

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

Biological Systems 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 BIOLOGICAL SYSTEMS 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
- Engineering 003 or Communications 001 or Communications 003
- Engineering 006 or Computer Science Engineering 032A
- Engineering 017, 035
- Mathematics 021A/B/C/D
- Mathematics 022A/B
- Physics 009A/B/C
- University Writing Program 001 (English 003 not accepted for this major)

Additional Recommendations:

- Biological Sciences 002B/C

MAJOR PREPARATION

- Please carefully review Information and Advisories and Course Articulation Details.

COURSE ARTICULATION DETAILS

- **Important note:** Due to the limitations and bugs on 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)

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

Complete entire sequence at same institution prior to transfer

CHE 002A - General Chemistry (5.00)



CHEM 1A - General Chemistry (5.00)

- *Effective next fall, this articulation will be revised*

--- Or ---

CHEM 1AH - General Chemistry - HONORS (5.00)

- *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)

- *Effective next fall, this articulation will be revised*

--- Or ---

CHEM 1BH - General Chemistry - HONORS (5.00)

- *Course is articulated in more than one agreement but credit can only apply to one*
- *Effective next fall, this articulation will be revised*

CMN 001 - Introduction to Public Speaking (4.00)



COMM 1 - Public Speaking (5.00)

--- Or ---

COMM 1H - Public Speaking - HONORS (5.00)

--- Or ---

CMN 003 - Interpersonal Communication Competence (4.00)



COMM 16 - Interpersonal Communication (5.00)

--- Or ---

COMM 16H - Interpersonal Communication - HONORS (5.00)

--- Or ---

ENG 003 - Introduction to Engineering Design (4.00)



No Course Articulated

ECS 032A - Introduction to Programming (4.00)



No Course Articulated

--- Or ---

ENG 006 - Engineering Problem Solving (4.00)



No Course Articulated

ENG 017 - Circuits I (4.00)



ENGR 37 - Introduction to Circuit Analysis (5.00)

ENG 035 - Statics (4.00)



ENGR 35 - Statics (4.00)

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)

- *Credit for articulated courses in one series only*

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)

- *Credit for articulated courses in one series only*

MAT 021B - Calculus (4.00)



MATH 1B - Calculus (5.00)

- *Credit for articulated courses in one series only*

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

- *Credit for articulated courses in one series only*

MAT 021C - Calculus (4.00)	←	MATH 1C - Calculus (5.00) <ul style="list-style-type: none"> <i>Credit for articulated courses in one series only</i> <div>--- Or ---</div> MATH 1CH - Calculus - HONORS (5.00) <ul style="list-style-type: none"> <i>Credit for articulated courses in one series only</i>
MAT 021D - Vector Analysis (4.00)	←	MATH 1D - Calculus (5.00) <div>--- Or ---</div> MATH 1DH - Calculus - HONORS (5.00)
MAT 022A - Linear Algebra (3.00)	←	MATH 2B - Linear Algebra (5.00) <div>--- Or ---</div> MATH 2BH - Linear Algebra - HONORS (5.00)
MAT 022B - Differential Equations (3.00)	←	MATH 2A - Differential Equations (5.00) <div>--- Or ---</div> MATH 2AH - Differential Equations - HONORS (5.00)

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)

Select 1 Course from the following
Minimum grade required: C- or better

UWP 001 - Introduction to Academic Literacies (4.00)

- ****REFER TO TOP OF AGREEMENT****

**COMM 9** - Argumentation: Analysis of Oral and Written Communication (5.00)

- *Course is articulated in more than one agreement but credit can only apply to one*

--- Or ---

COMM 9H - Argumentation: Analysis of Oral and Written Communication - HONORS (5.00)

- *Course is articulated in more than one agreement but credit can only apply to one*

--- Or ---

ESL 5 - Advanced Composition and Reading (5.00)

- *Course is articulated in more than one agreement but credit can only apply to one*

--- Or ---

EWRT 1A - Composition and Reading (5.00)

--- Or ---

EWRT 1AH - Composition and Reading - HONORS (5.00)

--- Or ---

EWRT 1B - Reading, Writing and Research (5.00)

- *Course is articulated in more than one agreement but credit can only apply to one*

--- Or ---

EWRT 1BH - Reading, Writing and Research - HONORS (5.00)

--- Or ---

EWRT 1AS - Intensive Composition and Reading Stretch: First Quarter (5.00)

--- And ---

EWRT 1AT - Intensive Composition and Reading Stretch: Second Quarter (5.00)

- *Complete entire sequence at same institution prior to transfer*

--- Or ---

EWRT 2 - Critical Reading, Writing and Thinking (5.00)

- *Course is articulated in more than one agreement but credit can only apply to one*

--- Or ---

EWRT 2H - Critical Reading, Writing and Thinking - HONORS (5.00)

- *Course is articulated in more than one agreement but credit can only apply to one*

UWP 001V - Introduction to Academic Literacies: Online (4.00)

No Course Articulated

UWP 001Y - Introduction to Academic Literacies (4.00)

No Course Articulated

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 an advisor prior to enrollment

Complete entire sequence at same institution prior to transfer

CHE 008A - Organic Chemistry: Brief Course (2.00)

No Course Articulated

CHE 008B - Organic Chemistry: Brief Course (4.00)

No Course Articulated

--- Or ---

CHE 008A - Organic Chemistry: Brief Course (2.00)

No Course Articulated

--- And ---

CHE 008B - Organic Chemistry: Brief Course (4.00)

--- Or ---

CHE 118A - Organic Chemistry for Health & Life Sciences (4.00)**CHEM 12A** - Organic Chemistry (5.00)

- *Articulation applies to one series only, or one series plus labs*
- *Lower division credit only*

CHE 118B - Organic Chemistry for Health & Life Sciences (4.00)



CHEM 12B - Organic Chemistry (5.00)

- *Articulation applies to one series only, or one series plus labs*
- *Lower division credit only*

EBS 001 - Foundations of Biological Systems Engineering (4.00)



No Course Articulated

EBS 075 - Properties of Materials in Biological Systems (4.00)



No Course Articulated

END OF AGREEMENT