

Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Davis
2022-2023 General Catalog, Quarter

From: De Anza College
2022-2023 General Catalog, Quarter

Biochemical Engineering B.S.

INFORMATION AND ADVISORIES

INFORMATION AND ADVISORIES FOR ALL MAJORS

UC Davis transfer students must meet the minimum UC transfer admission requirements by the end of Spring term prior to Fall enrollment. This page lists UC Davis courses with the equivalent substitutes from other colleges for preparation of the specified major. Although not required, transfer students are strongly advised to complete as many major preparatory courses as possible for their major before enrolling at UC Davis. See [UC Davis Transfer Admissions](#) for more information covering course and GPA requirements before transferring to a particular major. Some required major courses do not apply to GE criteria- refer to the General Education agreement below for more information. Advanced Placement (AP) and International Baccalaureate (IB) exams are case specific as course requirements are fulfilled depending on the exam. Completing the IGETC will completely satisfy the GE requirements that may be met with lower-division courses at UC Davis. For more information concerning satisfaction of UC Davis GE requirements in regards to IGETC, IB, AP scores, refer to the General Education/Breadth section of ASSIST or view the "General Education" section of the [UC Davis General Catalog](#). Quick reference charts for AP and IB credit are also available [here](#).

ADMISSION IN BIOCHEMICAL ENGINEERING:

Applicants to the Engineering major who complete the equivalent of all the REQUIRED UC Davis major preparation courses and as many of the STRONGLY RECOMMENDED courses as possible with a major prep GPA of 3.20 or higher are the most competitive for admission. Applicants without all of the REQUIRED courses will be reviewed for admission, but will have less competitive applications. Courses for the major taken prior to admission must be completed with no grades lower than "C". AP or IB examinations may satisfy UC Davis course equivalents. If you have any additional questions please contact your [UC Davis Counselor](#).

Transfer Admission Guarantee (TAG) Note:

GPA and other requirements to obtain a [UC Davis TAG](#) may differ from those stated here for general transfer admission to the major.

REQUIRED preparation courses:

- Biological Sciences 002A
- Chemistry 002A/B/C
- Organic Chemistry 128A/B, 129A
- Engineering 006* or Chemical Engineering 060
- Mathematics 021A/B/C/D
- Mathematics 022A/B
- Physics 009A/B/C
- English 003 or University Writing Program 001

Additional Recommended For Fall 2023:

- Computer Science Engineering 032A

**For F'24 applicants, Computer Science Engineering 032A will replace Engineering 006 as a requirement; Engineering 006 will no longer be an option.*

MAJOR PREPARATION

- Please carefully review Information and Advisories and Course Articulation Details

COURSE ARTICULATION DETAILS

- **Important note:** Due to the limitations of the ASSIST platform at this time, it is important to view both the department and major agreements for a complete picture of the articulation arrangements. [Please refer to the appropriate department agreements in conjunction with the major agreement below.](#)
- Please check the UC Transferability Lists on ASSIST for information on any credit limitations.
- **Attention:** Articulation agreements are California Community College *specific*. Lower division courses that are taken at multiple California Community Colleges, including those within a shared district, may articulate differently from what is indicated in the department or major agreements. It is recommended that series courses be completed at the same California Community College. Please contact your California Community College counselor for more information.

REQUIRED COURSES FOR ADMISSION

BIS 002A - Introduction to Biology: Essentials of Life on Earth (5.00) ← **BIOL 6B** - Cell and Molecular Biology (6.00)

Select 1 Series from the following

Highly recommended to complete the entire series

If the entire sequence is not completed prior to transfer, students must consult the department advisor prior to enrollment

Complete entire sequence at same institution prior to transfer

CHE 002A - General Chemistry (5.00)	←	CHEM 1A - General Chemistry (5.00) <ul style="list-style-type: none"> Effective next fall, this articulation will be revised <div style="text-align: center;">--- Or ---</div> CHEM 1AH - General Chemistry - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one Effective next fall, this articulation will be revised
CHE 002B - General Chemistry (5.00)	←	CHEM 1B - General Chemistry (5.00) <ul style="list-style-type: none"> Effective next fall, this articulation will be revised <div style="text-align: center;">--- Or ---</div> CHEM 1BH - General Chemistry - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one Effective next fall, this articulation will be revised
CHE 002C - General Chemistry (5.00)	←	CHEM 1C - General Chemistry and Qualitative Analysis (5.00) <div style="text-align: center;">--- Or ---</div> CHEM 1CH - General Chemistry and Qualitative Analysis - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one

--- Or ---

CHE 002AH - Honors General Chemistry (5.00)	←	CHEM 1AH - General Chemistry - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one Effective next fall, this course will no longer articulate
CHE 002BH - Honors General Chemistry (5.00)	←	CHEM 1BH - General Chemistry - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one Effective next fall, this course will no longer articulate
CHE 002CH - Honors General Chemistry (5.00)	←	CHEM 1CH - General Chemistry and Qualitative Analysis - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one Effective next fall, this course will no longer articulate

--- Or ---

CHE 004A - General Chemistry for the Physical Sciences & Engineering (5.00)	←	CHEM 1AH - General Chemistry - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one
CHE 004B - General Chemistry for the Physical Sciences & Engineering (5.00)	←	CHEM 1BH - General Chemistry - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one
CHE 004C - General Chemistry for the Physical Sciences & Engineering (5.00)	←	CHEM 1CH - General Chemistry and Qualitative Analysis - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one

Complete entire sequence at same institution prior to transfer

CHE 128A - Organic Chemistry (3.00)	←	CHEM 12A - Organic Chemistry (5.00) <ul style="list-style-type: none"> • <i>Articulation applies to one series only, or one series plus labs</i> • <i>Lower division credit only</i>
CHE 128B - Organic Chemistry (3.00)	←	CHEM 12B - Organic Chemistry (5.00) <ul style="list-style-type: none"> • <i>Articulation applies to one series only, or one series plus labs</i> • <i>Lower division credit only</i>
CHE 129A - Organic Chemistry Laboratory (2.00)	←	CHEM 12A - Organic Chemistry (5.00) <ul style="list-style-type: none"> • <i>Articulation applies to one series only, or one series plus labs</i> • <i>Lower division credit only</i>

REFER TO TOP OF AGREEMENT		
ECH 005 - Introduction to Analysis & Design in Chemical Engineering (3.00)	←	No Course Articulated
ECH 051 - Material Balances (4.00)	←	No Course Articulated
ECH 060 - Numerical Methods in Engineering (4.00)	←	No Course Articulated
ECH 080 - Chemical Engineering Profession (1.00)	←	No Course Articulated

Select 1 Course from the following		
REFER TO TOP OF AGREEMENT		
Minimum grade required: C- or better		
COM 001 - Major Works of the Ancient World (4.00)	←	No Course Articulated
COM 002 - Major Works of the Medieval & Early Modern World (4.00)	←	No Course Articulated
COM 003 - Major Works of the Modern World (4.00)	←	No Course Articulated
COM 004 - Major Works of the Contemporary World (4.00)	←	ELIT 39 - Contemporary Literature (4.00)
ENL 003 - Introduction to Literature (4.00)	←	EWRT 1B - Reading, Writing and Research (5.00)
		--- Or ---
		EWRT 1BH - Reading, Writing and Research - HONORS (5.00)
		--- Or ---
		EWRT 1C - Literature and Composition (5.00)
NAS 005 - Introduction to Native American Literature (4.00)	←	NAIS 15 - Native American Literature (4.00)

UWP 001 - Introduction to Academic Literacies (4.00)	←	COMM 9 - Argumentation: Analysis of Oral and Written Communication (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one <div>--- Or ---</div> COMM 9H - Argumentation: Analysis of Oral and Written Communication - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one <div>--- Or ---</div> ESL 5 - Advanced Composition and Reading (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one <div>--- Or ---</div> EWRT 1A - Composition and Reading (5.00) <div>--- Or ---</div> EWRT 1AH - Composition and Reading - HONORS (5.00) <div>--- Or ---</div> EWRT 1B - Reading, Writing and Research (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one <div>--- Or ---</div> EWRT 1BH - Reading, Writing and Research - HONORS (5.00) <div>--- Or ---</div> <div> EWRT 1AS - Intensive Composition and Reading Stretch: First Quarter (5.00) <div>--- And ---</div> EWRT 1AT - Intensive Composition and Reading Stretch: Second Quarter (5.00) <ul style="list-style-type: none"> Complete entire sequence at same institution prior to transfer </div> <div>--- Or ---</div> EWRT 2 - Critical Reading, Writing and Thinking (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one <div>--- Or ---</div> EWRT 2H - Critical Reading, Writing and Thinking - HONORS (5.00) <ul style="list-style-type: none"> Course is articulated in more than one agreement but credit can only apply to one
UWP 001Y - Introduction to Academic Literacies (4.00)	←	No Course Articulated
UWP 001V - Introduction to Academic Literacies: Online (4.00)	←	No Course Articulated

Highly recommended to complete the entire series If the entire sequence is not completed prior to transfer, students must consult an advisor prior to enrollment		
MAT 021A - Calculus (4.00)	←	MATH 1A - Calculus (5.00) <ul style="list-style-type: none"> Credit for articulated courses in one series only <div>--- Or ---</div> MATH 1AH - Calculus - HONORS (5.00) <ul style="list-style-type: none"> Credit for articulated courses in one series only
MAT 021B - Calculus (4.00)	←	MATH 1B - Calculus (5.00) <ul style="list-style-type: none"> Credit for articulated courses in one series only <div>--- Or ---</div> MATH 1BH - Calculus - HONORS (5.00) <ul style="list-style-type: none"> Credit for articulated courses in one series only
MAT 021C - Calculus (4.00)	←	MATH 1C - Calculus (5.00) <ul style="list-style-type: none"> Credit for articulated courses in one series only <div>--- Or ---</div> MATH 1CH - Calculus - HONORS (5.00) <ul style="list-style-type: none"> Credit for articulated courses in one series only

MAT 021D - Vector Analysis (4.00)	←	MATH 1D - Calculus (5.00) --- Or --- MATH 1DH - Calculus - HONORS (5.00)
MAT 022A - Linear Algebra (3.00)	←	MATH 2B - Linear Algebra (5.00) --- Or --- MATH 2BH - Linear Algebra - HONORS (5.00)
--- Or ---		
MAT 027A - Linear Algebra with Applications to Biology (4.00) Same-As: BIS 027A	←	No Course Articulated
MAT 022B - Differential Equations (3.00)	←	MATH 2A - Differential Equations (5.00) --- Or --- MATH 2AH - Differential Equations - HONORS (5.00)
--- Or ---		
MAT 027B - Differential Equations with Applications to Biology (4.00) Same-As: BIS 027B	←	No Course Articulated

Highly recommended to complete the entire series If the entire sequence is not completed prior to transfer, students must consult an advisor prior to enrollment		
PHY 009A - Classical Physics (5.00)	←	PHYS 4A - Physics for Scientists and Engineers: Mechanics (6.00)
PHY 009B - Classical Physics (5.00)	←	PHYS 4C - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
PHY 009C - Classical Physics (5.00)	←	PHYS 4B - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)

END OF AGREEMENT