Computing

The College of Creative Studies (CCS) Computing Program provides a small, tight-knit community of passionate, self-directed learners in the context of a major research university. Our program provides well-prepared students an accelerated path through the "lower division" curriculum so that they can move quickly into advanced courses offered both in the CCS and the College of Engineering's Computer Science (CS) Department, which is one of the highest ranked CS departments in the nation. Our goal: early involvement of students in research and creative activity.

CCS Computing students start their studies by following an accelerated curriculum covering the mathematical foundations of computer science and programming techniques. This background paves the way to upper-division courses covering preparatory material for diverse specializations such as:

- Bioinformatics
- Computer Architecture
- Computational Science and Engineering
- Computer Science Education and Diversity
- Database and Information Systems
- Foundations and Algorithms
- Intelligent and Interactive Systems
- Networking
- Operating Systems and Distributed Systems
- Programming Languages and Software Engineering
- Security

These advanced courses provide both the depth and breadth necessary for admission to graduate-level research programs at top- ranked institutions in the United States and abroad, as well as skills needed for direct entry into the computing workforce on graduation.

Early in their studies, CCS Computing students can participate in innovative and challenging research projects that are typically reserved for graduate students. The areas listed above give an idea of the types of projects in which CCS Computing students can get involved.

Masters Program – BS/MS Program

CCS, in conjunction with the Computer Science Department in the College of Engineering, offers a five year BS/MS program for qualified students. Students interested in pursuing the BS/MS track, please obtain details about the program in the CCS office, Rm. 104. Candidates must apply during their Junior year and begin planning their curriculum.

CCS Computing Degree Requirements

Students are expected to maintain a 3.00 grade point average (GPA) in their computer science courses, with a 2.75 GPA being the minimum GPA acceptable in major courses.

General Education Requirements
All CCS students must complete the CCS General Education requirements. Speak with a CCS staff adviser and/or CCS faculty adviser, and refer to the CCS GE Requirements document.

Computing Major Requirements

Mathematics
1. Math 3A/3B -- 8 units
2. Math 4A/4B -- 8 units
3. Math 6A -- 4 units
4. PSTAT 120A -- 4 units
5. PSTAT 120B – 4 units

Science
Twenty units from the following list, including at least 1 laboratory course:
1. Physics: 1, 2, 3 & 3L, 4 & 4L, 5 & 5L
2. Chemistry: 1A & 1AL, 1B & 1BL, 1C & 1CL
3. Molecular, Cellular, & Developmental Biology: 1A & 1AL
4. Molecular, Cellular, & Developmental Biology: 1B & EEMB 2 & (1BL or 2L)

Computer Science
1. CMPTGCS 1A, 1B, & 1L
2. CMPTGCS 2

Students also are required to take those CCS computer science courses, and any other UCSB courses, that the student's faculty advisor deems necessary. This aspect of the curriculum is tailored for each student.

In the mathematics and science courses listed above, students may instead take a CCS course that their advisor deems acceptable. Some of the requirements above also can be met via advanced placement (please see the General Catalog).

Upper Division
The upper division requirements are the same as those for upper division Computer Science majors in the College of Engineering (Bachelor of Science degree program). These include the Major requirements, the Major Electives, and the Ethics requirement. However, CCS students are not required to satisfy the formal prerequisites for the upper division courses that they take. Rather, they meet with their CCS faculty advisor each quarter, and obtain approval for their planned course of study for the next quarter. CCS Computing students must also complete a mandatory Mid-Residency Review, which will be scheduled during the student's second year unless otherwise specified by their faculty advisor.

Under exceptional circumstances, certain upper division Computing course requirements may be waived. Examples of such circumstances include a case in which a student has completed advanced work or research in the topic of the course(s), or has arranged to take a more advanced course. All such waivers require written advisor approval. For further information please contact Prof. Phill Conrad, email: <pconrad@cs.ucsb.edu>

CCS Computing Program Course Planning

This grid may be used as a guide for requirements specific to the CCS Computing Program. Courses listed below are subject to change. Consult with faculty advisor on requirements.

Course	Year:				Year:				Year:				Year:				
	F	W	S	M	F	W	S	M	F	W	S	M	F	W	S	M	
Mathematics Requirements																	
MATH 3A																	
MATH 3B																	
MATH 4A																	
MATH 4B																	
MATH 6A																	
PSTAT 120A																	
PSTAT 120B																	
CCS Requirements																	
CCS 1A																	
CCS 1L																	
CCS 1B																	
CCS 2																	
Science Requirements (20 units, including a lab. See list of approved courses)																	
Upper Division Required Computer Science																	
CMPSC 111 or 140																	
CMPSC 130A																	
CMPSC 130B																	
CMPSC 138																	
CMPSC 154																	
CMPSC 160																	
CMPSC 162																	
CMPSC 170																	
Upper Division Computer Science Electives (20 units)																	
Ethics: ENG 101																	