

2021

# Computer Science

## Undergraduate Student Handbook



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## Welcome

Dear Students,

Welcome to the Department of Computer Science! In choosing this course of study, you have selected an exciting and dynamic career that uses technology to make life better for everyone — and sometimes make it more fun!

This handbook has the information and tools that you will need to navigate the requirements that will lead to graduation. I encourage you to read it and keep it handy for your reference. In addition, please know that the faculty and staff are here to help you and we encourage you to ask us for help when you need it.

The curriculum is designed to give you a well-rounded education, with flexibility in your major so that you can focus on areas that most interest you. Becoming a computer scientist will require a lot of study time and hard work. Beyond learning the theories and technical skills, you will learn to collaborate with your fellow students, communicate with diverse audiences, become aware of your environmental and social responsibilities as they relate to your field, and nurture your innovative and creative spirit.

We sincerely hope you will enjoy your time at Cal State L.A. and that you will also take advantage of all the wonderful resources available to you as a student.

Sincerely,

*Dr. Elaine Kang*

## I. Advisement

All students must receive academic advisement to help them make informed academic choices. Computer Science majors can thus seek advisement both at the department and the college level as described below:

### Department Undergraduate Advisement

The advisor and student go over the student's degree progress data available on GET. Students will receive both Open Advisement and Mandatory Advisement. The advising information is available at the [department advising webpage](#).

#### Open Advisement:

- i) Advisor/staff office visitation: Office hours for the Advisor and the Department chair are posted in the Department Office and the [Department Advising Webpage](#). Students meet with their faculty advisor: to evaluate class work to date, to discuss issues (if any) impacting their present load, to resolve any GPA issues, and to plan subsequent classes. Students may also seek the advice of any faculty member in evaluating career choices.
- ii) Email advisement: Students may seek advisement via email.

#### Mandatory Advisement:

Every student is required to meet with their advisor at least once a year. At these meetings students plan their course schedule for the upcoming semester and formulate a longer-term road map to complete all remaining requirements. Advisement meetings are scheduled first with entering first time freshmen or transfer students and then with continuing students.

- i) Entering first term students: Admitted freshmen and transfer students attend university-sponsored advising sessions, which are attended by the Department chair and program advisors. Students are informed of the degree requirements, course pre-requisites, laboratory access, computer-related student clubs, and the advising process. Students are given information about the program requirements, which are also posted on the online university catalog and the Department website. Students are also given information in the form of an Undergraduate Student Handbook, which is also posted on the Department website.
- ii) Freshmen level in CS1010: Entering freshmen or a first year transfer students must enroll in CS1010 during their first term. CS1010 presents a comprehensive overview of higher education. Topics include: University rules and regulations; general education requirements; major requirements; evaluation of transfer units; sample road maps; individualized quarterly planners; and graduation checks. Instructional videos from CS1010 remain accessible online. Additionally, Professional Staff Advisors and the Placement Coordinator schedule a class visit during the semester to provide career-advising, overview of university and college resources, and academic advising in preparation for next semester's class registration.
- iii) Sophomore level in CS2011: CS2011 is a required course usually taken as the first required course at the sophomore level. The undergraduate faculty advisor visits all the CS2011-CS2013 sections for an in-class advisement session. Students are reminded to keep pace with the General Education, Math and Physics requirements along with CS requirements as specified in the *Undergraduate*

*Student Handbook*. Any questions are clarified. All the students are reminded of the registration “hold” and are mandated to make an appointment with the College Professional Advisor who checks on their GPA and guides them to take particular MATH/PHYS/CS courses. Both the College Professional Advisor and the undergraduate advisor give assistance in modifying their roadmaps.

- iv) Transfer student advisement: All incoming transfer students are required to attend a mandatory orientation session organized by the College of ECST. These students are sent a worksheet (Appendix B in the Student Handbook) and a questionnaire to be filled out before coming to the orientation. The intent is to expedite the transfer evaluation process. The University is committed to complete the official transfer evaluation and reflected in the student transcripts on GET by the transfer orientation date. Transfer students are then ready to take on further classes having completed any of the prerequisites in their transfer institution.
- v) Junior level in CS3112: CS3112 is usually taken as the first required course at the junior level. The advisor creates a group of all students registered for CS3112 or any other CS3000 level courses. All these students are sent a worksheet (Appendix B in the Student Handbook) to create an individualized roadmap and attend a mandatory advising session. Students roadmaps are checked to see if they are on pace to take the senior design the next year. This advising session will serve as a pre-graduation check and students make adjustments to their planner during this session. A “hold” is placed on the students till they complete this task
- vi) Senior level in CS4961. CS4961 is the front end of the senior design sequence. The advisor sends email with Graduation Application Information to all CS4961 students. Students are required to schedule a one-on-one meeting with an advisor and complete a formal graduation check which involves a *Degree Completion Worksheet* and an *Undergraduate Graduation Application* with the advisor to ensure that they are on track to graduate by the end of the academic year.

## College Undergraduate Advisement

The College of ECST Student Success Center is committed to delivering quality advising services to students to assist them in achieving their educational, career, and personal goals. To deliver advising services, our college practices a split advising model in which advising is carried out by professional staff advisors in the ECST Advising Center (EAC), and by faculty advisors in their departments. These services include: academic advisement through professional staff and peer advisors, the engagement of freshman in learning communities, and academic excellence workshops. Advisement is mandatory every semester for the first two years and completion of all lower division MATH/PHYS/CS2000-level requirements. To enforce this mandatory advising to students, the professional advisor places an “Advisement Hold” on GET every semester and any student will be able to register for the next semester if one meets with an advisor.

- Advance appointment guarantees advisement time with a Professional Staff Advisor or Peer Advisor. Appointment may be made either by
  - Visiting the ECST Advising Center (Engineering and Technology building, A-125),
  - Calling the office Front Desk at 323-343-4574, or
  - Visiting <http://www.calstatela.edu/ecst/success/academic-advising-> and clicking on the “Student Success Collaborative” icon.

- The professional staff advisor and student go over the student's degree progress data available on GET.

## Career Guidance

[The College of ECST Professional Placement Services](#) provides a link to industry, the University Career Development Center, and other university departments focused on leadership and professional development. In an effort to ensure that all students are receiving career guidance, workshops are offered in key courses that are required for all students. These courses include: ENGR 1500/CS 1010 (freshmen- Introduction to Higher Education), ENGR 3010/ CS 3801 (junior- Ethics), and CE 4960/EE 4961/ME4971/CS 4961 (senior design project). The content of the workshops are developmentally appropriate based upon the students' academic level. Every session will begin with the ECST motto "Commit to Excellence and Engage in Community." Further, each workshop will focus on two online resources:

- Golden Eagle Career Link <http://www.calstatela.edu/univ/cdc/careerlink> : Cal State L.A.'s online source for jobs, internships, mentoring, and career events.
- Career Express <http://www.calstatela.edu/univ/cdc/careerexpress> : Career Express provides online resources organized into four career preparation areas, 1. Self-Assessment, 2. Researching Careers, 3. Preparing for the Job Search and 4. Job Searching

In addition to the resources listed above, all students receive the core career development topics which include, Resume Writing, Effective Interview Skills, Networking at a Career Fair, Career Fair Follow-up, and Creating an Elevator Speech (30 Second Commercial). Other workshop topics include the following:

### Freshmen Workshop Topics:

- Academic Excellence- Strive to perform well in your classes so that you will be in the best position to obtain scholarships and internships.
- The importance of researching different career fields within the major
- Attending conferences and professional development workshops
- Establishing a Board of Directors

### Junior Workshop Topics:

- Developing a professional identity
- The importance of social media to land a job
- Research Experience for Undergraduate Students (REU) search strategies.

### Senior Workshop Topics :

- How to effectively use your senior design project
- Tailoring your resume to each particular company



## II. Objectives and Learning Outcomes

### Objectives

Program Educational Objectives are broader statements that will describe what graduates are expected to attain within a few years of graduation.

1. Students who had entered the workforce will have established themselves as effective professionals by having solved real problems through the use of their computer science knowledge and their communication, critical thinking, and problem-solving skills.
2. Students who had continued in academia will have been successful in pursuing advanced degrees and in demonstrating their ability to master advanced areas of computer science.
3. Students will have demonstrated their ability to adapt to a rapidly changing environment by having learned and applied new knowledge and skills.

### Learning Outcomes

Student Learning Outcomes are specific skills that the students will possess on completion of the degree program. Students will:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

### III. Useful Web Links

- University home page: <http://www.calstatela.edu/>
- Department of Computer Science home page: <http://www.calstatela.edu/cs>
- Golden Eagle Territory (GET) provides basic online student services: <http://get.calstatela.edu>
- University online catalog: <http://ecatalog.calstatela.edu>
- Student Chapter of the Association for Computing Machinery: <http://acm.calstatela.edu>
- Technical Resources: Information on Cal State LA technical support resources for students: [Technical Support Resources](#)
- IT Resources for Students: Information on ITS Resources for students: [ITS Helpdesk Student Resources page](#)
- Student Support Resources: Information on Cal State LA student support resources for students: [Student Support Resources](#)
- Academic Support Resources: Information on Cal State LA academic support resources for students: [Academic Support Resources](#)
- Center for Academic Success (Tutoring and Writing Center): Includes Tutoring and Writing Center to support students: [Center for Academic Success](#)
- Office of Students with Disabilities (OSD): Information for students with disabilities: [Office of Students with Disabilities](#)
- University Library Online Resources: Information about library resources: [University Library](#)
- Student Advising Services: Information for students about academic advisement: [Student Advising](#)
- Dean of Students Office: Information of a wide variety including help with housing, food insecurity, CARES, etc.: [Dean of Students](#)
- Glazer Family Dreamers Resource Center: The [Erika J. Glazer Family Dreamers Resource Center](#) promotes the success of undocumented students and students from mixed-status families at Cal State LA through a variety of resources, services, and community engagement opportunities. Such programs and services are weekly immigration legal clinics, California Dream Act Application for Financial Aid Assistance, and professional and academic development workshops.
- Veterans Resource Center: The [Veterans Resource Center](#) serves military-connected students by providing academic and professional resources for their development and success.

## IV. General Education/University Requirements

The GE requirements specified in this section reflects updates effective Fall 2021.

The total number of units required for the Bachelor of Science degree in Computer Science is 120 units, which is divided into **General Education Requirements** and **Major Requirements**.

### General Education Requirements

(48 units, of which 21 units are in the major)

#### Lower Division General Education Requirements (39 units)

American Institutions (6 units)

- U.S. History (3 units)
- U.S. Constitution and State/Local Government (3 units)

Block A - English Language Communication & Critical Thinking (9 units)

- A1 Oral Communication (3 units)
- A2 Written Communication (3 units)
- A3 Critical Thinking and Composition (3 units) – Met by major
  - Critical Thinking - Met by major courses
  - 2<sup>nd</sup> Composition – Met by ENGL 2030

Block B - Natural Science & Mathematics/Quantitative Reasoning (9 units)

- B1 Physical Science (3 units) - Met by PHYS2100
- B2 Biological Science [OR] B3 Interdisciplinary Physical/Biological Science (3 units)
- B4 Mathematics/Quantitative Reasoning (3 units) - Met by Math 2110

Block C - Arts & Humanities (6 units)

- C1 Arts (3 units)
- C2 Humanities (3 units) - Met by CS 3801

Block D - Social Sciences (3 units)

Block E - Lifelong Understanding & Self-Development (3 units)

- Met by CS1010, also satisfied LD (cl) and IHE for **Freshmen**

Block F - Ethnic Studies (3 units)

#### Upper Division General Education Requirements (9 units) - Met by major

UD Block B - Natural Science and Quantitative Reasoning (3 units)

- Met by CS 3112, CS 3186

UD Block C - Arts & Humanities (3 units)

- Met by CS 4961, CS 4962

UD Block D - Social Sciences (3 units)

- Met by CS 4961, CS 4962

## University Requirements

A minimum 2.0 grade average is required in (i) Overall at CSULA (ii) Major requirements and (iii) Overall at CSULA. In addition, students must check on the course designations describe below:

<i>Cl</i>	Computer Science students fulfill this requirement in the major (IHE -CS1010 and Senior Design - CS4961/CS4962).
<i>Wi</i>	Computer Science students fulfill this requirement in the major (Senior Design - CS4961/CS4962).
<i>d/re</i>	Diversity Requirement (d) or (re) is a total of 6-semester units; students must complete one race/ethnicity (re) course and one diversity(d) course or another race/ethnicity (re) course. These courses are designated as (re) or (d) before the course listing.

Note:

- (i) “Cl” and “Wi” requirement is met by major courses;
- (ii) “d/re” requirement must be met by the General Education courses.

## V. Major Curricular Requirements

The Computer Science core curriculum provides students with basic knowledge, training, discipline, and skills, as defined by the Computer Science Program Student Learning Outcomes. Through its lower division required courses, the curriculum provides students with the basic mathematical and science framework. Through its upper division required courses, the curriculum builds upon the fundamental principles of computer science for more advanced study. Through its upper division technical electives, students gain additional breadth and/or depth in computer science by an appropriate selection of courses.

### Requirements for the Major (93 units)

A grade of "C" or better is required for all prerequisite courses in the major.

#### Lower Division Required Courses (44 units)

- CS 1222 - Introduction to Relational Databases (3)
- CS 2011 - Introduction to Programming I (4)
- CS 2012 - Introduction to Programming II (4)
- CS 2013 - Programming with Data Structures (4)
- CS 2148 - Discrete Structures (4)
- CS 2445 - Introduction to Computer Systems (3)
- CS 2470 - Fundamentals of Network Systems and Cybersecurity (3)
- ENGL 2030 - Introduction to Technical Writing (3)
- MATH 2110 - Calculus I (4)
- MATH 2120 - Calculus II (4)
- MATH 2550 - Introduction to Linear Algebra (3)
- PHYS 2100 - General Physics I: Mechanics (5)

#### Upper Division Required Courses (33 units)

- CS 3035 - Programming Paradigms (3)
- CS 3112 - Analysis of Algorithms (3)
- CS 3186 - Introduction to Automata Theory (3)
- CS 3220 - Web and Internet Programming (4)
- CS 3337 - Software Engineering (3)
- CS 3801 - Societal and Ethical Issues in Computing (3)
- CS 4440 - Introduction to Operating Systems (3)
- CS 4961 - Software Design Laboratory I (3)
- CS 4962 - Software Design Laboratory II (3)
- CS 4963 - Computer Science Recapitulation (3)

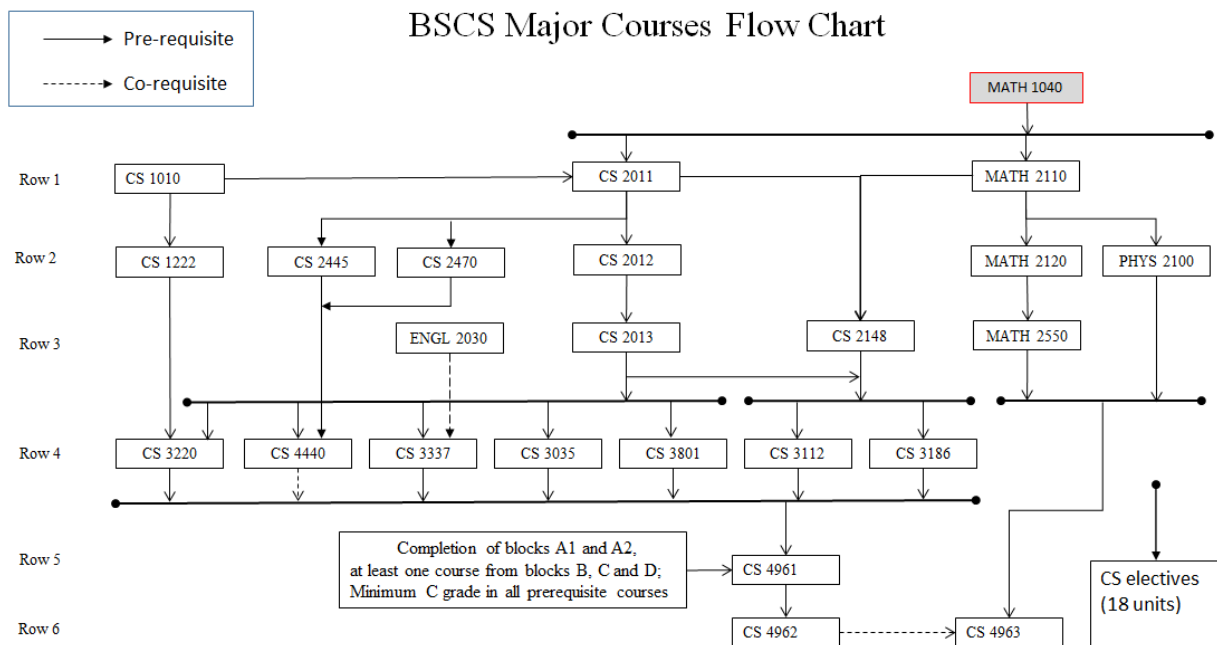
#### Electives (18 units)

- Select 18 units of upper division Computer Science (CS3xxx/CS4xxx) courses that are not required courses.

## Prerequisite Flowchart

The prerequisite flowchart for the B.S. in Computer Science curriculum is depicted in the flowchart diagram below. The courses are structured with the lower division requirements shown in Rows 1 – 3. The advanced required CS courses are shown in Rows 4 – 6. Elective courses should be scheduled between Rows 4 – 6.

As a general rule, students are advised to finish the courses in a particular row before progressing to the next row and follow the graduation roadmaps described in the next section.



## VI. Degree Progress and Graduation Roadmaps

### Pre-Computer Science and Major Specific Declaration Requirements

Computer Science major requires that freshman students begin as Pre-Computer Science and then declare the Computer Science major if and when they complete the [major specific criteria](#). Pre-Computer Science students must pursue the coursework necessary to be able to declare the major by the time they reach 60 units.

#### **Criteria for Major Declaration**

- Minimum cumulative GPA: 2.0
- Major preparation courses (grade of "C" or better required):
  - CS 2011 – Introduction to Programming I
  - MATH 2110 – Calculus I
  - MATH 2120 – Calculus II
  - PHYS 2100 – General Physics I: Mechanics
- General Education courses not covered by major preparation courses listed above:
  - Written Communication
  - Oral Communication

### Pre-Computer Science Incoming Freshmen Needing Math and English Support

When students are admitted to Cal State LA, the university looks at various measures to determine their Math and English placement category. CSU places students into one of four categories in Math and English.

[STEP](#) (SUMMER TRANSITION TO ECST PROGRAM) is required for all incoming freshmen majoring in Pre-Computer Science in the College of ECST who place in Math Category I and II. ECST incoming freshmen who placed in Math Category III or IV will NOT participate in STEP. Students who have successfully completed the ALEKS placement during summer via STEP will be directly placed into calculus. Otherwise, these freshman students will be required to begin with Pre-Calculus as shown in the Figure 1.2.

As for the first-year writing requirement for all incoming freshmen majoring in Pre-Computer Science, the English Placement Test (EPT) determines which courses students can take to satisfy this requirement.

- Exempt from a EPT or a score of 147 or higher: Student can choose to enroll in either the two-semester long first-year writing course (ENGL 1005A & 1005B) or the one-semester accelerated first-year writing course (ENGL1010).
- EPT score of 146 or lower: Student must enroll in the two-semester long first-year writing course (ENGL 1005A & 1005B)

## Precalculus/Calculus Sequence Chart

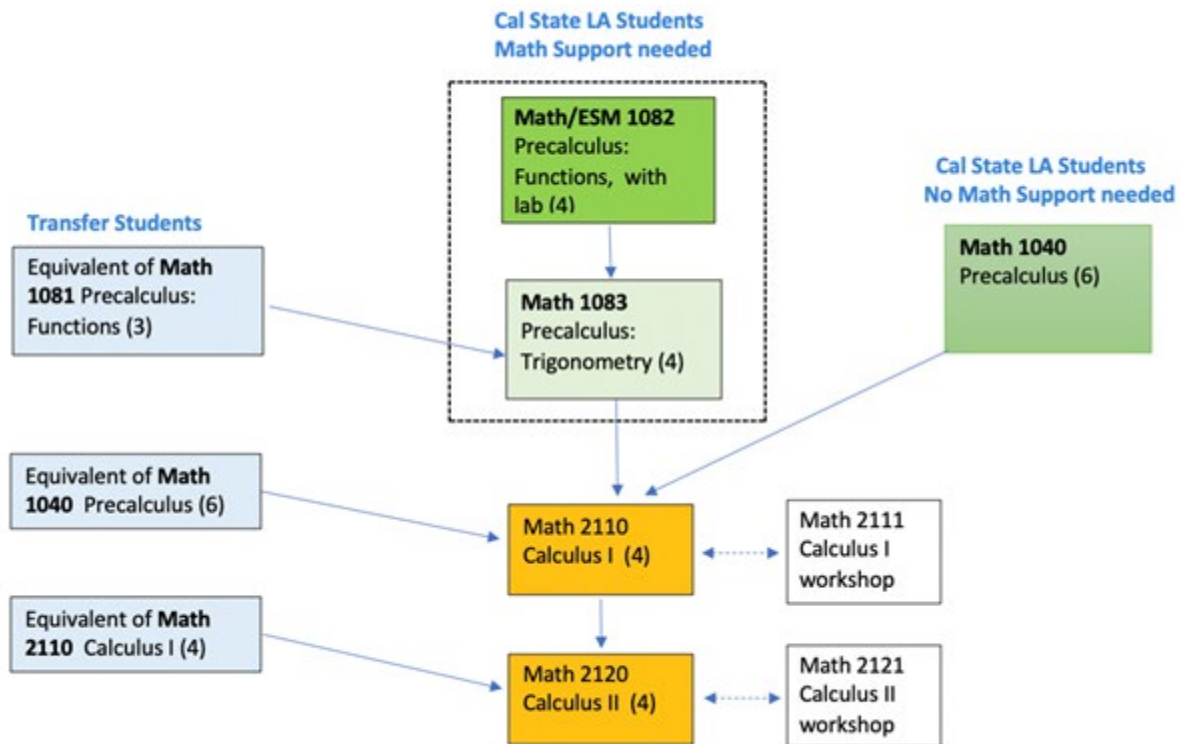


Figure 1.2 Pre-calculus and Calculus Courses

## Unit Limits and Add a Major/Minor

It is expected that students will complete study toward their baccalaureate degree in no more than 120% (144 units for a standard 120–unit program) of the units required by their primary degree program, including a second major or any minors. There may be additional limits on the ability to add a second major or to add/change degree objectives.



## Graduation Roadmaps

Graduation roadmaps are suggested academic plans designed to inform students about the sequence of courses needed to satisfy degree requirements. The roadmaps adhere strictly to the prerequisites and scheduling patterns of the courses.

### Plan 1: Freshman Roadmaps (4 Year completion taking 5 courses/term)

This roadmap is described for students who enter Cal State LA directly from high school as freshman. It assumes that the freshmen students are ready to take MATH 2110 and ENGL 1010 and do not need to take any remedial mathematics or English courses.

This ideal roadmap provides a pathway for students to complete their undergraduate requirements in four years.

YEAR 1	SUMMER	FALL	SPRING
		MATH 2110	MATH 2120
		ENGL 1010	HIST 2020
		COMM 1100	POLS 1000
		CS 1010	CS 1222
		GE B2/B3	CS 2011

YEAR 2	SUMMER	FALL	SPRING
		MATH 2550	ENGL 2030
		PHYS 2100	CS 2013
		CS 2012	CS 2148
		CS 2445	CS 2470
		GE C1	GE D

YEAR 3	SUMMER	FALL	SPRING
		CS 3035	CS 3186
		CS 3112	CS 3801
		CS 3220	CS 4440
		CS 3337	CS Elective
		GE F	

YEAR 4	SUMMER	FALL	SPRING
		CS 4961	CS 4962
		CS Elective	CS 4963
		CS Elective	CS Elective
		CS Elective	CS Elective

Plan 2: Freshman Roadmaps (5 Year completion taking 4 courses/term)

YEAR 1	SUMMER	FALL	SPRING
		MATH 2110	MATH 2120
		ENGL 1010	HIST 2020
		COMM 1100	POLS 1000
		CS 1010	CS 1222

YEAR 2	SUMMER	FALL	SPRING
		PHYS 2100	ENGL 2030
		CS 2011	CS 2012
		GE C1	CS 2445
		GE B2/B3	GE D

YEAR 3	SUMMER	FALL	SPRING
		CS 2013	CS 2470
		CS 2148	CS 3112
		MATH 2550	CS 3220
		GE F	

YEAR 4	SUMMER	FALL	SPRING
		CS 3035	CS 3801
		CS 3186	CS 3337
		CS 4440	CS Elective
		CS Elective	CS Elective

YEAR 5	SUMMER	FALL	SPRING
		CS 4961	CS 4962
		CS Elective	CS 4963
		CS Elective	CS Elective

Plan 3: Roadmap for Pre-Computer Science Incoming Freshmen Needing Math and English Support

A revised plan 2 roadmap (5-year plan) as shown below can be also used for students who need to take additional requirements for Math and English during their first year.

YEAR 1	SUMMER	FALL	SPRING
		MATH 1040	MATH 2110
		ENGL 1005A	ENGL 1005B
		COMM 1100	HIST 2020
		MATH 1040	CS 1010

YEAR 2	SUMMER	FALL	SPRING
		MATH 2120	CS 1222
		CS 2011	CS 2012
		GE C1	PHYS 2100
		POLS 1000	GE D

YEAR 3	SUMMER	FALL	SPRING
		CS 2013	CS 2470
		CS 2445	CS 2148
		ENGL 2030	MATH 2550
		GE F	GE B2/B3

YEAR 4	SUMMER	FALL	SPRING
		CS 3035	CS 3801
		CS 3186	CS 3337
		CS 3112	CS 3220
		CS 4440	CS Elective

YEAR 5	SUMMER	FALL	SPRING
		CS 4961	CS 4962
		CS Elective	CS 4963
		CS Elective	CS Elective
		CS Elective	CS Elective

#### Plan 4: Roadmap for Transfer Students

This roadmap is for students who transfer to Cal State LA directly from another institute of higher education. The plan assumes that the students have entered Cal State LA with completion of all lower division GE requirements and all lower division required math, computer science and physics PHYS courses.

This ideal roadmap provides a pathway for students to complete their remaining upper division (3000/4000 level) undergraduate course requirements as laid out in either Plan1 or Plan2 above.

#### Plan 5: Individualized Roadmap

It is a fact that every student's situation is unique. Therefore, the roadmaps described above should be used as guides. Note the following two characteristics described in the roadmap plans above:

- The roadmaps describe the suggested plan of study (by year and semester term) for students assuming that a student plans for the regular fall and spring semesters. These roadmaps do not include courses during the summer sessions.
- **Students can take classes during the summer session to finish earlier or to reduce the number of units per semester.**
- The roadmaps are designed for individuals who are devoting full-time to their studies and thus taking a full load of 12 to 15 units per semester.

### **Degree Planner**

It is essential that every student should see a faculty academic advisor and complete the Degree Planner on GET. [Degree Planner](#) is an online tool allowing undergraduate students to map their academic path to graduation. It should be updated if any situation changes down the road. Check [the quick reference guide to the degree planner](#) on the next page.



# Degree Planner

**Plan for Timely Degree Completion** – Graduating in a timely manner is a top priority at Cal State LA. Degree Planner is a new online tool allowing undergraduate students to map their entire academic path to graduation. If “Degree Planner” appears in your Student Center in MyCalStateLA, your major is available and you are eligible to use the Planner!

For more information on Degree Planner including which majors are available and who is eligible, visit [calstatela.edu/??](http://calstatela.edu/??) (when available)

## Degree Planner

Help Feedback Schedule Planner Advising Report Advising Report Planned

My Areas of Study

Program	Plan	Catalog Year	Plan Student Group	Planner Available	Primary Major
UGRD Degree Programs	Engineering - Electrical (MAJ / BS)	Fall Semester 2017	EE BS Computer Engineering	No	Yes

Preferences

Fall Semester 2018 16.00 units  
 Spring Semester 2019 15.00 units  
 Fall Semester 2019 15.00 units  
 Spring Semester 2020 15.00 units  
 Fall Semester 2020 14.00 units  
 Spring Semester 2021 17.00 units  
 Fall Semester 2021 17.00 units

EDIT PREFERENCES

ARRANGE MY PLAN DEGREE PLANNER REPORT WHAT-IF REPORT OVERVIEW REFRESH SUGGESTIONS CLEAR LOCKS

Below you will find course work based on the remaining requirements for your major(s) and minor(s). Please note that not all plans may be available at this time.

Start searching for classes by loading your plan into Class Schedule Planner.

Ensure your plan meets all requirements.

Select the terms and unit load to maximize your path to graduation.

Drag-and-drop makes it simple to move classes to your preferred terms.

View a summary of all requirements completed, in progress, and planned.

Considering changing your degree objective? View a customized report.

### Fall Semester 2018

Requirement	Notes	Critical	Units	Course	Info	Planned Units 16.00		Target Units 16.00		Remove
						Select Course	Lock	Advisor Message	Remove	
CHEM 1040 - General Chemistry for Engineers (GE B2)			4	CHEM 1040	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MATH 2110 - Calculus I (GE B4)			4	MATH 2110	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GE E - Lifelong Understanding & Self-Development			3	Not Selected	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE 2440 - Digital Engineering			3	EE 2440	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE 2449 - Digital Logic Laboratory			1	EE 2449	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Major Specialization Upper Division Lab Course			1	Not Selected	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Add Course](#)

### Spring Semester 2019

Requirement	Notes	Critical	Units	Course	Info	Planned Units 15.00		Target Units 15.00		Remove
						Select Course	Lock	Advisor Message	Remove	
MATH 2130 - Calculus III			3	MATH 2130	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PHYS 2200 - General Physics II: Electromagnetism and Circuits			5	PHYS 2200	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE 2450 - Embedded System Programming I			3	EE 2450	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EE 3010 - Ethics and Professionalism in Engineering (GE C2)			3	EE 3010	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Major Additional Upper Division Lab Course			1	Not Selected	Select	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Degree Planner provides a number of helpful features to ensure you remain on track to graduate:

“Advisor Message” communicates personalized information on a specific requirement.

“Critical” identifies key courses necessary for timely degree completion.

“Notes” convey important details about a specific requirement.

“Info” displays the course description from the current catalog.

“Remove” discards a requirement that is not needed for degree completion. Removed courses may always be restored to your plan.

“Lock” sets a course to a specific term.

“Select Course” allows you to choose a specific course for that requirement.

The blank roadmap on this page can be used as a draft to prepare the Degree Planner. Students should consult with an advisor while making any changes to the plan.

YEAR	SUMMER	FALL	SPRING

YEAR	SUMMER	FALL	SPRING

YEAR	SUMMER	FALL	SPRING

YEAR	SUMMER	FALL	SPRING

YEAR	SUMMER	FALL	SPRING

## VII. Blended BS+MS Integrated Program

The Blended BS/MS program (<http://www.calstatela.edu/ecst/cs/integrated-bsms>) in computer science provides an accelerated route for academically excellent upper-division students in the BS degree program to complete the MS degree program while simultaneously completing the BS requirements. The main objectives of the program are:

- To provide an accelerated route to a graduate degree, with simultaneous awarding of both bachelor's and master's degrees.
- To provide a seamless process whereby a limited number of select students can progress from undergraduate to graduate status.

### Program Features

- Simplified application process
- BS and MS coursework can be taken concurrently
- **Nine** common elective units between BS and MS programs.
- Access to graduate student facilities
- TA appointments (if available)
- The scheduling flexibility provided by the program enables students to complete the BS and MS degrees efficiently.

The eligibility requirements for admission to the Blended BS/MS program are:

- Students must have completed a minimum of 90 semester units of coursework.
- Students must have a CSULA GPA of > 3.0.
- Students must have completed all CS2000 level and the six required CS 3000-level courses in the BS degree program with a minimum grade of "B".

Eligible and interested students should contact the Academic Advisor for further information.

## VIII. Applying for Graduation

Students must apply for graduation to notify the university that they are ready to complete their degree program. It follows an audit process as described below:

- 1) Students take note of all the information (application deadlines, fees, diploma, commencement, transcripts, etc.), as described at [http://www.calstatela.edu/sites/default/files/groups/Graduation/Docs/graduation\\_application\\_for\\_undergrad.pdf](http://www.calstatela.edu/sites/default/files/groups/Graduation/Docs/graduation_application_for_undergrad.pdf).
- 2) Students complete the 2-page **Degree Completion Worksheet** and 1-page **Undergraduate Graduation Application**.
  - Students will review their Academic Requirements report on GET to complete the Degree Completion Worksheet.
  - The Academic Requirements Report (an audit report generated on GET) gives a visually clear picture of the requirements; completed requirements; transfer credits etc. as shown in the Figure 1.1. Students thus have a general idea of the graduating quarter and discuss the program requirements with the advisor.



Figure 1.1: Academic Requirements Report on GET

- 3) Students make an appointment with the Advisor to discuss the Academic Requirements Report and resolve/plan out all the remaining requirements (which are indicated as RED flags). The Advisor reviews the *Degree Completion Worksheet* and the *Undergraduate Graduate Application*. Both the applications are signed off by the Advisor.



- 4) Students submit the signed Graduation Application and Degree Completion Worksheet to the Cashier's Office (ADM 128) and pay the Application (\$20) and Diploma (\$10) fees. The Cashier's Office will forward the form to the Graduation Office for processing and do the final audit.
- 5) Degree dates are posted at the end of the semester in which all requirements are met. On completion of the degree requirements, the transcripts on GET indicate the following:

Degree: Bachelor of Science

Confer Date: (date)

Plan: Computer Science

- 6) If the students do not graduate during the term declared on their **Graduation Application**, then they must file a **Request to Change Graduation Term**. The following steps have to be completed before the students will be able to register for classes beyond the previous declared graduation term.
  - Students make a graduation advising appointment with the Advisor to determine the correct term at the end of which all graduation requirements are completed.
  - Complete and sign the **Request to Change Graduation Term** form; available at <http://www.calstatela.edu/graduation>
  - Pay the \$25 late filing fee to the Cashier's Office
  - Cashier's Office will forward the form to the Graduation Office for processing.

## IX. Academic Standards

As a student, you are now joining an academic community. The privilege of membership has certain obligations. Academic Integrity is very important. Cheating will not be tolerated. Cheating on any assignment or exam will be taken seriously. Failure to meet established standards may result in various penalties. In extreme cases this could result in expulsion from the University.

Please visit the Cal State LA, Judicial Affairs Office website where you will find examples of what constitutes cheating and plagiarism so that you become familiar with the guidelines, and consequences of not following them.

We hope that behavior standards never become an issue, but it is important that you prove worthy of the trust we place you in. Honesty is extremely important both for the operation of the University and for your personal development.