

SCIENCE & TECHNOLOGY COURSES, COMPUTER SCIENCE, B.S. (Updated 05/24/17)

HSSEAS Office of Academic and Student Affairs, 6426BH

Computer Science, B.S students are required to complete twelve units of science and technology courses, not used to satisfy other requirements. They may do so by choosing one of the four options listed below.

- Courses used to satisfy the Science & Technology Course requirements **cannot be used to satisfy other requirements in a student's major.**
- Students are responsible for any pre-requisites for the courses they select to fulfill the Science & Technology requirements.
- **Please pay attention to subset restrictions on page 2.**

OPTION 1 – 12 UNITS OF ADDITIONAL COMPUTER SCIENCE ELECTIVE COURSES:

Twelve units of additional upper division CS electives (numbered 100-187) not being applied to any other Degree Requirements. (CS 188 offerings and CS 199 must be petitioned).

OPTION 2 – 12 UNITS OF COURSES TO SUPPLEMENT YOUR CHOSEN TECHNICAL BREADTH AREA:

Twelve additional units of courses listed in the **same** TBR area selected on my.engineering.ucla.edu. Courses must be on the current Technical Breadth Requirements list. <http://www.seasoasa.ucla.edu/wp-content/uploads/seasoasa/TBA-1.pdf> Example: If Electrical Engineering is your TBA, then you may take 6 EE courses to satisfy both the TBA and the Sci-Tech. You may not choose a 2nd TBA. To complete a different area, follow Option 3. **NOTE:** *Students who have chosen to complete their TBA in **Technology Management** may not complete the Science & Technology requirements in additional Management/Technology Management courses. They must choose Option 1 or Option 3 to complete their Science & Technology requirements.*

OPTION 3 – 12 UPPER DIVISION UNITS SELECTED FROM ONE OF THE FOLLOWING DEPARTMENTS:

Twelve upper division units (numbered 100-187) from **ONE** of the departments below and are not used to satisfy other requirements. **Students are responsible for pre-requisites, but may petition to use 1 lower division prerequisite to count towards 1 Sci-Tech elective, IF the lower division course is a pre-requisite for at least one of the other two upper division Sci-Tech courses that the student takes from the same area.**

NOTE: *Enrollment access to the departments listed below is at the respective department's discretion. There is no guarantee of access to the courses. Note there is no guarantee of approval and petitions should be submitted (at 6426BH) well in advance of enrolling in courses.*

- | | | | |
|--------------------------------------|---|--|---|
| ◦Astronomy | ◦Civil & Environmental Engr | ◦ Management*(read below) | ◦Molecular,Cell & |
| ◦Atmospheric & Oceanic Science | ◦Earth, Planetary & Space Science | ◦ Materials Science & Engr | Developmental Biology |
| ◦Biological Chemistry | ◦Economics | ◦Mathematics*(read below) | ◦Physics |
| ◦Chemical & Biomolecular Engineering | ◦Electrical & Computer Engr | ◦Mechanical & Aerospace Engineering | ◦Statistics*(read below) |
| ◦Chemistry & Biochemistry | ◦Geography*(read below) | ◦Microbiology, Immunology & Molecular Genetics | ◦Design Media Arts (DESMA)*(read below) |
| | ◦Linguistics | | |

* *GEOG 167, 168, 169, 166, 170, M171, 172, and 173 only. Other courses subject to review; please attach syllabi and petition in advance of taking courses.*

* *Only classes in MGMT currently apply. ENGR courses are a part of the Technology Management Technical Breadth. Students who have chosen to complete their TBR in Tech Mgmt may not complete the Sci-Tech requirements with additional Management courses.*

* *Math 182 is not approved. Math 116 not approved for students with credit for CS 183.*

* *STATS 112 and C116 are not approved for the STATS Sci-tech.*

* *DESMA courses such as 101 or 104, and 157, and 161 are approved. Other courses subject to review; please attach syllabi and petition in advance of taking courses. (Denied in the past: 153, 154, 160 – Digital Photography) Warning, this is a smaller department. Enrollment is based on availability and it may be difficult to complete 3 courses in this area.*

OPTION 4 - LIFE SCIENCES PREP:

Students can take the 3 of the following lower division courses to satisfy this Sci-Tech requirement: Chemistry 20A, 20B, 30A, one from Life Sciences 3 or 7A. Note that for CS majors this combination of courses can be used to acquire the prerequisites for courses in the Genomics Technical Breadth Area and the Bioinformatics minor.

SUMMARY OF RESTRICTIONS

*The following lists several subsets of courses. It is not permitted to use more than one course from any one subset to satisfy degree requirements of any HSSEAS major unless one is explicitly specified as recommended or is listed as a prerequisite in the catalog description of the other course in the same subset. Example: in Subset 3b), MECH&AE 101 is a pre-requisite for MECH&AE 102; therefore, a student is allowed take both of these courses unless this pre-requisite changes.

Subset 1: Probability and Statistics course subset (C&EE 110, STATS 110A, EL ENGR 131A, MATH 170A, STATS 100A)

Subset 2: Numerical Computing course subset (EL ENGR 133A, C&EE 103, CH ENGR 109, MATH 151A)

Subset 3a): Structural Mechanics Subset (C&EE 108, MECH&AE 101)

Subset 3b): Statics and Dynamics Subset (C&EE 101, MECH&AE 101, MECH&AE 102)*

Subset 4a): Introductory Thermodynamics subset (CH ENGR 102A, MECH&AE 105A)

Subset 4b): Transport Phenomena (CH ENGR 101B, MECH&AE 105D)

Subset 5a): Systems (EL ENGR 102, MECH&AE 107, PHYSICS 131)

Subset 5b): Controls (CH ENGR 107, EL ENGR 141, MECH&AE 171A)

Subset 6): Circuits (EL ENGR 10, EL ENGR 100), (EL ENGR 100, EL ENGR 110)