# Articulation Agreement by Major

**Effective during the 2018-2019 Academic Year** 

To: University of California, Merced General Catalog, Semester From: Gavilan College General Catalog, Semester

#### **APPLIED MATHEMATICAL SCIENCES, B.S.**

#### SCHOOL OF NATURAL SCIENCES

\*\*Applied Mathematical Sciences, B.S. offers emphases in: Computational Biology, Computer Science, Computational & Data Sciences, Economics, Engineering, Environmental, and Physics. Transfer applicants must choose an emphasis in the major.\*\*

#### REQUIREMENTS FOR ADMISSION

For admission to the Applied Mathematical Sciences major, students must earn a minimum overall GPA of 2.8 or better, and <u>must</u> complete classes articulated with the following UC Merced courses prior to admission:

MATH 21, MATH 22, PHYS 8 and PHYS 9

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

- 1. All minimum admissions requirements including appropriate courses in math and the equivalent of WRI 1 and WRI 10 (see articulation by department on ASSIST.org).
- 2. At least one social science, Humanities or Arts course listed in the general education information for the School of Natural Sciences. Two courses (one from each area) is <u>strongly</u> recommended.
- 3. All major preparation requirements as stated above.

#### 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

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\*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 will not be competitive in the admission process if their academic records show unsuccessful attempts of UC-transferable courses as demonstrated by one or more of the following:

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 abour UC Merced admissions policy, please email: admissions@ucmerced.edu

Completion of IGETC is not recommended but is accepted for this major.

All course work must be completed with a letter grade of "C" or better.

For the most up-to-date information about transferring to UC Merced, please visit admissions.ucmerced.edu/transfer\_requirements.

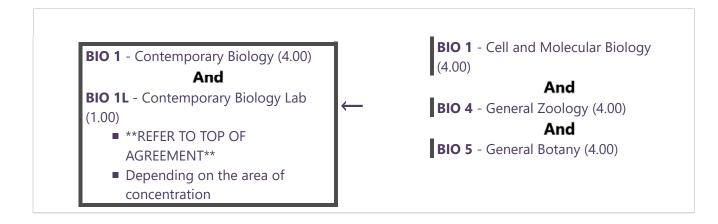
Information about applying for a Transfer Admission Guarantee is available at admissions.ucmerced.edu/tag.

## ADDITIONAL LOWER DIVISION REQUIREMENTS

\*\*For the Applied Mathematical Sciences and Computational Biology emphasis tracks, students must take BIO 1 and BIO 1L and earn a grade of B or better.\*\*

\*\*For the Applied Mathematical Sciences and Environmental emphasis tracks, students will take ESS 1 to fulfill emphasis track requirements, and must take a different course to fulfill the lower division course requirement\*\*

#### COMPLETE ONE OF THE FOLLOWING



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ESS 1 - Introduction to Earth Systems Science (4.00)  **REFER TO TOP OF AGREEMENT** Depending on the area of concentration	<b>←</b>	No Course Articulated
<b>ESS 5</b> - Introduction to Biological Earth Systems (4.00)	<b>←</b>	No Course Articulated

# MATHEMATICS REQUIREMENT (COMPLETE THE FOLLOWING FIVE COURSES):

MATH 21 - Calculus I for Physical Sciences & Engineering (4.00)	$\leftarrow$	<b>MATH 1A</b> - Single-Variable Calculus and Analytic Geometry (4.00)
MATH 22 - Calculus II for Physical Sciences & Engineering (4.00)	<b>←</b>	<b>MATH 1B</b> - Single-Variable Calculus and Analytic Geometry (4.00)
MATH 23 - Vector Calculus (4.00)	$\leftarrow$	MATH 1C - Multivariable Calculus (4.00)
MATH 24 - Introduction to Linear Algebra and Differential Equations (4.00)	<b>←</b>	MATH 2 - Linear Algebra (3.00)  And  MATH 2C - Differential Equations (3.00)
MATH 32 - Probability and Statistics (4.00) ■ Course recommended to be taken at university	←	No Course Articulated

### **COMPLETE ONE OF THE FOLLOWING**

<b>CSE 20</b> - Introduction to Computing I (2.00)	$\leftarrow$	<b>CSIS 5</b> - C++ Scientific Programming (3.00)
		Or
		CSIS 18 - UNIX/C++ Programming (3.00)
		And
		CSIS 18L - UNIX C++ Programming Lab (1.00)
		Or
		CSIS 24 - JAVA PROGRAMMING I (3.00)
		Or
		CSIS 43 - C Programming (4.00)
		Or
		<b>CSIS 45</b> - C++ Programming I (3.00)
ME 21 - Engineering Computing (4.00)	$\leftarrow$	No Course Articulated

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## **CHEMISTRY REQUIREMENT**

CHEM 2 - General Chemistry I (4.00) ←

**CHEM 1A** - General Chemistry (5.00)

# **PHYSICS REQUIREMENT**

<b>PHYS 8</b> - Introductory Physics I for Physical Sciences (4.00)	<b>←</b>	<b>PHYS 4A</b> - Physics for Scientists and Engineers - Mechanics (4.00)
<b>PHYS 9</b> - Introductory Physics II for Physical Sciences (4.00)	<b>←</b>	<b>PHYS 4B</b> - Physics for Scientists and Engineers - Electricity and Magnetism (4.00)

## **END OF AGREEMENT**

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