Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

Aerospace Engineering, Lower Division B.S.

COLLEGE OF ENGINEERING JUNIOR TRANSFER ADMISSION REQUIREMENTS

Admission to the UC Berkeley **College of Engineering** is highly competitive. Application for junior transfer admissions to the Aerospace Engineering major will open in 2023-24 for admission in fall 2024.

Applicants to the **Aerospace Engineering** major must complete all required core UCB preparation courses in order to be eligible for admission. Only applicants who have completed 100% of these required 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 2024 course is not considered to be "work in progress" for the fall 2024 selection process.**

If a series of courses at a community college is required (e.g., English 1A + 1B + 103 = English R1A and R1B), all the courses in the series must be completed, and must (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 MATH 1A; 1B; 53; 54
- UCB PHYSICS 7A; 7B
- One from UCB: ASTRON 7A; 10; BIOLOGY 1A/1AL; 1B; CHEM 1A/AL; 1B; 3A/3AL; 3B/3BL; MCELLBI 32; PHYSICS 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) If no articulation, students are strongly encouraged to take a course in SolidWorks and a course in Computer Programming.

- UCB ENGIN 7 or COMPSCI 61A
- UCB MAT SCI 45
- UCB MEC ENG 40 or ENGIN 40
- UCB MEC ENG C85/CIV ENG C30

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 cannot be satisfied by IGETC; applicants must 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 COLLEGE OF ENGINEERING UNDERGRADUATE GUIDE.

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 on Aerospace Engineering:
http://www.aero.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

TEST CREDIT

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

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 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)

Select 1 Course(s) from the following

ASTRON 7A - Introduction to Astrophysics (4.00)	←	No Course Articulated

ASTRON 10 - Introduction to General Astronomy (4.00)	←	**ASTR 10** - Stellar Astronomy (5.00)
BIOLOGY 1A - General Biology Lecture (Cells, Genetics, Animal Form & Function) (3.00) **--- And ---** **BIOLOGY 1AL** - General Biology Laboratory (2.00)	←	**BIOL 6A** - Form and Function in the Biological World (6.00) **--- And ---** **BIOL 6B** - Cell and Molecular Biology (6.00) **--- Or ---** **BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00) **--- And ---** **BIOL 6B** - Cell and Molecular Biology (6.00)
BIOLOGY 1B - General Biology (Plant Form & Function, Ecology, Evolution) (4.00)	←	**BIOL 6A** - Form and Function in the Biological World (6.00) **--- And ---** **BIOL 6C** - Ecology and Evolution (6.00) **--- Or ---** **BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00) **--- And ---** **BIOL 6C** - Ecology and Evolution (6.00) **--- Or ---** **BIOL 6A** - Form and Function in the Biological World (6.00) **--- And ---** **BIOL 6CH** - Ecology and Evolution - HONORS (6.00) **--- Or ---** **BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00) **--- And ---** **BIOL 6CH** - Ecology and Evolution - HONORS (6.00)
BIOLOGY 1A - General Biology Lecture (Cells, Genetics, Animal Form & Function) (3.00) **--- And ---** **BIOLOGY 1AL** - General Biology Laboratory (2.00) **--- And ---** **BIOLOGY 1B** - General Biology (Plant Form & Function, Ecology, Evolution) (4.00)	←	Articulates as Course-to-Course Only
CHEM 1A - General Chemistry (3.00) **--- And ---** **CHEM 1AL** - General Chemistry Laboratory (2.00)	←	Articulates as a Series Only
CHEM 1B - General Chemistry (4.00)	←	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)
CHEM 3A - Chemical Structure and Reactivity (3.00) **--- And ---** **CHEM 3AL** - Organic Chemistry Laboratory (2.00)	←	**CHEM 12A** - Organic Chemistry (5.00) **--- And ---** **CHEM 12B** - Organic Chemistry (5.00)

CHEM 3B - Chemical Structure and Reactivity (3.00) **--- And ---** **CHEM 3BL** - Organic Chemistry Laboratory (2.00)	←	**CHEM 12B** - Organic Chemistry (5.00) **--- And ---** **CHEM 12C** - Organic Chemistry (5.00)
CHEM 3A - Chemical Structure and Reactivity (3.00) **--- And ---** **CHEM 3AL** - Organic Chemistry Laboratory (2.00) **--- And ---** **CHEM 3B** - Chemical Structure and Reactivity (3.00) **--- And ---** **CHEM 3BL** - Organic Chemistry Laboratory (2.00)	←	Articulates as Course-to-Course Only
MCELLBI 32 - Introduction to Human Physiology (3.00) **--- And ---** **MCELLBI 32L** - Introduction to Human Physiology Laboratory (2.00) • *Lab is not required*	←	**BIOL 40A** - Human Anatomy and Physiology (5.00) **--- And ---** **BIOL 40B** - Human Anatomy and Physiology (5.00) **--- And ---** **BIOL 40C** - Human Anatomy and Physiology (5.00)
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) **--- And ---** **PHYSICS 7C** - Physics for Scientists and Engineers (4.00)	←	Articulates as Course-to-Course Only

STRONGLY RECOMMENDED COURSES

Please refer to additional important General Information section above

ENGIN 7 - Introduction to Computer Programming for Scientists and Engineers (MATLAB) (4.00)	←	No Course Articulated
--- Or ---		
COMPSCI 61A - The Structure and Interpretation of Computer Programs (4.00)	←	No Course Articulated
MAT SCI 45 - Properties of Materials (3.00) **--- And ---** **MAT SCI 45L** - Properties of Materials Laboratory (1.00) • *Lab is not required*	←	No Course Articulated
MEC ENG C85 - Introduction to Solid Mechanics (3.00) Same-As: CIV ENG C30	←	No Course Articulated
MEC ENG 40 - Thermodynamics (3.00)	←	No Course Articulated
--- Or ---		
ENGIN 40 - Engineering Thermodynamics (4.00)	←	No Course Articulated

END OF AGREEMENT