

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

Data Science, B.S.

GENERAL REQUIREMENTS

Update: Effective Winter 2023, the following equivalency to UCR courses must be completed in order to meet selection criteria for this major.

The B.S. in Data Science major is an intercollege major offered by the Marlan and Rosemary Bourns College of Engineering and the College of Natural and Agricultural Sciences. A B.S. degree in Data Science is offered by each college. When students declare the major, they choose from which college they wish to have their degree awarded. Students whose degrees are awarded by the Marlan and Rosemary Bourns College of Engineering are advised in and have their records maintained by the BCOE Office of Student Academic Affairs; students whose degrees are awarded by the College of Natural and Agricultural Sciences are advised in and have their records maintained by the CNAS Undergraduate Academic Advising Center. Breadth requirements vary by college; and students must fulfill the breadth requirements of the college they choose.

Applicants to majors in the College of Natural and Agricultural Sciences are selected on the basis of academic preparation, as assessed by their GPA and the strength of preparation for their intended major. A GPA of at least 2.70 is required (This is a baseline GPA for consideration and not a guarantee of admission).

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

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 [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.

The **College of Natural and Agricultural Sciences (CNAS)** does not accept IGETC for its majors. Courses taken for IGETC will be applied to the College's breadth pattern as appropriate. Transfer students who wish to supplement their math and science preparation with humanities or social science courses are encouraged to follow the College of Natural and Agricultural Sciences breadth pattern. You may view the breadth requirements for College of Natural and Agricultural Sciences by visiting the [2022-23 Catalog](#), pages 87-89.

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)

Select 3 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 11 - Intro to Discrete Structures (4.00)



MATH 22 - Discrete Mathematics (5.00)

Same-As: MATH 11

MATH 10A - Calculus of Several Variables (4.00)



MATH 1C - Calculus (5.00)

MATH 31 - Applied Linear Algebra (5.00)



MATH 2B - Linear Algebra (5.00)

STAT 8 - Statistics for Business (5.00)



MATH 10 - Introductory Statistics (5.00)

- An AP exam may be used to satisfy this course requirement

END OF AGREEMENT