

ORANGE COAST COLLEGE

TRANSFER CURRICULUM GUIDE

ENGINEERING

Materials Science

LOWER DIVISION MAJOR REQUIREMENTS FOR TRANSFER

The following courses should be taken at OCC prior to transfer. Courses not offered at OCC will need to be taken after transfer unless otherwise noted. Four-year colleges and universities often make changes in their requirements for majors. The information contained in this guide is based on the most recent information available from the four-year school and does not constitute an official agreement.

Recent updates to this guide can be found on the Transfer Center Website at:

www.occ.cccd.edu/departments/studentsvcs/transferctr

UNIVERSITY OF CALIFORNIA, BERKELEY

Notes: Admission to the College of Engineering is highly competitive. Selection is based on the completeness of lower division preparation, GPA and the applicant essay. The college reviews the essay for evidence of interest in the chosen field and a thoughtful match between the academic program and the academic and career objectives. You must complete all of the required lower division courses by the end of the spring term prior to fall enrollment to be eligible for admission. Summer coursework is not considered to be "work in progress" for fall selection. English 100 & 101(or 101H) must be completed with a letter grade and is a prerequisite for admission. IGETC is not acceptable for this major. When courses are listed as a series, you must complete entire series. No partial credit is given. All required and strongly recommended courses must be taken for a letter grade.

Breadth Requirements:

1. ENGL 100 & 101(or 101H)
2. **Two 3-unit GE breadth courses from:** Arts & Literature, Historical Studies, Philosophy & Values or Social & Behavioral Sciences
3. Two additional upper division courses taken after transfer.

AP Credit for Engineering Majors:

Course	Score
Biology	score of 4 or 5 = BIOL 1A/AL & 1B
Chemistry	score of 3, 4 or 5 = CHEM 1A/1AL
English	score of 4 or 5 = ENGL R1A
Calculus (AB/BC Exam)	score of 3 = MATH 1A
Calculus (BC Exam)	score of 4 or 5 = MATH 1AB
Physics (Mechanics C Exam)	score of 5 = PHYS 7A

BACHELOR OF SCIENCE MATERIALS SCIENCE AND ENGINEERING (College of Engineering)

UCB	OCC	(9/17:A16-17)
Required Core Courses		
CHEM 1A/AL	CHEM 180	
CHEM 1B	CHEM 185	
MATH 1A	MATH 180(or 180H)*	
MATH 1B	MATH 185(or 185H)*	
MATH 53	MATH 280(or 280H)	
MATH 54	MATH 285(or 285H)	Continued

UCB	OCC	(9/17:A16-17)
PHYSICS 7A	PHYS 185	
PHYSICS 7B	PHYS 280	
PHYSICS 7C	PHYS 285	
ENGL R1AB	ENGL 100 & 101(or 101H)	
Strongly Recommended Courses		
ENGIN 7	No Equivalent Course	
ENGIN 45/45L	No Equivalent Courses	
MEC ENG C85	No Equivalent Course	
*MATH 182H is also equivalent to MATH 1AB.		
**Completion of these courses will strengthen your application. If there is no articulation, students are strongly encourage to take a course in statistics and computer programming.		

UNIVERSITY OF CALIFORNIA, IRVINE

BACHELOR OF SCIENCE IN MATERIALS SCIENCE ENGINEERING

UCI	OCC	(09/17:A16-17)
Required Courses		
MATH 2AB	MATH 180(or 180H) & 185(or 185H)*	
MATH 2D <u>or</u> 2E	MATH 280(or 280H)	
MATH 3A	MATH 235 <u>or</u> 280(or 285H)	
MATH 3D	MATH 285(or 285H)	
PHYS 7CDE, LC/LD	PHYS 185 & 280 & 285	
CHEM 1ABC, 1LC	CHEM 180 & 185**	
ENGRMAE 10	CS 150	
ENGRMAE 30	ENGR 280	
ENGR 54	No Equivalent Course	
Necessary to Graduate in 2 years		
EECS 70A	ENGR 285	
Additional Major Requirements		
CBEMS 45A <u>or</u> ENGRMAE 91	No Equivalent Courses	
DBEMS 45B & 45C	No Equivalent Courses	
Additional Electives (One course from basic engineering/science courses)		
BIO SCI 93	BIOL 180	
CHEM 51A	CHEM 220/220L	
STATS 7	MATH 160(or 160H) <u>or</u> PSYC 160	
*MATH 182H & 280(or 280H) will also satisfy this requirement.		
**Entire chemistry sequence should be completed at OCC.		
+PSYC 160 will not satisfy IGETC Area 2 - Mathematical Concepts and Quantitative Reasoning. Students wishing to satisfy IGETC Area 2 should take MATH 160(or 160H).		
Important Note: Preference is given to students with the highest grades overall who have completed the required courses with a grade of "C" or better by the end of the spring term prior to transfer.		

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Requirements for Admission:

Admission to an engineering major as a junior level transfer is very competitive. All courses must be taken for a letter grade. The most important selection criteria are completion of required prep courses and academic performance. A minimum transferable cumulative GPA of 3.4 is required for consideration. Prep courses should be completed by the end of the spring term prior to fall enrollment. Alternate major applicants will not be considered. Breadth and GE requirements may be fulfilled by completion of IGETC. Although not required to complete the HSSEAS GE requirements for admission, it is beneficial for students to complete one course from each of the following areas: arts, humanities, social sciences and life sciences. Partial IGETC is not accepted. Visit the listed websites for further information: <http://www.engineer.ucla.edu> and <http://www.admissions.ucla.edu>

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BACHELOR OF SCIENCE IN MATERIALS ENGINEERING

UCLA	OCC	(09/17:A16-17)
Courses Required for Admission:		
CHEM 20AB, 20L	CHEM 180 & 185	
MATH 31AB	MATH 180(or 180H) &185(or185H)*	
MATH 32AB	MATH 280(or 280H)	
MATH 33AB	MATH 285(or 285H)	
PHYS 1ABC, 4AL/BL	PHYS 185, 280 & 285**	
ENGCAMP 3	ENGL 100	
Computer Programming	CS 250	
A second course in English composition from: ENGL 101, 101H, 102, 102H, PHIL 150		
Additional Requirements (Strongly Recommended):		
COM SCI 31	CS 150	
C&EE M20	No Equivalent Course	
EL ENGR 100	No Equivalent Course	
MAT SCI 104	No Equivalent Course	
MECH&AE 101	No Equivalent Course	
*MATH 182H is also equivalent to MATH 31AB.		
**Entire physics sequence should be completed at OCC.		

CAL POLY, SAN LUIS OBISPO**BACHELOR OF SCIENCE IN MATERIALS ENGINEERING**

CPSLO	OCC	(09/17:A16-17)
Major Courses		
MATE 110	No Equivalent Course	
MATE 120	No Equivalent Course	
MATE 130	No Equivalent Course	
MATE 210/215	No Equivalent Courses	
MATE 222/225	No Equivalent Courses	
MATE 232/235	No Equivalent Courses	
Support Courses		
CE 204	No Equivalent Course	
CHEM 124	CHEM 180	
CHEM 125	No Equivalent Course	
CSC 231	No Equivalent Course	
EE 201 & 251	ENGR 285	
ENGL 149	ENGL 105*	
MATH 141, 142, 143, 241	MATH 180(or 180H) & 185(or 185H) & 280(or 280H)+	
MATH 244	MATH 285(or 285H)	
ME 211	ENGR 280	
PHYS 132, 133 & 141	PHYS 185 & 280 & 285	
IME 144	No Equivalent Course	
Approved Electives (8 units required)		
BUS 207	BUS 110	
CHEM 216	CHEM 220/220L**	
CHEM 217	CHEM 225/225L**	
ECON 221	ECON 170	
*Credit only when additional GE Area A3 course is completed.		
**No upper division credit.		
+MATH 182H & 280H is also equivalent to MATH 141, 142, 143 & 241.		
Note: Selection criteria for transfer students can be found at: http://admissions.calpoly.edu/applicants/transfer/criteria.html		

UNIVERSITY OF SOUTHERN CALIFORNIA

Note: Students may fulfill four of the six required GE requirements with transfer courses taken before starting USC (see USC GE requirements). Credit for courses is not granted if (1) the course is taken before high school graduation, (2) the grade is lower than C-, (3) is a lab science or foreign language course and is not taken in a traditional classroom setting, (4) is offered through “study abroad”, (5) repeats credit from another college course or from an AP or IB exam.

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING – Polymer/Materials Science

USC	OCC	(09/17:A16-17)
WRIT 130	ENG 101 (or 101H) <u>or</u> 102 (102H)*	
Global Perspectives	ANTH 150 <u>or</u> PSCI 110 <u>or</u> SOC 150	
Traditions & Historical	One course from: ARCH 290(or 290H), 296(or 296H), ART 100(or 100H), 101(or 101H), 103, ENGL 176(or 176H), HIST 141, 161(or 161H), 162(or 162H), 170(or 170H), 175(or 175H), 180(or 180H), 185(or 185H), PHIL 125, PSCI 188, RLST 110, 140, 150, THEA 101	
CHEM 322A	CHEM 220/220L	
CHEM 322B	CHEM 225/225L	
CHEM 105AB	CHEM 180 & 185	
PHYS 151 & 152	PHYS 185, 280 & 285	
MATH 125 & 126	MATH 180(or 180H) & 185(or 185H or 182H)	
MATH 226	MATH 280(or 280H)	
MATH 245	MATH 285(or 285H)	
*Course must be taken for a letter grade.		

ADDITIONAL AGREEMENTS ARE AVAILABLE ON THE INTERNET FOR THE FOLLOWING SCHOOLS AT:

www.assist.org

Campus	Campus
UC Merced	San Jose State