Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Berkeley 2022-2023 General Catalog, Semester	From: De Anza College 2022-2023 General Catalog, Quarter

Engineering Mathematics and Statistics, Lower Division B.S.

COLLEGE OF ENGINEERING JUNIOR TRANSFER ADMISSION REQUIREMENTS

Admission to the UC Berkeley **College of Engineering** is highly competitive.

Applicants to the **Engineering Mathematics and Statistics** major must complete all <u>required</u> core UCB preparation courses in order to be eligible for admission. Only applicants who have completed 100% of these <u>required</u> courses will be considered for admission. Required courses for admission to the major must be completed by the end of the spring semester prior to fall enrollment. **A summer 2023 course is not considered to be "work in progress" for the fall 2023 selection process.**

If a series of courses at a community college is required (e.g., English 1A + 1B + 103 = English R1A and R1B), <u>all</u> the courses in the series <u>must</u> be completed, and <u>must</u> (unless otherwise indicated) be completed at the same community college. Partial completion (e.g., 2 of the 3 required courses) will result in zero credit toward the requirement(s), and the applicant will NOT be considered for admission. The only exception to the series rule is Math 54. If Math 54 is split into two different courses, one covering linear algebra and one covering differential equations, we strongly encourage applicants to take both courses at the same community college; however, the College of Engineering will accept linear algebra from one school and differential equations from a different school.

Lower division UC Berkeley courses required for graduation (but not admission) are also listed in the major agreements and are strongly recommended to be taken to strengthen one's application. The more of these courses completed, the stronger the application will be.

Required core courses for admission: (all these courses must be completed to be considered for admission)

- UCB CHEM 1A/1AL
- UCB MATH 1A; 1B; 53; 54
- UCB PHYSICS 7A; 7B; 7C
- UCB ENGLISH R1A; R1B

Strongly recommended courses: (if your college offers the courses listed below and they are articulated, taking them will strengthen your application)

- Two courses from: UCB CIV ENG C30/MEC ENG C85; COMPSCI 61C; ENGIN 29; MAT SCI 45/45L; MATH 55 or COMPSCI 70
- Two courses in Computer Science: COMPSCI 61A or ENGIN 7 and COMPSCI 61B

Articulation subject to completion of a university course
If the above statement is indicated under any of the community college course listed below, you will be required to take an additional course at UC Berkeley in order to complete the requirement.

Admission is primarily based on the completeness of the applicant's lower division preparation and the level of academic achievement reflected in the student's grade point average. The UC applicant essay also plays an important role in the selection process at UC Berkeley. The College reviews the essay for evidence of interest in the student's chosen field and a thoughtful match between the academic program and the student's academic and career objectives.

The College of Engineering requires six humanities/social science courses, two of which must be reading and composition. The only non-technical admission requirement for the College of Engineering is the coursework equivalent to UC Berkeley's English R1A and R1B (reading and composition), which must be taken for a letter grade. The College of Engineering **does not recognize the Intersegmental General Education Transfer Curriculum (IGETC) and strongly discourages** students from following this option due to the number of major-specific technical courses required for engineering transfer admission.

NOTE: The English R1A and R1B requirements <u>cannot</u> be satisfied by IGETC; applicants <u>must</u> complete the specific courses indicated as English R1A and R1B equivalents to be considered for admission. Failure to complete the exact courses listed will mean the applicant will NOT be considered for admission.

The remaining four humanities/social science requirement courses are not considered for admission purposes but are required for graduation. See http://engineering.berkeley.edu/hss for the College of Engineering humanities/social science breadth requirements and courses. Courses which are three semester units or more that appear in the following categories on the "General Education/Breadth" section of assist.org may be used to satisfy **two of** the remaining four humanities/social science course requirements for the College of Engineering. ARTS AND LITERATURE; HISTORICAL STUDIES; INTERNATIONAL STUDIES, PHILOSOPHY AND VALUES; SOCIAL AND BEHAVIORAL SCIENCES. Additionally, courses that teach a foreign language may be used to satisfy this requirement.

SAT/ACT/A-level test scores and letters of recommendation are NOT considered for admission.

NOTE: ALL REQUIRED COURSES AND ALL STRONGLY RECOMMENDED COURSES FOR THE MAJOR MUST BE TAKEN FOR A LETTER GRADE. FOR MORE INFORMATION, PLEASE CHECK THE COLLEGE'S WEB SITE FOR THE <u>COLLEGE OF ENGINEERING UNDERGRADUATE GUIDE.</u>

For more information:
http://engineering.berkeley.edu/admissions/undergraduate-admissions

College of Engineering Undergraduate Guide:
http://engineering.berkeley.edu/academics/undergraduate-guide

For more information about Engineering Math & Statistics:
http://engineeringscience.berkeley.edu

For more information on admission to UC Berkeley:
http://admissions.berkeley.edu

For more information on majors at UC Berkeley:
http://guide.berkeley.edu

Some Advanced Placement, International Baccalaureate, and A-Level exams can fulfill requirements in the College of Engineering. For details, please see https://engineering.berkeley.edu/students/undergraduate-guide/exams/.

REQUIRED COURSES FOR ADMISSION

CHEM 1A - General Chemistry (3.00)
--- And ---
CHEM 1AL - General Chemistry Laboratory (2.00)

← Articulates as a Series Only

CHEM 1A - General Chemistry (3.00)
--- And ---
CHEM 1AL - General Chemistry Laboratory (2.00)
--- And ---
CHEM 1B - General Chemistry (4.00)

←

CHEM 1A - General Chemistry (5.00)
--- And ---
CHEM 1B - General Chemistry (5.00)
--- And ---
CHEM 1C - General Chemistry and Qualitative Analysis (5.00)
- *Regular and honors courses may be combined to complete this series*

--- Or ---

CHEM 1AH - General Chemistry - HONORS (5.00)
--- And ---
CHEM 1BH - General Chemistry - HONORS (5.00)
--- And ---
CHEM 1CH - General Chemistry and Qualitative Analysis - HONORS (5.00)
- *Regular and honors courses may be combined to complete this series*

MATH 1A - Calculus (4.00)

←

MATH 1A - Calculus (5.00)
--- And ---
MATH 1B - Calculus (5.00)
- *Regular and honors courses may be combined to complete this series*

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)
--- And ---
MATH 1BH - Calculus - HONORS (5.00)
- *Regular and honors courses may be combined to complete this series*

MATH 1B - Calculus (4.00)

←

MATH 1B - Calculus (5.00)
--- And ---
MATH 1C - Calculus (5.00)
- *Regular and honors courses may be combined to complete this series*

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)
--- And ---
MATH 1CH - Calculus - HONORS (5.00)
- *Regular and honors courses may be combined to complete this series*

MATH 53 - Multivariable Calculus (4.00)

←

MATH 1C - Calculus (5.00)
--- And ---
MATH 1D - Calculus (5.00)
- *Regular and honors courses may be combined to complete this series*

--- Or ---

MATH 1CH - Calculus - HONORS (5.00)
--- And ---
MATH 1DH - Calculus - HONORS (5.00)
- *Regular and honors courses may be combined to complete this series*

MATH 54 - Linear Algebra and Differential Equations (4.00)	←	**MATH 2A** - Differential Equations (5.00) --- And --- **MATH 2B** - Linear Algebra (5.00) • *Regular and honors courses may be combined to complete this series* --- Or --- **MATH 2AH** - Differential Equations - HONORS (5.00) --- And --- **MATH 2BH** - Linear Algebra - HONORS (5.00) • *Regular and honors courses may be combined to complete this series*
PHYSICS 7A - Physics for Scientists and Engineers (4.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)
PHYSICS 7B - Physics for Scientists and Engineers (4.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00) --- And --- **PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
PHYSICS 7C - Physics for Scientists and Engineers (4.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00) --- And --- **PHYS 4D** - Physics for Scientists and Engineers: Modern Physics (6.00)
PHYSICS 7A - Physics for Scientists and Engineers (4.00) --- And --- **PHYSICS 7B** - Physics for Scientists and Engineers (4.00)	←	Articulates as Course-to-Course Only
PHYSICS 7A - Physics for Scientists and Engineers (4.00) --- And --- **PHYSICS 7B** - Physics for Scientists and Engineers (4.00) --- And --- **PHYSICS 7C** - Physics for Scientists and Engineers (4.00)	←	Articulates as Course-to-Course Only
ENGLISH R1A - Reading and Composition (4.00)	←	**EWRT 1A** - Composition and Reading (5.00) --- Or --- **EWRT 1AH** - Composition and Reading - HONORS (5.00) --- Or --- **ESL 5** - Advanced Composition and Reading (5.00)
ENGLISH R1B - Reading and Composition (4.00)	←	**EWRT 1B** - Reading, Writing and Research (5.00) --- Or --- **EWRT 2** - Critical Reading, Writing and Thinking (5.00) --- Or --- **EWRT 1BH** - Reading, Writing and Research - HONORS (5.00) --- Or --- **EWRT 2H** - Critical Reading, Writing and Thinking - HONORS (5.00)

STRONGLY RECOMMENDED COURSES

Select 2 Course(s) from the following

CIV ENG C30 - Introduction to Solid Mechanics (3.00) Same-As: MEC ENG C85	←	No Course Articulated
--- Or ---		
MEC ENG C85 - Introduction to Solid Mechanics (3.00) Same-As: CIV ENG C30	←	No Course Articulated

COMPSCI 61C - Machine Structures (4.00)	←	No Course Articulated
ENGIN 29 - Manufacturing and Design Communication (4.00)	←	No Course Articulated
MAT SCI 45 - Properties of Materials (3.00) --- And --- **MAT SCI 45L** - Properties of Materials Laboratory (1.00)	←	No Course Articulated

MATH 55 - Discrete Mathematics (4.00)	←	**MATH 22** - Discrete Mathematics (5.00) --- Or --- **MATH 22H** - Discrete Mathematics - HONORS (5.00)
--- Or ---		
COMPSCI 70 - Discrete Mathematics and Probability Theory (4.00)	←	This course must be taken at the university after transfer

COMPUTER SCIENCE

COMPSCI 61A - The Structure and Interpretation of Computer Programs (4.00) ← No Course Articulated

--- Or ---

ENGIN 7 - Introduction to Computer Programming for Scientists and Engineers (MATLAB) (4.00) ← No Course Articulated

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COMPSCI 61B - Data Structures (4.00) ← **CIS 22C** - Data Abstraction and Structures (4.50)
- *Articulation subject to completion of a university course*

--- Or ---

CIS 22CH - Data Abstraction and Structures - HONORS (4.50)
- *Articulation subject to completion of a university course*

--- Or ---

CIS 26B - Advanced C Programming (4.50)
- *Articulation subject to completion of a university course*

END OF AGREEMENT