

# 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

## Computer Science with Business Applications B.S.

### GENERAL REQUIREMENTS

All majors in the Bourns College of Engineering are selective, based on academic preparation and GPA in all transferable coursework, with a minimum 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

##### Economics: Macroeconomics Exam

Minimum score of 3 satisfies ECON 2

##### Economics: Microeconomics Exam

Minimum score of 3 satisfies ECON 3

##### 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. Please visit "[GE Areas - Transfer Institution](#)" for the complete list of required GE/Breadth Articulation Agreement. For more information on BCOE breadth requirements, go to [Bourns College of Engineering Breadth Requirements](#). Prospective applicants are strongly encouraged to focus instead on preparatory course work for the major, such as the mathematics, science and other technical preparatory course work listed below, rather than IGETC. Strong technical preparation is essential for success in the admissions process, and subsequently, in all coursework at BCOE.

### LOWER DIVISION MAJOR REQUIREMENTS

Required for admission  
All courses in this section are required

**BUS 20** - Financial Accounting and Reporting (4.00)



**ACCT 1A** - Financial Accounting I (5.00)

**CS 10A** - Intro to Computer Science for Science, Mathematics, and Engineering I (4.00)



**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)

**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)

Select 3 Course(s) from the following

### Required for admission

<b>CS 10B</b> - Intro to Computer Science for Science, Mathematics, and Engineering II (4.00)	←	<b>CIS 22B</b> - Intermediate Programming Methodologies in C++ (4.50) --- Or --- <b>CIS 27</b> - Programming in C++ for C/Java Programmers (4.50) --- Or --- <b>CIS 28</b> - Object Oriented Analysis and Design (4.50) --- Or --- <b>CIS 29</b> - Advanced C++ Programming (4.50) --- Or --- <b>CIS 36A</b> - Introduction to Computer Programming Using Java (4.50) --- And --- <b>CIS 36B</b> - Intermediate Problem Solving in Java (4.50)
<b>CS 10C</b> - Intro to Data Structures and Algorithms (4.00)	←	<b>CIS 22C</b> - Data Abstraction and Structures (4.50)
<b>CS 11</b> - Intro to Discrete Structures (4.00) Same-As: MATH 11	←	<b>MATH 22</b> - Discrete Mathematics (5.00)
<b>CS 61</b> - Machine Organization and Assembly Language Programming (4.00)	←	<b>CIS 21JA</b> - Introduction to x86 Processor Assembly Language and Computer Architecture (4.50) --- And --- <b>CIS 21JB</b> - Advanced x86 Processor Assembly Programming (4.50)
<b>ECON 2</b> - Intro to Macroeconomics (5.00) • An AP exam may be used to satisfy this course requirement	←	<b>ECON 1</b> - Principles of Macroeconomics (4.00)
<b>ECON 3</b> - Intro to Microeconomics (5.00) • An AP exam may be used to satisfy this course requirement	←	<b>ECON 2</b> - Principles of Microeconomics (4.00)

### STRONGLY RECOMMENDED COURSES

#### Recommended

<b>MATH 10A</b> - Calculus of Several Variables (4.00) --- And --- <b>MATH 10B</b> - Calculus of Several Variables (4.00)	←	<b>MATH 1C</b> - Calculus (5.00) --- And --- <b>MATH 1D</b> - Calculus (5.00)
<b>MATH 31</b> - Applied Linear Algebra (5.00)	←	<b>MATH 2B</b> - Linear Algebra (5.00)
--- Or ---		
<b>EE 20B</b> - Linear Methods for Engineering Analysis and Design Using MATLAB (4.00)	←	No Course Articulated

### END OF AGREEMENT