

# Articulation Agreement by Major

Effective during the 2018-2019 Academic Year

To: University of California, Merced  
General Catalog, Semester

From: Ventura College  
General Catalog, Semester

## MATERIALS SCIENCE AND ENGINEERING, B.S.

### REQUIREMENTS FOR ADMISSION

For admission to the Materials Science and Engineering, B.S. major, students must earn an overall GPA of 2.4 or better, demonstrate readiness for a rigorous course of study in Engineering, and must complete classes articulated with the following UC Merced courses prior to admission:

- CHEM 2, MATH 21, MATH 22, MATH 23, MATH 24, PHYS 8, and PHYS 9

\*\*Completion of the equivalent of PHYS 10 prior to admission is strongly recommended for this major.

Transfer students seeking fall admission should have the following completed by the end of the spring term preceding fall enrollment at UC Merced:

1. All major preparation requirements as stated above.
2. All minimum admission requirements including appropriate courses in math and the equivalent of WRI 1 and WRI 10 (see articulation by department on ASSIST.org).
3. At least one course from the 'Arts and Humanities' or 'Social and Behavioral Sciences' section of the General Education requirements for School of Engineering, shown here:

Three courses with at least one from the arts and one from the humanities from the Arts and Humanities IGETC areas:

- **Area 3A** (Arts)
- **Area 3B** (Humanities)

**AND**

Three courses from at least two disciplines, or an interdisciplinary sequence from the Social and Behavioral Sciences IGETC area:

- **Area 4**

NOTE: Completion of IGETC (certified by your community college) satisfies all of the above requirements.

## ADVANCED PLACEMENT INFORMATION

Advanced Placement (AP) and International Baccalaureate (IB) Examination note:

AP and IB examination credit policies are detailed in the 2017-18 UC Merced general catalog viewable online at:

[http://catalog.ucmerced.edu/content.php?catoid=7&navoid=647#AP\\_IB](http://catalog.ucmerced.edu/content.php?catoid=7&navoid=647#AP_IB)

**\*ALERT\*** It is strongly recommended that you obtain a full transcript of your academic records from each of the colleges and universities you have attended before you start your UC application. **Applicants must report ALL grades in ALL courses--transferable and not transferable--from all institutions attended.** Applicants are solely responsible for the integrity of their self-reported academic record in the UC application.

Applicants are encouraged to clear any No Pass, D, or F letter grade received in UC Transfer course. Applicants are most competitive in the Admissions Process with fewer withdrawals and/or repeated course work in major preparation.

All course work must be completed with a 'C' or better.

Following these guidelines will assist you to be more competitive for admission to your UC Merced major.

If you have any questions about UC Merced admissions policy, please email: **admissions@ucmerced.edu**

The School of Engineering strongly discourages completion of IGETC as students are encouraged to focus primarily on lower division major preparation.

**\*\*Please Note:** Courses used to satisfy lower-division major preparation may simultaneously satisfy lower-division general education for the School of Engineering.

For the most up-to-date information about transferring to UC Merced, please visit [admissions.ucmerced.edu/transfer\\_requirements](http://admissions.ucmerced.edu/transfer_requirements).

Information about applying for a Transfer Admission Guarantee is available at [admissions.ucmerced.edu/tag](http://admissions.ucmerced.edu/tag).

## LOWER DIVISION MAJOR PREPARATION COURSES

**CHEM 2** - General Chemistry I (4.00)



**CHEM V1A** - General Chemistry I (3.00)

**And**

		<b>CHEM V1AL</b> - General Chemistry I Laboratory (2.00)
<b>ENGR 45</b> - Introduction to Materials (4.00)	←	<b>ENGR V18</b> - Engineering Materials (3.00) <b>And</b> <b>ENGR V18L</b> - Engineering Materials Laboratory (1.00)
<b>ENGR 57</b> - Statics and Dynamics (4.00)	←	No Course Articulated
<b>MATH 21</b> - Calculus I for Physical Sciences & Engineering (4.00)	←	<b>MATH V21A</b> - Calculus with Analytic Geometry I (5.00)
<b>MATH 22</b> - Calculus II for Physical Sciences & Engineering (4.00)	←	<b>MATH V21B</b> - Calculus with Analytic Geometry II (5.00)
<b>MATH 23</b> - Vector Calculus (4.00)	←	<b>MATH V21C</b> - Multivariable Calculus (5.00)
<b>MATH 24</b> - Introduction to Linear Algebra and Differential Equations (4.00)	←	<b>MATH V22</b> - Introduction to Linear Algebra (3.00) <b>And</b> <b>MATH V23</b> - Introduction to Differential Equations (3.00)
<b>MATH 32</b> - Probability and Statistics (4.00) ▪ Course recommended to be taken at university	←	No Course Articulated
<b>PHYS 8</b> - Introductory Physics I for Physical Sciences (4.00)	←	<b>PHYS V4</b> - Mechanics for Scientists and Engineers (4.00) <b>And</b> <b>PHYS V4L</b> - Mechanics Laboratory for Scientists and Engineers (1.00)
<b>PHYS 9</b> - Introductory Physics II for Physical Sciences (4.00)	←	<b>PHYS V5</b> - Electricity and Magnetism for Scientists and Engineers (4.00) <b>And</b> <b>PHYS V5L</b> - Electricity and Magnetism Laboratory for Scientists and Engineers (1.00)

### COMPLETE ONE OF THE FOLLOWING

<b>BIO 1</b> - Contemporary Biology (4.00)	←	<b>ANPH V1</b> - Introduction to Human Anatomy and Physiology (5.00) <b>And</b> <b>BIOL V3</b> - Introduction to Organismal Biology and Ecology (5.00) <b>Or</b> <b>BIOL V1</b> - Principles of Biology (3.00) <b>Or</b> <b>PHSO V1</b> - Introduction to Human
--	---	---

		Physiology (4.00)
		<b>Or</b>
		<b>BIOL V3</b> - Introduction to Organismal Biology and Ecology (5.00)
		<b>And</b>
		<b>BIOL V4</b> - Introduction to Cell and Molecular Biology (5.00)
<b>BIO 5</b> - Concepts & Issues in Biology Today (4.00)	←	No Course Articulated
<b>ESS 1</b> - Introduction to Earth Systems Science (4.00)	←	No Course Articulated
<b>ESS 5</b> - Introduction to Biological Earth Systems (4.00)	←	No Course Articulated

### COMPLETE ONE OF THE FOLLOWING

<b>ME 21</b> - Engineering Computing (4.00)	←	<b>ENGR V14</b> - MATLAB: Programming and Problem Solving (3.00)
		<b>Or</b>
<b>BIOE 21</b> - Computing for Bioengineers (3.00)	←	No Course Articulated
		<b>Or</b>
<b>CSE 20</b> - Introduction to Computing I (2.00)	←	<b>CS V11</b> - Programming Fundamentals (3.00)
		<b>Or</b>
		<b>CS V30</b> - Beginning C++ (3.00)
		<b>Or</b>
		<b>CS V40</b> - Beginning Java (3.00)
		<b>And</b>
<b>CSE 21</b> - Introduction to Computing II (2.00)	←	<b>CS V11</b> - Programming Fundamentals (3.00)
		<b>Or</b>
		<b>CS V30</b> - Beginning C++ (3.00)
		<b>Or</b>
		<b>CS V40</b> - Beginning Java (3.00)

### END OF AGREEMENT