Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Riverside 2022-2023 General Catalog, Quarter	From: De Anza College 2022-2023 General Catalog, Quarter

Robotics, B.S.

GENERAL REQUIREMENTS

Available **FALL 2024** - Robotics B.S. Degree

All majors in the Bourns College of Engineering are selective, based on academic preparation and GPA in all transferable coursework, with a minimum cumulative GPA of 2.80. This is a baseline GPA for consideration and not a guarantee of admission.

Prior to transfer, a minimum GPA of at least 2.50 in the calculus sequence and at least one additional sequence.

AP Exam - Satisfy Course Requirement Section
Computer Science: A Exam
Minimum score of 4 satisfies CS 10A
Mathematics: AB Exam or AB Subscore from BC Exam
Minimum score of 3 satisfies MATH 9A or MATH 7A
Mathematics: BC Exam
Minimum score of 3 satisfies MATH 9A and MATH 9B or MATH 7A and MATH 7B
Minimum score of 4 satisfies MATH 9A, MATH 9B, MATH 9C or MATH 7A, MATH 7B, MATH 9C

If the sending institution offers ***honors courses***, the articulation for the same course number will be used.

For more information regarding this major and UCR's transfer selection process, please visit Bourns College of Engineering General Requirements.
For information about the UC Transfer Admission Guarantee (TAG) program, please visit Transfer Admission Guarantee.

IGETC and General Education/Breadth Information
The Bourns College of Engineering (BCOE) accepts completion of IGETC as satisfying the college's lower division general education/breadth requirements for transfer students. Additional upper division breadth requirements may be required after enrollment in BCOE. For more information on BCOE breadth requirements, go to: http://student.engr.ucr.edu/policies/requirements/breadth.html

LOWER DIVISION MAJOR REQUIREMENTS

Required for admission
All courses in this section are required

CS 10A - Intro to Computer Science for Science, Mathematics, and Engineering I (4.00) • *An AP exam may be used to satisfy this course requirement*	←	**CIS 22A** - Beginning Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 26A** - C as a Second Programming Language (4.50) **--- Or ---** **CIS 26B** - Advanced C Programming (4.50) **--- Or ---** **CIS 36A** - Introduction to Computer Programming Using Java (4.50) **--- And ---** **CIS 36B** - Intermediate Problem Solving in Java (4.50)
CS 10B - Intro to Computer Science for Science, Mathematics, and Engineering II (4.00)	←	**CIS 22B** - Intermediate Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 27** - Programming in C++ for C/Java Programmers (4.50) **--- Or ---** **CIS 28** - Object Oriented Analysis and Design (4.50) **--- Or ---** **CIS 29** - Advanced C++ Programming (4.50) **--- Or ---** **CIS 36A** - Introduction to Computer Programming Using Java (4.50) **--- And ---** **CIS 36B** - Intermediate Problem Solving in Java (4.50)

MATH 9A - First-Year Calculus (4.00) **--- And ---** **MATH 9B** - First-Year Calculus (4.00) **--- And ---** **MATH 9C** - First-Year Calculus (4.00) • *An AP exam may be used to satisfy this course requirement*	←	**MATH 1A** - Calculus (5.00) **--- And ---** **MATH 1B** - Calculus (5.00) **--- And ---** **MATH 1C** - Calculus (5.00)
PHYS 40A - General Physics (5.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)

Select 4 Course(s) from the following

Required for admission

CS 10C - Intro to Data Structures and Algorithms (4.00)	←	**CIS 22C** - Data Abstraction and Structures (4.50)
CS 61 - Machine Organization and Assembly Language Programming (4.00)	←	**CIS 21JA** - Introduction to x86 Processor Assembly Language and Computer Architecture (4.50) **--- And ---** **CIS 21JB** - Advanced x86 Processor Assembly Programming (4.50)
EE 5 - Circuits and Electronics (4.00)	←	No Course Articulated
ME 10 - Statics (4.00)	←	**ENGR 35** - Statics (4.00)
PHYS 40C - General Physics (5.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
MATH 31 - Applied Linear Algebra (5.00)	←	**MATH 2B** - Linear Algebra (5.00)
MATH 46 - Intro to Ordinary Differential Equations (4.00)	←	**MATH 2A** - Differential Equations (5.00)

STRONGLY RECOMMENDED COURSES

MATH 10A - Calculus of Several Variables (4.00)	←	**MATH 1C** - Calculus (5.00)
ME 9 - Engineering Graphics and Design (4.00)	←	No Course Articulated
PHYS 40B - General Physics (5.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)

END OF AGREEMENT