



California State University, Los Angeles
Department of Civil Engineering

Undergraduate Student Handbook
B.S. in Civil Engineering

Although every attempt has been made to keep this handbook up to date and accurate, it is an advising tool and not an official University policy statement. Therefore, in cases where there are contradictions, the official university rules take precedence over statements in this handbook.

Prepared by the Faculty of the Department of Civil Engineering

2018

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I. INTRODUCTION

THE CIVIL ENGINEERING PROFESSION

Civil engineering is the broadest of the engineering disciplines, extending across many technical specialties that interact with each other. As a civil engineer, you plan, design, and supervise the construction of facilities that vary widely in nature, size, and scope. Space satellites and launching facilities, offshore structures, bridges, buildings, tunnels, highways, transit systems, dams, airports, irrigation projects, treatment and distribution facilities for water, and collection and treatment facilities for wastewater are just some of the projects in which you could be involved.

In addition to facility design and construction, you will also have options to teach and to participate in research. As you develop your skills, you will have the opportunity to move into the area of engineering management, overseeing the completion of entire projects.

As we enter the new millennium, the growth of the world population beyond seven billion people will continue to increase the demands for energy producing, food supplying, land stabilizing, water preserving, transportation providing, materials handling, waste disposing, earth moving, health caring, environmental cleansing, living, working and structural facilities on an unprecedented scale. As always, the skills of civil engineers will be needed to make this happen. The civil engineer builds to advance civilization and make possible the higher standards of living that lie ahead.

You will be in the forefront of high-technology's newest applications and will be using the latest concepts in computer-aided design (CAD) during design, construction, project scheduling, and cost control. You will be working with architects, owners, contractors, city councils, planning commissions, government officials, and others involved in the many aspects of design and construction.

One of the greatest rewards of civil engineering is the personal satisfaction derived from the creation of enduring construction that make our communities better places in which to live and work.

AREAS OF SPECIALIZATION

Structural Engineering

Hydraulic and Water Resources Engineering

Geotechnical Engineering

Transportation Engineering

Environmental Engineering

A complete description of each area of specializations can be found at:

<http://www.calstatela.edu/ecst/ce/undergraduate>

A complete list of all faculty and their area of specialization is available at:

<http://www.calstatela.edu/ecst/ce/faculty>

CHOOSING YOUR TECHNICAL SPECIALTY

Introductory courses in all areas of civil engineering are included in the Upper Division Required Courses. These courses will introduce and provide an overview of the field and help you select an area in which you would like to specialize.

If you decide to concentrate on a specialty at this stage, you will be able to pursue it in more detail by choosing the appropriate Upper Division Electives. You may, however, continue taking courses in several areas if you wish and wait until after graduation before deciding on a specialty.

Almost one-third of the civil engineering graduates today go straight into a master's degree program and others pursue a master's degree later while in practice. This postgraduate study is widely supported by many employers. Significant and increasing numbers continue on to earn a doctorate degree, primarily to prepare for careers in research and teaching.

In the master's degree program at Cal State L.A., you can specialize in structural engineering, geotechnical engineering, hydraulic and water resources engineering, transportation engineering, and environmental engineering.

The Department of Civil Engineering at Cal State L.A. offers a contiguous program (Integrated BS/MS program) leading to a Master of Civil Engineering for academically excellent upper-division students in the BS degree program. This program provides an accelerated route for these students to complete the MS degree program while simultaneously completing the BS requirements.

For more information on the Integrated BS/MS program please visit the following URL:

http://ecatalog.calstatela.edu/preview_program.php?catoid=22&poid=9290

STUDENT ORGANIZATIONS

Honor Societies

Chi Epsilon and Tau Beta Pi are undergraduate honor societies. Election to honor societies represents outstanding scholarship as well as participation in other activities. Tau Beta Pi is for all engineering disciplines, while Chi Epsilon is for civil engineers only.

Professional Societies

The student chapters of professional societies conduct regular meetings, invite speakers, arrange field trips, and participate in local competitions. ASCE Student Chapter members actively participate in competitions, such as concrete canoe and steel bridge design, for the Pacific Southwest Conference.

Student Organizations

American Society of Civil Engineers (ASCE)

Structural Engineers Association of Southern California (SEASC)

Institute of Transportation Engineers (ITE)

Earthquake Engineering Research Institute (EERI)

PROFESSIONAL REGISTRATION

All civil engineers in charge of a project must be licensed or registered in the state or states in which the project will be constructed. To use the term "Professional Engineer" you must complete the requirements for professional registration or licensure established by the state.

Registration requires education and experience and the successful completion of the Fundamentals of Engineering (FE) examination and the Professional Engineering (PE) examination. The department offers a review course to help students prepare for the FE examination and reimburses the application fees to undergraduate students who successfully pass the exam.

Please visit the following URL to get more information FE exam review course offered through your program:

<http://www.calstatela.edu/page/engineer-training-eit-review-course>

II. UNDERGRADUATE DEGREE REQUIREMENTS

CIVIL ENGINEERING PROGRAM OBJECTIVES AND OUTCOMES

Please visit the following link to find about the department's educational program objective:

<http://www.calstatela.edu/ecst/ce/undergrad-bsce-0>

Please visit the following link to find about the department's program outcomes:

<http://www.calstatela.edu/ecst/ce/undergrad-bsce>

REQUIREMENTS FOR THE MAJOR

Please visit the following URL and select program in the drop down menu and search for the Civil Engineering program in the search box. After selecting Civil Engineering, B.S., you will then see all the major requirements.

<http://ecatalog.calstatela.edu/>

ROAD MAPS

Please visit the following URL for a sample 4-Year study plan recommended by the program:

<http://www.calstatela.edu/ecst/ce/road-maps>

UNIVERSITY REQUIREMENTS

Written English Competency Requirement

All CSU students subject to degree requirements listed in the 1977-78 and subsequent catalogs are required to demonstrate competence in writing skills as a requirement for the bachelor's degree. The development of competence in written English is a key institutional learning outcome that depends on the active participation of all University faculty. The main responsibility for teaching English Composition has historically resided within the English department, but because the University's written English competency

requirements span a student's academic career, all faculty play an important role in helping students become effective writers.

At Cal State L.A., undergraduate students demonstrate competence in written English by meeting the following requirements:

First-Year Writing Requirement-successfully completing a first-year writing course that satisfies the CSU General Education Block A Written Communication requirement. Satisfied by ENGL 1010.

Critical Thinking/Composition Requirement- successfully completing a second course in written English that satisfies the Cal State L.A. General Education Block A Critical Thinking/Composition requirement. Satisfied by CE 3060, CE 4960, and CE 4970.

Writing-Intensive (WI) Courses Requirement-will be satisfied in the major through CE 3060 and CE 4960

Upper-Division Disciplinary Writing Requirement- will be satisfied by CE 3060.

III. GENERAL INFORMATION: PROCEDURES AND REGULATION

STUDY LOAD

Undergraduate students must carry a study load of 12 semester units for full-time enrollment certification by the University. The recommended full-time study load for undergraduates is 15 semester units. Students on scholastic probation must limit their study load to 12 semester units or fewer. A student on probation may petition the university for a greater study load with the approval of an academic advisor and department/division chair or school director.

CAMPUS IDENTIFICATION NUMBER (CIN)

California State University, Los Angeles randomly assigns a nine-digit Campus Identification Number (CIN) to all students in the University. This number is used as a means of identifying records and offering services pertaining to students. The students' Social Security Number will continue to be retained for purposes of financial aid eligibility and other debts payable to the institution.

REGISTRATION

Continuing students at California State University, Los Angeles receive information regarding their registration appointment dates by logging into GET (Golden Eagle Territory). Additional information about registration procedures is provided in the Schedule of Classes, available online each semester before the registration period. Web registration (GET) is available to all eligible continuing students. Students maintain their continuing student status for registration purposes only by attending at least one of the two semesters immediately preceding the semester in which they plan to enroll (excluding the summer term). Students who were admitted and enrolled in one of the last two semesters preceding the semester in which they plan to enroll will also maintain their continuing student status for registration purposes. Absence for more than one of any two consecutive semesters without an approved leave of absence will cancel continuing registration eligibility. See Leaves of Absence later in this chapter.

Attendance in University extension courses does not constitute continuous attendance. Students who

attended another college or university during an absence from Cal State L.A., except for a summer session or extension program or approved visitor enrollment at another CSU campus, are required to file an application for admission as a returning student and have official transcripts of work taken sent to the Admissions Office. A nonrefundable application fee is charged. Such students will, if eligible, receive forms to register as returning students.

Students who have graduated with a bachelor's degree from Cal State L.A. and wish to continue in graduate standing are required to file a new application for graduate admission and will, if eligible, receive forms to register as new students.

ACADEMIC ADVISEMENT

The ECST Student Success Center provides an array of services to incoming freshman and sophomore civil engineering majors. Advisement is mandatory every semester for the first two years until the junior year (at the completion of all Calculus and Physics courses). Students will receive an "Academic Advisement Hold" on GET every semester and will be able to register for the next semester only after they meet with the advisor. Students must make an appointment in advance to guarantee advisement time with a professional advisor or peer advisor. Following completion of all Calculus and Physics courses, advising is provided to each Civil Engineering student by full-time Civil Engineering faculty based on the last digit of the student's CIN number. All full-time faculty in the Department of Civil Engineering serve as advisors although the department has one faculty member in addition to the chair who act as the primary departmental advisors. Advising hours are posted outside the department and faculty offices.

If a student has transferred to the University from another institution, the student may access the online system to determine the transfer credit given for courses taken at other institutions and specifying which courses (if any) have been accepted toward the major. In some occasions during the initial advising the Transfer Credit Evaluation (TCE) may not yet have been completed by the University. In these cases, the advising is based on a tentative evaluation by the advisor on the basis of an unofficial transcript, which will be formalized later once the University has completed its TCE.

After meeting with their faculty advisor for the first time, students are urged to see their advisor each semester prior to registration. The purpose of these pre-registration meetings is to review the student's progress, to double check that the student is meeting the prerequisites, and to provide an opportunity for the student to discuss any questions he or she may have.

Mandatory advisement occurs at both the junior and senior level for all Civil Engineering students. At the Junior level, all students enrolled in the required CE 3610 (Introduction to Structural Design), are flagged and required to attend a department sponsored advisement workshop scheduled during every semester in the academic year. These mandatory sessions provide one-on-one advisement of the students in terms of where they stand in the program and what they need to do to complete the major requirements. The focus is on identifying coursework still needed to enroll in the Senior Design sequence, reacquaint students on how to look up their own advisement reports on the centralized advisement website (GET system), and to understand and interpret their individualized reports and plan their schedules to be able to achieve their timely graduation goals. Career guidance is also discussed. Finally, all students in senior standing are formally evaluated by the department chair one semester prior to their anticipated graduation through "Grad. Check." This pre-graduation evaluation process ensures that students are on track to satisfy all curricular requirements and have achieved at least a 2.0 GPA in the following four areas: (1) all units attempted (including units accepted as transfer units); (2) all units attempted at CSLA; (3) all courses used to meet the General Education requirements; and (4) all courses required for the Civil Engineering major.

REPEATING COURSES

Undergraduate students may repeat a course no more than two times (a maximum of 3 times taking the same course). Undergraduate students who wish to repeat an individual course a second time must create an action plan with the appropriate academic advisor and receive approval from the college associate dean or designee of their major course of study. These limits apply to courses completed at Cal State LA, whether as a matriculated student or through the College of Professional and Global Education or Open University. Repeating courses under this policy does not result in the removal of the original record and grade from the transcript.

Individual colleges and departments/divisions/schools/programs may have additional restrictions on repeating courses. Unless otherwise indicated, undergraduate students may not repeat for credit any course already completed with a grade of C (2.00 grade points).

ACADEMIC RENEWAL

Under certain circumstances, up to two semesters or three quarters of previous undergraduate course work taken at any college may be disregarded from all considerations associated with requirements for the baccalaureate. Detailed eligibility and procedural information is provided in the *Schedule of Classes*.

The basic criteria are listed below:

- Five years must have elapsed since the completion of the most recent work to be disregarded;
- Any previous removal of work from degree consideration must be included in applying the limits on work that may be disregarded;
- Since completion of the work to be disregarded, students must have maintained the following grade point averages at Cal State L.A. at the time of petition: 3.0 for students with 15-29 semester units completed; 2.5 with 30-44 semester units completed; and 2.0 with 45 or more semester units completed; and
- There must be evidence that the student would find it necessary to complete additional units and enroll for one or more additional semesters to qualify for the baccalaureate if the request was not approved.

Students are advised that they may file a petition to disregard undergraduate course work as described above if their grade point average is lower than C (2.0) in general education, the major, or overall college units attempted (a condition preventing them from qualifying for the degree) and they meet all of the above criteria and conditions.

REPEATING COURSES with “GRADES AVERAGED”

In addition to the 16 semester units for which grade replacement is permitted, undergraduate students may repeat 12 semester units with the grade earned in the repeated course calculated into the student’s overall grade-point average. The original grade is not replaced by the repeated grade; both grades are used for the calculation of the grade point average and remain on the student’s records

WITHDRAWALS and LEAVES

Add and Drop Deadlines and Limit on Number of Withdrawals

Students may add and drop classes without restriction or record through the first 15% of an instructional period.

Drops occurring after the first 15% of an instructional period and prior to the last 20% of an instruction period are considered withdrawals and shall be recorded with a grade of “W” on the student’s permanent record transcript. Withdrawals are permitted only for serious and compelling reasons. The student must complete a drop request form, state the reason for withdrawal, and obtain the signatures of the course instructor and the department/division chair or school director. Records of such approvals shall be maintained in accordance with campus record retention policy. Undergraduate students may withdraw from no more than 18 semester units (27 quarter-units) attempted at Cal State Los Angeles.

Withdrawals shall not be permitted during the final 20% of instructional period except where the cause of withdrawal is due to circumstances clearly beyond the student’s control (e.g. serious illness, accident, job transfer, military deployment, etc.) and the assignment of an incomplete is not practicable. Withdrawals of this sort may involve total withdrawal from the University or may involve only one course, except that course grade and credit or an incomplete may be assigned for courses in which sufficient work has been completed to permit an evaluation to be made. Requests for permission to withdraw under these circumstances shall be handled and filed as indicated in the preceding paragraph, except that such requests must also be approved by the appropriate college dean. Such withdrawals shall not count against the 18 semester-unit maximum.

Add and drop activity occurring on or after the first day of instruction may incur late payment fees and refund limitations as specified by the office of student financial services and the center for student financial aid and scholarships.

COURSE PREREQUISITES AND COREQUISITES

Students are responsible for fulfilling any and all prerequisites and corequisites. The instructor and department have the authority to waive specific prerequisites and/or corequisites for students who have completed equivalent courses at another institution, who have had equivalent experience (such as work experience), or who possess the requisite skills to proceed with the work of the course. Students should consult the instructor before registering to determine whether the course(s) or experience they present will justify waiver of the stated prerequisite(s) and/or corequisite(s). Note that some courses require a grade of C or higher in order to enroll in a subsequent course.

GRADES REQUIRED FOR CREDIT

Students will receive no credit for any course in which they do not earn a grade of D- or higher.

GRADE POINT AVERAGE REQUIREMENTS

Undergraduate students are expected to maintain a C (2.0) average in all courses attempted at Cal State L.A. and any other college or university attended and to make satisfactory progress toward their academic objectives. Students who receive financial aid should inform themselves of additional criteria defining satisfactory progress by consulting the Center for Student Financial Aid.

PROBATION FOR UNDERGRADUATE STUDENTS

Probation is determined separately for academic and administrative-academic deficiencies. Students' probation status is indicated on their class grades for the term viewable online in GET under Academic Standing.

ADMINISTRATIVE-ACADEMIC PROBATION

The Office of the Chancellor has made provision whereby students may be placed on administrative-academic probation for any of the following reasons:

- Withdrawal from all or a substantial portion of courses for which they registered in two successive semesters or in any three semesters.
- Repeated failure to progress toward a stated degree or program objective when such failure is within their control.
- Failure to comply, after due notice, with a routine academic requirement or regulation.
- Written notice is given of the conditions required for removal from administrative- academic probation, as well as circumstances that would lead to disqualification if probation is not rectified.

ACADEMIC PROBATION

Students are placed on academic probation at the end of a semester if either their grade point average at Cal State L.A. or their cumulative grade point average in all college work attempted falls below C (2.0). They remain on academic probation until their Cal State L.A. and cumulative grade point average is 2.0 or higher or until they are disqualified in accordance with the regulations for academic disqualification.

DISQUALIFICATION OF UNDERGRADUATE STUDENTS

Disqualification is determined separately for academic and administrative-academic deficiencies. Students' disqualification status is indicated on their grade report.

Academic Disqualification

Students already on probation or special probation whose Cal State L.A. or cumulative grade point average reaches the following levels are disqualified:

<i>Class Level</i>	<i>Grade Point Average</i>
Freshman (0-29 units completed)	<1.50
Sophomores (30-59 units completed)	<1.70
Juniors (60-89 units completed)	<1.85
Seniors (90+ units completed)	<1.95

Disqualified students are required to arrange a disqualification interview with their academic advisor to review the reasons for disqualification, to explore the option of requesting special probation or readmission, and to establish the terms and conditions for recommending special probation or readmission. Undeclared

majors will hold this interview with their advisor in the University Academic Advisement Center.

Administrative-Academic Disqualification

The Office of the Chancellor has made provision whereby students placed on administrative-academic probation may be disqualified for any of the following reasons:

- The conditions for removal of administrative-academic probation are not met within the period specified.
- Students become subject to academic probation while on administrative-academic probation.
- Students become subject to a new administrative-academic probation period for the same or similar reasons of a previous probationary period, although not currently in such status.

Notification of Disqualification

Students' notices of disqualification appear on their unofficial transcript in GET. Students who wish to appeal their disqualification should refer to Immediate Reinstatement below. Disqualified students are required to arrange an exit interview with their academic adviser to establish readmission requirements. Undeclared majors will hold this exit interview with their assigned adviser in the University Academic Advisement Center.

Special Probation

Continuing students who have been disqualified may petition to remain as matriculated students on special probation. To be eligible for special probation, disqualified students must complete the disqualification interview with their academic adviser and obtain the advisor's approval. The advisor must specify on the special probation petition the terms and conditions under which the student will be eligible to be returned to and to remain in matriculated status, such as courses to be repeated, courses to be completed, GPA requirements, and any required workshops and/or tutoring.

A student's initial petition for special probation must be approved by the appropriate department chair, division chair, and school director. Subsequent petitions for special probation must be approved as well by the appropriate college or university dean for that student. Students' approved special probation petitions must be received in enrollment services by the specified deadline.

All disqualified students who are placed on special probation are required to earn **better** than a C (2.0) grade point average each semester until their grade point average is increased to a level that is higher than that which would normally cause them to be disqualified according to their class level, at which time they would be switched from special probation to probation.

RESIDENCE REQUIREMENT

Undergraduate students must complete a minimum of 30 semester units, including at least 24 upper division units, 12 units in the major, and 9 units in general education courses, in residence at Cal State L.A. for the baccalaureate. Credit earned in special sessions may be applied toward this residence requirement. However, only 24 residence units may be earned through Open University. Credit earned in extension courses or by examination may not apply toward the residence requirement.

UNDERGRADUATE CREDIT FOR GRADUATE COURSES

Under special academic circumstances as specified below the department may approve the granting of

baccalaureate credit for 5000-level course work to a maximum of two courses not to exceed a total of 6 semester units. Academic credits earned under this rule may not be used to satisfy requirements towards M.A. and M.S. degrees awarded by California State University, Los Angeles. Additionally, the following conditions must be met:

- Senior standing (completion of 90 semester units) at the start of the term in which the course will be taken;
- A grade point average adequate for admission in classified standing to the master's program in that major;
- Permission of the instructor teaching the course, the student's advisor, and the chair of the department, division or school offering the course.

GRADUATE CREDIT FOR UNDERGRADUATE STUDENTS

Undergraduate students with 90 semester units completed may take for graduate credit a maximum of 9 semester units in courses beyond the minimum requirements for the baccalaureate degree, provided they have maintained a grade point average of 2.75. Graduate credit is allowed for courses numbered in the 4000 and 5000 series only. Enrollment in any course for which graduate credit is requested must be approved in advance by the instructor teaching the course, the student's adviser and the coordinator/chair/director of the program/department/division/school offering the course.

The approved application must be delivered to the Graduation Office, Administration 409, during the semester before that in which courses are to be taken.

APPLICATION FOR GRADUATION (DEGREE CHECK)

Once a minimum of 90 semester units is earned, students may apply for graduation. Application for graduation (degree check) is made on a form available at the Cal State L.A. Graduation Office Website, and at Enrollment Services in Administration 409. . Candidates take their completed application form for payment to the Cashiers Office. Once payment is made, candidates take their application to their department for approval and processing. Filing periods are published in the Graduation Information section of the Schedule of Classes.

Students arrange to meet with their faculty adviser who will complete the Bachelor's Degree Application Worksheet and approve the candidate's major program. The department then forwards the documentation to the Graduation office for processing. The Graduation Office notifies students of the receipt of their graduation application and supporting documents.

Graduation check results are sent to the students in the mail prior to their final anticipated semester. Students who are enrolled in the semester they expect to graduate but do not complete all degree requirements will have their graduation application "automatically" transferred to the following semester for processing. Students who do not complete all requirements for the degree within the anticipated graduation date or the additional grace semester following the requested graduation date must reapply for graduation.

Degrees dates are posted at the end of the semester in which all requirements are met.

COOPERATIVE EDUCATION

Cal State L.A. offers a range of Cooperative Education courses carrying different unit values. The Cooperative Education program provides educational enhancement by integrating classroom studies with related on-the-job experiences. With department approval, students may earn a maximum of 9 semester units of elective credit toward an academic major or minor, including a maximum of 6 transferred semester units. A maximum of 12 semester units earned in cooperative education may apply toward a baccalaureate.

IV.FORMS

A complete list of relevant forms for the undergraduate civil engineering student can be found at:

<http://www.calstatela.edu/ecst/ce/forms>