

Geotechnical Technical Electives

Students must select with approval from the Graduate Affairs Committee at least four courses (M.S. Comprehensive Examination Plan) or three courses (M.S. Thesis Plan) from the following list of geotechnical technical electives. Guidance on selection of the technical electives is provided later.

SE 207 Soil Dynamics	SE 246 Unsaturated Soil Mechanics
SE 222 Geotechnical Earthquake Engineering	SE 247 Ground Improvement
SE 243 Soil-Structure Interaction	SE 248 Engineering Properties of Soils
SE 244 Numerical Methods in Geomechanics	SE 249 Rock Mechanics

Other Technical Electives

Students may select with approval from the Graduate Affairs Committee any from the following list of

other technical electives to meet the 12 required courses beyond the required core courses, geotechnical technical electives, and research graduate credits (if applicable). It should be noted that some of the technical electives have prerequisites that must be fulfilled as noted in the lists below. Guidance on selection of the technical electives is provided below.

SE181 Geotechnical Engineering	SE 182 Foundation Engineering
SE 201A – Advanced Structural Analysis	SE 272 Theory of Elasticity
SE 203A Structural Dynamics I	SE 274 Nonlinear Finite Element Methods
SE 206 Random Vibrations (Prerequisite: SE 203A)	SE 276A Finite Element Methods in Solid Mechanics I
SE 211 RC/PC Design	SE 276B Finite Element Methods in Solid Mechanics II
SE 212 Steel Design	SE 276C Finite Element Methods in Solid Mechanics III (Prerequisite: SE 276A)
SE 213 Bridge Design	SIOG 225 Physics of Earth Materials
SE 220 Seismic Isolation and Energy Dissipation (Prerequisite: SE 221)	SIOG 226 Introduction to Marine Geophysics
SE 221 Earthquake Engineering (Prerequisite: SE 201A or SE 203A)	SIOG 227A Introduction to Seismology
SE 223 Advanced Seismic Design of Structures	SIOG 227B Advanced Seismology
SE 224 Structural Reliability and Risk Analysis	SIOG 239 Introduction to the Rheology of Solid Earth
SE 235 Wave Propagation in Elastic Media	

Suggested Course Sequences

Geotechnical Engineering:

Students following this course sequence will gain an in-depth understanding of both geotechnical fundamentals and soil-structure interaction phenomena. Students following this course sequence may also choose technical electives to gain expertise in related topics in geology.

SE 248 Engineering Properties of Soils	SE 244 Numerical Methods in Geomechanics
SE 249 Rock Mechanics	SE 247 Ground Improvement
SE 207 Soil Dynamics	SIOG 225 Physics of Earth Materials
SE 246 Unsaturated Soil Mechanics	SIOG 226 Introduction to Marine Geophysics
SE 222 Geotechnical Earthquake Engineering	

Geotechnical Earthquake Engineering:

Students following this course sequence will still gain an understanding of geotechnical fundamentals and soil-structure interaction, but will also gain specialization in different aspects of geotechnical and structural earthquake engineering:

SE 201A Advanced Structural Analysis	SE 223 Advanced Seismic Design of Structures
SE 203A Structural Dynamics I	SE 235 Wave Propagation in Elastic Media

Table continues on next page

SE 206 Random Vibrations (Prerequisite: SE2 03A)	SE 243 Soil-Structure Interaction
SE 207 Soil Dynamics	SE 244 Numerical Methods in Geomechanics
SE 220 Seismic Isolation and Energy Dissipation ((Prerequisite: SE 221)	SIOG 227A Introduction to Seismology
SE 221 Earthquake Engineering (Prerequisite: SE 201A or SE 203A)	SIOG 227B Advanced Seismology
SE 222 Geotechnical Earthquake Engineering	

Geomechanics:

Students following this course sequence will still gain an understanding of geotechnical fundamentals and soil-structure interaction, but will also gain specialization in computational techniques that can be applied to the study of geotechnical and structural engineering problems:

SE 248 Engineering Properties of Soils	SE 274 Nonlinear Finite Element Methods
SE 226 Groundwater Engineering	SE 276A Finite Element Methods in Solid Mechanics I
SE 235 Wave Propagation in Elastic Media	SE 276B Finite Element Methods in Solid Mechanics II
SE 243 Soil-Structure Interaction	SE 276C Finite Element Methods in Solid Mechanics III
SE 244 Numerical Methods in Geomechanics	SIOG 225 Physics of Earth Materials
SE 249 Rock Mechanics	SIOG 226 Introduction to Marine Geophysics
SE 272 Theory of Elasticity	SIOG 239 Introduction to the Rheology of Solid Earth

Geotechnical and Structural Engineering:

Students following this course sequence will still gain an understanding of geotechnical fundamentals and soil-structure interaction, but will also gain skills necessary to pursue a joint career in geotechnical and structural engineering:

SE 201A – Advanced Structural Analysis	SE 224 Structural Reliability and Risk Analysis
SE 248 Engineering Properties of Soils	SE 235 Wave Propagation in Elastic Media
SE 211 Advanced Structural Concrete	SE 243 Soil-Structure Interaction
SE 212 Steel Design	SE 244 Numerical Methods in Geomechanics
SE 213 Bridge Design	SE 247 Ground Improvement
SE 222 Geotechnical Earthquake Engineering	SE 249 Rock Mechanics

Ph.D. PROGRAM IN STRUCTURAL ENGINEERING SE75

The Ph.D. program is intended to prepare students for careers in research, teaching, and advanced professional practice in the broad sense of structural engineering, encompassing civil and aerospace structures, earthquake and geotechnical engineering, composite structures and materials, structural health monitoring and nondestructive evaluation, and engineering mechanics. Depending on the student's background and ability, research is initiated as soon as possible. All students, in consultation with their Faculty Advisors, develop course programs that will prepare them for the Departmental Qualifying Examination and for their dissertation research. However, these programs of study and research must be planned to meet the time limits established to advance to candidacy and to complete the requirements for the Ph.D. degree.

The department also offers a seminar course each quarter that emphasizes the latest research topics and industry practices in structural engineering (SE 290). Ph.D. students must complete three quarters of SE 290 prior to the DQE to meet graduation requirements, but they do not have to be taken consecutively. Students who cannot fulfill the SE 290 requirement for one, two, or three of the quarters must have taken an alternate structured seminar course/program, which must be pre-approved by the SE Graduate Affairs Committee. It is also strongly recommended that all Ph.D. students enroll in SE 290 for at least one quarter in every subsequent year.

Pedagogy Training for Incoming Ph.D. Students:

Teaching and mentorship is an important part of a doctoral student's training. Therefore, all incoming Ph.D. students must complete the online Foundations of Teaching workshop through the Teaching and Learning Commons before starting their first year in the PhD Program. This program covers essential topics such as cultivating community, balancing relationships and responsibilities in teaching, exploring how people learn and communicating learning outcomes, active learning and formative assessments, fostering growth mindsets through feedback and assessments, and meaningful engagement and facilitation.

The program includes asynchronous Canvas modules, allowing incoming students to begin their training before arriving at UC San Diego. During their first quarter on campus, Ph.D. students are also required to meet with a designated Professor in the SE Department for a half-day workshop to reflect on their learning and discuss how to apply the concepts to engineering-specific contexts such as problem-solving instruction, laboratory teaching, facilitating discussion, and technical assessment strategies.

At a minimum, all incoming Ph.D. students must complete this training before obtaining any Instructional Assistant position in the Department.

Additional Pedagogy Training for Professional Development:

Throughout their program, Ph.D Students are highly recommended to take additional pedagogy courses offered by the Teaching and Learning Commons

(https://engagedteaching.ucsd.edu/educators/workshops.html) that focus on enhancing pedagogical skills and preparing graduate students for independent instruction. These classes include Introduction to College Teaching and Advanced College Teaching. These courses provide pathways for students interested in academic careers and offer certificates that students can highlight on their curriculum vitae.

Introduction to College Teaching: This free one quarter long course will equip graduate students with practical skills and theoretical knowledge about the fundamentals of student-centered college teaching and equitable teaching practices. Students will try out and engage with evidence-based teaching practices, reflect on their philosophy of teaching and what it means to teach for equity, and apply their knowledge to structure a lesson or activity relevant to their discipline. The course is offered every Fall, Winter, and Spring.

Advance College Teaching: This free one quarter long course will guide graduate students through the creation of a student-centered course and syllabus, integrating prerequisite knowledge of foundations of teaching to plan the course structure, activities, and equity-minded course policies. Students will try out and engage with evidence-based teaching practices, reflect on their philosophy of teaching and what it means to teach for equity, and connect this to their course context.

For more information about Introduction to College Teaching and Advance College Teaching, email engagedteaching@ucsd.edu.

Summer Graduate Teaching Scholars (SGTS) program: This program provides excellent opportunities for advanced graduate students to obtain mentored teaching experience while serving as the instructor of record for a UC San Diego undergraduate course during summer session.

Doctoral Examinations:

A Structural Engineering Ph.D. student is required to pass three examinations.

1. Department Qualifying Examination

The Departmental Qualifying Examination (DQE) is the first examination, which should be taken after three to six quarters of full-time graduate study with a minimum cumulative UCSD graduate GPA of 3.5. The examination covers four focus areas in Structural Engineering, which is specified by the Ph.D. student and approved by the Faculty Advisor and the Graduate Affairs Committee. This examination is intended to determine the candidate's core fundamental structural engineering knowledge and his/her ability to successfully pursue a research project at a level appropriate for the doctorate. It is administered by at least two faculty members in Structural Engineering, depending on how many areas the student will be tested on. Students can download The Department Qualifying Exam Guide from the SE Website.

Although the student may elect to satisfy one examination area by coursework, they are responsible for material pertaining to four focus areas. Additionally, a student may waive out of a second examination area with the GAC Chair's approval if they have successfully completed a M.S. Thesis Defense in Structural Engineering or a closely related area. Requests can be sent to

se-sa-grad@ucsd.edu.

In order to satisfy an area by coursework, all the courses in that area must have been taken at UCSD, the grade in each course must be no lower than a B, and the overall GPA in that area must be a minimum of 3.5. To ensure appropriate breadth, the focus areas should consist of the following:

(a) two focus areas within Structural Engineering which are closely related to the student's research interest
(b) one focus area, usually within Structural Engineering that is not directly related to the student's area of research
(c) one minor focus area outside the Department of Structural Engineering. Minor areas too closely related to the major areas will not be approved by the Graduate Affairs Committee.

Sample Courses:
SE Focus Area 1: 3 courses
SE Focus Area 2: 3 courses
Breadth Focus Area: 3 courses
Non-SE Focus Area: 3 courses

Focus Areas for the Departmental Qualifying Examination are listed at the end of this section.

Since the examination areas must be approved by the Graduate Affairs Committee, students are advised to seek such approval well before their expected examination date, preferably while planning their graduate studies. Although students are not required to take particular courses in preparation for the departmental examination, the scope of the examination in each area is associated with a set of three graduate courses, generally focus areas offered or approved by the Department. Any transfer credits must adhere to the SE Ph.D. Transfer Credit Policy listed in this handbook.

A candidate can develop a sense of the level of knowledge expected to be demonstrated during the examination by studying the appropriate syllabi and/or discussing the course content with faculty experienced in teaching the courses involved. The Departmental Qualifying Examination may be a written or oral examination, at the discretion of the committee.

Doctoral students who have passed the Departmental Qualifying Examination may take any course for an S/U grade, with the exception of any course that the student's Ph.D. Qualifying Examination Committee stipulates must be taken in order to remove a deficiency. It is strongly recommended that all Structural Engineering graduate students take at least one course (other than research) per academic year after passing the Departmental Qualifying Examination.

2. Advancement to Candidacy Senate Examination

The Ph.D. Advancement to Candidacy Senate Examination is the second examination required of Structural Engineering doctoral students. The Ph.D. Candidacy Examination is an oral examination. In preparation for the Ph.D. Candidacy Examination (aka Senate Examination), students must have completed the Departmental Qualifying Examination, have a doctoral committee, have identified a topic for their dissertation research, and have made initial progress in that research topic. Students can download the Advancement to Candidacy Exam Guide from the SE Website.

The PhD committee conducts the Ph.D. Candidacy Examination, during which students must demonstrate the ability to engage in dissertation research. This involves the presentation of a plan for the dissertation research project. A short written document, such as an abstract, describing the research plan must be submitted to each member of the committee at least two weeks before the Ph.D. Candidacy Examination. This requirement can also be met by meeting with the doctoral committee members to discuss the nature of the student's dissertation research. The committee may ask questions directly or indirectly related to the research project and general questions that it determines to be relevant. Upon successful completion of this examination, students are advanced to candidacy and are awarded the Candidate in the Doctor of Philosophy designation.

At the time of application for advancement to candidacy, in accordance with Academic Senate Regulation 715, a doctoral committee shall be appointed by the Dean of Graduate Studies under the authority of the Graduate Council. The committee must have at least 4 members with UC San Diego faculty appointments; at least 2 members are from SE Department (including the Committee Chair); at least 1 member must be Outside SE Faculty (within UC San Diego); at least 1 member must be tenured or emeritus. Proposed members from other UC campuses, other universities, or industry are exceptions and must be requested in writing.

Example 1
SE Faculty Advisor (Committee Chair)
SE Faculty
Outside SE Faculty (within UCSD)
Outside SE Faculty (within UCSD)
(At least one of the committee members must be tenured or emeritus)

Example 2
SE Faculty Advisor (Committee Chair)
SE Faculty
SE Faculty
Outside SE Faculty (within UCSD)
(At least one of the committee members must be tenured or emeritus)

The default method for the doctoral and master's committee to conduct graduate examinations (doctoral qualifying examination and final dissertation/thesis defense) is when the student and all members of the committee are physically present in the same room. It is expected that there will be synchronous participation by all committee members in the scheduled exam. If a committee member must be absent for the scheduled exam, it is permissible for one absent committee member to examine the candidate on a separate date. The committee chair, or one co-chair, must participate synchronously in the scheduled exam. Special arrangements may be approved by the GAC chair on a case by case basis.

Requirements before the Dissertation Final Defense Examination
Mentorship and Teaching Experience is a formal degree requirement for all Structural Engineering Ph.D. students, which must be completed at least one quarter before the Dissertation Defense. This requirement can be fulfilled in two ways: by serving as a 50% Instructional Assistant (IA) in either a problem-solving section or a laboratory session of an undergraduate or graduate course, as designated by the Department. Alternatively, students can complete a structured teaching training program by enrolling in SE 501 and

taking the Teaching and Learning Commons "Introduction to College Teaching" course. Throughout the quarter, students will meet with the SE 501 course instructor to apply the concepts learned in the teaching course to their field of engineering.

Students must contact the Graduate Student Affairs Office in the Department to plan and obtain approval for completion of this requirement.

Please note that all international graduate students at UC San Diego are required to demonstrate a high level of oral and aural competence in the English language before they are appointed as a TA. This is a UC San Diego Graduate Division Policy on English Language Skills of International Teaching Assistants, established in compliance with the California English Proficiency in Higher Education Act**.**

3. Dissertation Final Defense Examination

The Dissertation Defense examination may not be conducted earlier than three quarters after the date of advancement to doctoral candidacy. 3 quarters total, which includes the quarter the student officially advances and the quarter they file for graduation. Summer is not included. For example, if a student advanced in Winter 2022 then the soonest they would be able to defend is in Fall 2023. Again, the earliest would be Fall 2023, as long as they are registered for at least 6 units in all three quarters.

The **Dissertation Defense** is the final Ph.D. examination. Upon completion of the dissertation research project, the student writes a dissertation that must be successfully defended in an oral examination and public presentation conducted by the doctoral committee. The form of the final draft must conform to procedures outlined in the publication: Preparation and Submission of the Doctoral Dissertation. A complete copy of the student's dissertation must be submitted to each member of the doctoral committee approximately three weeks before the defense. While the copy of the dissertation handed to the committee is expected to be complete, and in final form, it should be noted that students are expected to make changes in the text per direction of the committee as a result of the defense. Students can download the PhD Final Defense Exam Guide from the SE Website.

Students must fill out the online form in Kuali, "File for Doctoral/Master's (Thesis) Degree Form." by the Friday of Week 5. Please see the How to File for Degree for each specific step

Ph.D. Time Limit Policy:
Time limits are set at the end of a Ph.D. student's first year.
Pre-Candidacy Time Limit (PCTL): Pre-candidacy status is limited to four years.
Support Time Limit (SUTL): Doctoral students are eligible for university support for six years.
Total Registered Time Limit (TRTL): The defense and submission of the doctoral dissertation must be within seven years.

Spring Evaluations:
In the Spring quarter of each year, department faculty members are required to evaluate their doctoral student's overall performance in coursework, research, and prospects for financial support for future years. A written assessment is given to the student after the evaluation. If a student's work is found to be inadequate, the Faculty Advisor may determine that the student cannot continue in the graduate program.

Faculty Advisor:

Ph.D. students are placed with a Faculty Advisor (also known as research advisor/PI) when they are admitted into the Ph.D. program. A Faculty Advisor is the academic, research, and program guide for Ph.D. students. Additionally, the Faculty Advisor is the funding PI for their assigned PhD students. The student's research and academic performance are evaluated on a quarterly basis via an S/U grade in SE 299. Students who receive an 'U' in SE 299 will be placed on Academic Notice in the following quarter. The student must communicate with the Faculty Advisor to address any deficiencies and formulate a plan to address issues and deficiencies. Receiving two or more 'U's in SE 299 are grounds for dismissal from the student's research group and/or termination of the Ph.D. program. If Ph.D. students need to change their Faculty Advisor at any time, they have 1 quarter to find a new Faculty Advisor. Upon finding a Faculty Advisor, the Ph.D. students must notify the Graduate Academic Advisor.

If a student is dismissed by a PI, then they will have the option to TA in their next (last) quarter (the 1 quarter that will be used to find a new PI). In addition, any student without a PI will be put on departmental Academic Notice with a letter filed with GEPA.

JOINT DOCTORAL PROGRAM SAN DIEGO STATE UNIVERSITY SE 77

The University of California, San Diego and San Diego State University have a Joint Doctoral Program (JDP).
For questions regarding the SE SDSU JDP contact Donovan Geiger at: dgeiger@sdsu.edu.
Admission into the SE JDP is processed by SDSU. Information about SDSU Admissions can be found here.
JDP students must complete three quarters of SE 290 to meet graduation requirements, but they do not have to be taken consecutively. This must be completed before the Departmental Qualifying Examination (DQE). Any exception to this policy must be approved by the Graduate Affairs Committee (GAC) Chair. Requests can be sent to se-sa-grad@ucsd.edu.

Ph.D. SAMPLE NON-SE FOCUS AREAS

(Please check class schedule for quarterly offerings)

Seismology

SIO 225G Physics of Earth Materials	SIOG 227B Advanced Seismology I
SIOG 227A Introduction to Seismology	

Controls

MAE 280A Linear Systems Theory or ECE 275A Parameter Estimation	MAE 284 Robust and Multivariable Control
MAE 280B Linear Control Design or ECE 275B Parameter Estimation II	

Computer-Aided Design

MAE 291 Design and Mechanics in Computer Technology	MAE 293 Advanced Computer Graphics for Engineers and Scientists
MAE 292 Computer-Aided Design and Analysis	

Signal Processing

ECE 161A Introduction to Digital Signal Processing	ECE 251C Filter Banks and Wavelets
ECE 251A Digital Signal Processing I	ECE 251D Array Processing
ECE 251B Digital Signal Processing II	ECE 254 Detection Theories

Mathematics

MAE 290A, B Efficient Numerical Methods for Simulation, Optimization and Control (Choose a third from MAE 232A, MAE 294A, or consent of advisor)	MAE 294B Introduction to Applied Mathematics II
MAE 294A Introduction to Applied Mathematics	MAE 294C Introduction to Applied Mathematics III

Material Science

MATS 211A Mechanical Properties	MAE 233B Micromechanics
MAE 233A Fracture Mechanics	

Ph.D. AND M.S. SE 75 FOCUS AREAS

M.S. students are allowed to use up to eight units of the approved Upper Division Undergraduate courses listed below.

Ph.D. students are allowed to take eight units of approved Upper Division Undergraduate courses for the DQE.

Structural Analysis

SE 201A Advanced Structural Analysis	SE 205 Nonlinear Mechanical Vibrations
SE 201B Nonlinear Structural Analysis	SE 206 Random Vibrations
SE 202 Structural Stability	SE 215 Cable Structures
SE 203A Structural Dynamics I SE 203B Structural Dynamics II	SE 224 Structural Reliability and Risk Analysis
SE 204 Advanced Structural Dynamics	SE 233 Computational Techniques in Finite Elements

Computational Mechanics and Finite Elements

SE 233 Computational Techniques in Finite Elements	SE 276C Finite Element Methods in Solid Mechanics III
SE 232 Machine Learning in Computational Mechanics	SE 277 Error Control in Finite Element Analysis
SE 276A Finite Element Methods in Solid Mechanics I	SE 279 Meshfree Methods for Linear and Nonlinear Mechanics
SE 276B Finite Element Methods in Solid Mechanics II	SE 280 Finite Element Computations in Solid Mechanics

Structural Design

SE 151B Design of Prestressed Concrete	SE 214 Masonry Structures
SE 154 Design of Timber Structures	SE 220 Seismic Isolation and Energy Dissipation
SE 211 Advanced Structural Concrete	SE 223 Advanced Seismic Design of Structures
SE 212 Advanced Structural Steel Design	SE 224 Structural Reliability and Risk Analysis
SE 213 Bridge Design	SE 254 FRP in Civil Structures
SE 207 Advanced Timber Design	

Earthquake Engineering

SE 203A Structural Dynamics I SE 203B Structural Dynamics II	SE 223 Advanced Seismic Design of Structures
SE 206 Random Vibrations	SE 225 Probabilistic Seismic Hazard Analysis
SE 220 Seismic Isolation and Energy Dissipation	SE 227 Seismic Design and Analysis of Nonstructural Components and Systems
SE 221 Earthquake Engineering	SE 243 Soil-structure Interaction

SE 222 Geotechnical Earthquake Engineering	

Advanced Composites

SE 251A Processing Science of Composites	SE 260B Aerospace Structural Mechanics II
SE 251B Mechanical Behaviors of Polymers & Composites	SE 261 Aerospace Engineering Design
SE 252 Experimental Mechanics and NDE	SE 262 Aerospace Structures Repair
SE 253A Mechanics of Laminated Comp. Structures I	SE 266 Smart and Multifunctional Materials
SE 253B Mechanics of Laminated Comp. Structures II	SE 281 3D Printable Robotics
SE 253C Mechanics of Laminated Anisotropy Plates & Shells	SE 285 Structural Optimization
SE 254 FRP in Civil Structures	SE 286 Design Optimization for Additive Manufacturing
SE 260A Aerospace Structural Mechanics I	

Geotechnical Engineering

SE 222 Geotechnical Earthquake Engineering	SE 246 Unsaturated Soil Mechanics
SE 241 Advanced Soil Mechanics	SE 247 Ground Improvement
SE 242 Advanced Foundation Engineering	SE 248 Engineering Properties of Soils
SE 243 Soil-structure Interaction	SE 249 Rock Mechanics
SE 244 Numerical Methods in Geomechanics	SE 250 Stability of Earth Slopes & Retaining Walls
SE 181 Geotechnical Engineering	SE 183 Stability of Slopes & Walls

Solid Mechanics

SE 202 Structural Stability	SE 271 Solid Mechanics for Structural & Aerospace Engineering
SE 234 Plates and Shells (or MAE equivalent)	SE 272 Theory of Elasticity
SE 235 Wave Propagation in Elastic Media	SE 273 Inelasticity
SE 252 Experimental Mechanics and NDE	SE 207 Constitutive Modeling of Metals
SE 270 Fracture Mechanics	

Structural Health Monitoring and Nondestructive Evaluation

SE 202 Structural Stability	SE 264 Sensors and Data Acquisition for SE
SE 204 Advanced Structural Dynamics	SE 265 Structural Health Monitoring Principles
SE 205 Nonlinear Mechanical Vibrations	SE 266 Smart and Multifunctional Materials
SE 206 Random Vibrations	SE 267 Signal Processing
SE 224 Structural Reliability and Risk Analysis	SE 268 Structural System Testing and Model Correlation
SE 252 Experimental Mechanics and NDE	SE 269 Validation and Verification of Computational Models I
SE 263 Nondestructive Evaluation	SE 282 Diagnostic Imaging

SE 164 Sensors and Data Acquisition for Structural Engineering	

COURSE OFFERINGS 2025-2026

The course offerings are posted on the SE website and updated regularly. Here is the link for 2025-2026 Graduate Courses. You can look at the Course Offerings to better plan your Degree registration/course booking.

GRADUATE COURSES

You can read the course descriptions, prerequisites, and requirements in the Course Catalog and the SE Website.

Example:

SE 201A. Advanced Structural Analysis (4)

Application of advanced analytical concepts to structural engineering problems. Analysis of frame structures using matrix methods and introduction to the finite element method. Displacement-based and force-based beam element formulations. Development of computer programs for structural analysis. Use of computer resources. ***Prerequisites:*** graduate standing.

Note:
For cross-listed classes (listed under two different numbers/titles/departments, or because there is both an undergrad & a grad version of it with different numbers/titles) students cannot take one course and receive credit for two.

TECHNICAL ELECTIVES

Technical Electives can be any Science, Mathematics, or Engineering graduate course or approved SE upper division undergraduate courses.

Some classes are cross-listed on the upper division Pre-approved Technical Elective List. Students are not to enroll in the graduate equivalent course if they have already successfully passed the undergraduate version of the course. Any student who would like to be exempt from this policy must discuss their request with their faculty advisor then receive written approval from the Graduate Affairs Committee Chair. Any requests can be submitted to se-sa-grad@ucsd.edu with the following information:

1. Course number, name, and grade received in undergraduate course
2. Course number and name of the graduate course desired
3. Reason for repeating the course
4. Written documentation of faculty advisor's approval

GRADUATE RESEARCH

Ph.D. students conducting research must take SE 299 under his/her Faculty Advisor. Upon completing the first Ph.D. exam, 12 units of SE 299 every quarter until completion is the expectation.

M.S. students completing their Thesis must enroll in SE 299 with their Thesis Advisor. M.S. students completing their M.S. in SHM&NDE must enroll in SE 296 with their Faculty Mentor.

SE Ph.D. TRANSFER CREDIT POLICY

Any SE Ph.D. student who would like to request for transfer credits towards their degree, must submit the following for each of the courses they'd like transferred:

1. Course outline
2. Course syllabi
3. The transcript with the course grade (unofficial transcript is acceptable)
4. Supporting documentation noting that the course was not used towards a M.S. degree
   (This only applies to those Ph.D. students who will be requesting a M.S. Degree from the SE Department at UCSD)
5. Description of why the course is equivalent to one of the SE courses

All documentation must be sent in via this SE Transfer Request Google Form. The SE Graduate Advisor will have the requests reviewed by the Graduate Affairs Committee (GAC) Chair and communicate in writing the result of the request(s). There is no limit on how many courses may be transferred. If a Ph.D. student obtaining a M.S. Degree on the path to their Ph.D. degree, the student must adhere to all the M.S. policies.

ENROLLMENT AND COURSE BOOKING DEADLINES

The Enrollment & Course Booking Calendar below has important deadlines for the 2025-2026 Academic Year:

Description	Fall 25	Winter 26	Spring 26
Schedule of Classes available	5/20	11/5	2/6
Enrollment begins for all continuing students	5/23	11/10	2/14
Effective date for fee payment holds	5/20	11/22	2/21
Billing statement available on TritonPay. (eBill available continuing students)	9/3	12/3	3/4
Registration fee payment deadline	9/24	12/19	3/20
Deadline for mandatory health insurance waiver - all students (after this date, $50 late waiver fee will apply until late waiver deadline, see below.)	9/14	12/14	3/14
Quarter begins	9/22	1/2	3/25
Late registration fee payment deadline (to avoid being dropped from enrolled classes or wait listed courses)	9/29	1/7	3/30
First day of classes	9/25	1/5	3/30
Late health insurance fee waiver deadline (no waivers will be accepted beyond this date)	9/20	12/20	3/20
Deadline for all students to add or re-enroll in classes if canceled for non-payment via WebReg. Find out how to add a class.	10/10	1/16	4/10
Deadline for Graduate students to file for leave of absence , in absentia or to apply for half-time status for current quarter	10/10	1/16	4/10
Deadline to file for Advancement to Candidacy for Master's degrees	10/17	1/23	4/17
Deadline for all students to drop classes without "W" grade on transcript	10/24	1/30	4/24
Deadline for all students to change grading option	11/7	2/13	5/8

Deadline for Graduate students to drop with "W" grade on Transcript	12/1	3/6	5/29
Deadline for Graduate students to change units	12/5	3/13	6/5
Last day of classes before finals	12/5	3/13	6/5
Finals week	12/6-12/13	3/14-3/21	6/6-6/12
Deadline to file for "Removal of Grade Incomplete" from previous quarter	12/13	3/21	6/12
Quarter ends	12/13	3/21	6/12
Deadline to file for a Request to receive a grade of "Incomplete"	12/15	3/23	6/15
Grades available in the Triton Student System (TSS)	12/18	3/26	6/18

The Academic and Administrative Calendar below has the important dates to note for Fall 2025:

Fall 2025	
Fall Quarter begins	Monday, September 22
Instruction begins	Thursday, September 25
Veterans Day Holiday	Tuesday, November 11
Thanksgiving Holiday	Thursday – Friday, November 27-28
Instruction ends	Friday, December 5
Final Exams	Saturday – Saturday, December 6–13
Fall Quarter ends	Saturday, December 13
49 Days of Instruction - 60 Days in Quarter	

CAMPUS AND SAN DIEGO AREA INFORMATION

RESEARCH FACILITIES

The high national and international visibility and recognition of the UCSD Structural Engineering program can be attributed to the outstanding and unique experimental facilities and the high quality of the structural engineering faculty.

The Charles Lee Powell Structural Research Laboratories have developed over the past two decades into one of the world's leading experimental structural research facilities for large and full-scale testing of structural systems and components. Currently, three separate test facilities comprise the Powell Structural Research Laboratories on UCSD campus.

The Structural Systems Laboratory with a 15-m high reaction wall and a 30-m long and 15-m wide strong floor is capable of full-scale testing of up to 5-story buildings under simulated seismic loads and complete bridge systems under simulated traffic and/or seismic load conditions.

The Structural Components Laboratory features a 20-m long reaction wall for structural component tests such as columns, beams, joints, etc., and a 5 x 3-m shake table for real time earthquake load simulation on structural models and components with payloads close to 40 tons.

The Composite and Aerospace Structures Laboratory is dedicated to the evaluation of advanced composite structural components and systems. State-of-the-art equipment including servo-controlled hydraulic actuators and signal conditioning for up to 1,500 high-speed data channels provides structural testing capabilities which are unequaled worldwide.

The Powell Structural Research Laboratories also include manufacturing and materials characterization laboratories, such as the **Advanced Composites Laboratory** for advanced composite materials and structural members, and geotechnical research laboratories with a state-of-the-art geotechnical centrifuge (5 meter diameter).

A fourth large-scale structural testing laboratory houses the **Caltrans Seismic Response Modification Device (SRMD) Testing Facility** for the full-scale testing and evaluation of seismic response mitigation devices such as base-isolation bearings and dampers.

With its one-of-a-kind facilities, the **Englekirk Structural Engineering Center** at the Elliot Field Station of the University of California San Diego is enabling structural tests that have never been possible before. The Center is equipped with the world's first outdoor shake table (https://nheri.ucsd.edu/), as part of the Natural Hazards Engineering Research Infrastructure supported by NSF, allowing researchers to perform dynamic earthquake safety tests on full-scale structural systems. Adjacent to it is the country's largest soil-structure interaction test facility. The Center's **blast simulator** is being used to study the effects of bomb blasts and test new technologies to harden buildings against terrorist bomb attacks.

Other research laboratories include the **NDE & Structural Health Monitoring Laboratory, Structural Dynamics Laboratory**, and the **Active, Responsive, Multifunctional, and Ordered-materials Research (ARMOR) Laboratory**. Laboratory listings and additional information can be found on our website: (SE Testing Facilities).

IMPORTANT NUMBERS - IN CASE OF EMERGENCY

EMERGENCY – Life threatening situation From a campus phone From a cell phone, call UCSD Campus Police	 911 (858)534-HELP (4357)
If the emergency involves any of the department labs Notify Tyler Allen	(858) 226-5243
UCSD Medical Center, La Jolla, Thornton Hospital, Emergency and Urgent Care	(858) 657-7600
UCSD Medical Center, Hillcrest Emergency and Urgent Care	(619) 543-6400
Student Health Services (Urgent Care)	(858) 534-3300
San Diego County Center for Community Solutions (Rape Crisis Hotline)	(888) 385-4657
Student Sexual Assault Resource Center (SARC)	(858) 534-5793
Counseling and Psychological Services (CAPS)	(858) 534-3755
Poison Information Hotline (24 hour)	(858) 876-4766
Environment Health & Safety Hotline	(858) 534-3660
Physical Plant Repair (Trouble Desk) Facilities Management	(858) 534-2930
Lost & Found	(858) 534-4361
Student Policies & Judicial Affairs (SPJA)	(858) 534-6225

DIRECTORY OF CAMPUS SERVICES

Resources:		
Educational Technology Services	acs-help@ucsd.edu	https://blink.ucsd.edu/technology/computers/basics/ACMS/index.html
Bookstore	(858) 534-7323	https://ucsandiegobookstore.com/
Graduate & Professional Student Association (GPSA)	contact@gsa.ucsd.edu (858) 822-3243	https://gradsa.ucsd.edu/
Division of Graduate and Postdoctoral Affairs	gradadmissions@ucsd.edu (858) 534-3555	https://grad.ucsd.edu/
UCSD Libraries	(858) 534-3336	http://libraries.ucsd.edu/
Parking	parking@ucsd.edu (858) 534-4223	https://transportation.ucsd.edu/parking/index.html
Photo I.D./Campus I.D. Card	campuscards@ucsd.edu (858) 534-6606	https://sfs.ucsd.edu/campus-cards/index.html
Registrar's Office	registrar@ucsd.edu (858) 534-3150	https://students.ucsd.edu/sponsor/registrar/
Residency Requirements	residencedeputy@ucsd.edu	https://students.ucsd.edu/finances/fees/residence/about.html
Shortcut to Links that Grad Students need		
Student Financial Aid	finaid@ucsd.edu (858) 534-4480	https://fas.ucsd.edu/
Student Health Services	(858) 534-3300	https://wellness.ucsd.edu/studenthealth/Pages/default.aspx
Campus Services:		
Career Service	(858) 534-3750	http://career.ucsd.edu
Teaching + Learning Commons	(858) 246-2110	https://commons.ucsd.edu/
Cross Cultural Center	(858) 534-9689	http://ccc.ucsd.edu/
International Center		https://ispo.ucsd.edu/

Lesbian, Gay, Bisexual, Transgender Resource	(858) 822-3493	http://lgbt.ucsd.edu/
Office for Student with Disabilities (OSD)	(858) 534-4382	http://disabilities.ucsd.edu/
Counseling and Psychological Services (CAPS)	(858) 534-3755	https://wellness.ucsd.edu/CAPS/Pages/default.aspx
Sexual Harassment Prevention & Policy	OPHD Director/Title IX Officer (858) 534-8298	https://www.ucsd.edu/catalog/front/shpp.html
Student Legal Services	(858) 534-4374	https://students.ucsd.edu/sponsor/student-legal/
CARE at the Sexual Assault Resource Center (SARC)	(858) 534-5793	https://care.ucsd.edu/
Women's Center	(858) 822-0074	http://women.ucsd.edu/
Child Care Services:		
Early Childhood Education Center	(858) 246-0900	https://child.ucsd.edu/programs/ecec/index.html
Recreation:		
UC San Diego Recreation	RIMAC/Liontree: (858) 534-3557 Main Gym Complex: (858) 822-4815 Main Gym Natatorium: (858) 822-4815	http://recreation.ucsd.edu/
Graduate Housing:		
HDH Graduate and Family Housing		https://hdhgradfamilyhousing.ucsd.edu/