To: UC Berkeley | From: Laney College
18-19 General Catalog | Semester
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====Nuclear Engineering, 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 Nuclear 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 2019 course is not considered to be "work in progress" for the fall 2019 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.

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/L
- UCB Math 1A, 1B
- UCB Math 53, 54
- UCB Physics 7A, 7B, 7C
- UCB English 1A and 1B

Beginning Fall 2017 one of the following will be required for admission:

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

- UCB Engin 40
- UCB El Eng 40 or El Eng 16A
- UCB Engin 7
- UCB Mat Sci Engin 45/45L

Admission is primarily based on the completeness of the applicant's lower
Nuclear Engineering, Lower Division B.S. (continued)
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
Intersemental 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/hssreq 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.

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 Nuclear Engineering:
http://www.nuc.berkeley.edu

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

For more information on majors at UC Berkeley:
Berkeley Academic Guide: http://guide.berkeley.edu
Nuclear Engineering, Lower Division B.S. (continued)

**AP TEST CREDIT**

For students who have taken Advanced Placement Exams in high school, the College will clear requirements as follows:

- **Biology AP:** a score of 4 or 5 satisfies UCB Biology 1A/AL and 1B.
- **Chemistry AP:** a score of 3 or better satisfies UCB Chemistry 1A/1AL.
- **English AP (Literature and Composition):** a score of 4 or 5 satisfies UCB English R1A.
- **English AP (Language and Composition):** a score of 4 or 5 satisfies UCB English R1A.
- **Mathematics AP (AB Exam):** a score of 3 or better satisfies UCB Math 1A.
- **Mathematics AP (BC Exam):** a score of 3 satisfies UCB Math 1A.
- **Mathematics AP (BC Exam):** a score of 4 or 5 satisfies UCB Math 1A and 1B.
- **Physics AP (Mechanics C Exam):** a score of 5 satisfies UCB Physics 7A.

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**Required Courses for Admission:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>CHEM 1A</td>
<td>General Chemistry</td>
<td>3</td>
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<tr>
<td>CHEM 1AL</td>
<td>General Chemistry (Laboratory)</td>
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<tr>
<td>MATH 1A</td>
<td>Calculus</td>
<td>4</td>
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<tr>
<td>MATH 1B</td>
<td>Calculus</td>
<td>4</td>
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<tr>
<td>MATH 53</td>
<td>Multivariable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 54</td>
<td>Linear Algebra and Differential Equations</td>
<td>4</td>
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<tr>
<td>PHYSICS 7A</td>
<td>Physics for Scientists and Engineers</td>
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<tr>
<td>PHYSICS 7B</td>
<td>Physics for Scientists and Engineers</td>
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<td>PHYSICS 7C</td>
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<tr>
<td>ENGLISH R1A</td>
<td>Reading and Composition</td>
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<tr>
<td>ENGLISH R1B</td>
<td>Reading and Composition</td>
<td>4</td>
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</tbody>
</table>

**Notes:**
- CHEM 1A & CHEM 1AL are equivalent to CHEM 1A General Chemistry (5)
- MATH 1A & MATH 3A are equivalent to MATH 1A Calculus I (5)
- MATH 1B & MATH 3B are equivalent to MATH 1B Calculus II (5)
- MATH 53 & MATH 3C are equivalent to MATH 53 Multivariable Calculus (5)
- MATH 54 & MATH 3E & MATH 3F are equivalent to MATH 54 Linear Algebra and Differential Equations (3)
- PHYSICS 7A & PHYS 4A are equivalent to PHYSICS 7A Physics for Scientists and Engineers (5)
- PHYSICS 7B & PHYS 4B are equivalent to PHYSICS 7B Physics for Scientists and Engineers (5)
- PHYSICS 7C & PHYS 4C are equivalent to PHYSICS 7C Physics for Scientists and Engineers (5)
- ENGLISH R1A & ENGL 1A are equivalent to ENGLISH R1A Reading and Composition (4)
- ENGLISH R1B & ENGL 1B are equivalent to ENGLISH R1B Reading and Composition (4)
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Beginning Fall 2017 one of the following will be required for admission:
UCB Astro 7A, Biol 1A/1AL, Biol 1B, Chem 1B, Chem 3A/3AL, MCELLBI 32/32L or Stat 20

ASTRON 7A Introduction to Astrophysics (4) | NO COURSE ARTICULATED

BIOLOGY 1A General Biology Lecture (Cells, Genetics, Animal Form & Function) (3) | BIOL 1A General Biology (5)
BIOLOGY 1AL General Biology Laboratory (2)

BIOLOGY 1B General Biology (Plant Form & Function, Ecology, Evolution) (4) | BIOL 1B General Biology (5)

CHEM 1B General Chemistry (4) | CHEM 1B General Chemistry (5)

CHEM 3A & Chemical Structure and Reactivity (3) | CHEM 12A & Organic Chemistry (5)
CHEM 3AL & Organic Chemistry Laboratory (2)
CHEM 3B & Chemical Structure and Reactivity (3)
CHEM 3BL Organic Chemistry Laboratory (2)

MCELLBI 32 Introduction to Human Physiology (3) | BIOL 4 Human Physiology (5)
MCELLBI 32L Introduction to Human Physiology Laboratory (2)

STAT 20 Introduction to Probability and Statistics (4) | NO COURSE ARTICULATED

**NOTE:** STAT 20 at Berkeley has a prerequisite of one semester of calculus.

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

If no articulation, students are strongly encouraged to take an introductory course in electronics or circuits AND a course in Computer Programming.

ENGIN 40 Engineering Thermodynamics (4) | NO COURSE ARTICULATED

EL ENG 16A Designing Information Devices and Systems I (4) | NO COURSE ARTICULATED

OR

EL ENG 40 Introduction to Microelectronic Circuits (4) | NO COURSE ARTICULATED

If no articulation, students are strongly encouraged to take an introductory course in electronics or circuits.
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<table>
<thead>
<tr>
<th>ENGIN 7</th>
<th>Introduction to Computer Programming for Scientists</th>
<th>ENGIN 77</th>
<th>Computer Programming for Engineers Using MATLAB</th>
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<table>
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<th>MAT SCI 45 &amp; Properties of Materials</th>
<th>ENGIN 45</th>
<th>Properties of Materials</th>
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<td>Laboratory</td>
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END OF MAJOR