Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

Data Science, Lower Division B.A.

COLLEGE OF LETTERS AND SCIENCE

College Admission Requirements for Transfer Students
This major is offered by the College of Letters and Science (L&S).

By the end of the spring term preceding fall enrollment at Berkeley, you must complete:

1) The L&S Requirements in Reading & Composition, Quantitative Reasoning, and Foreign Language; **OR**

2) IGETC

Major Requirements: Complete as many lower division major requirements as possible. See details on preparation for this major below.

Primary selection criteria for admission, in general:
- completion of L&S Requirements (or IGETC), plus
- strength of academic preparation, and
- grade point average.

For more information on admission to UC Berkeley:
http://admissions.berkeley.edu

For more information on majors at UC Berkeley:
Berkeley Academic Guide: http://guide.berkeley.edu

PROGRAM

Fall 2023 Admission For this Major:
Transfer students who select this major on their College of Letters and Science (L&S) application and are offered admission to L&S will be directly admitted into this major. No additional steps are required to be admitted to the major

If you are interested in this major, it is very important to select this major on your application. If you do not select this major on your application, it may not be possible for you to declare this major at a later date. Complete as many lower-division major requirements as possible prior to transfer. See details on course preparation for this major below.

DATA SCIENCE is a new field of study that combines computational and inferential reasoning to draw conclusions based on data about some aspect of the real world. Data scientists come from all walks of life, all areas of study, and all backgrounds. They share an appreciation for the practical use of mathematical and scientific thinking and the power of computing to understand and solve problems for business, research, and societal impact.

The **Data Science Major** will equip students to draw sound conclusions from data in context, using knowledge of statistical inference, computational processes, data management strategies, domain knowledge, and theory. Students will learn to carry out analyses of data through the full cycle of the investigative process in scientific and practical contexts. Students will gain understanding of the human and ethical implications of data analysis and integrate that knowledge in designing and carrying out their work.

We strongly encourage you to visit our website for prospective transfer students (link listed below) to learn more about preparing for a major in Data Science at UC Berkeley. Also, please reach out to us via the email address below if you have specific questions about your academic path into data science.

For more information on this major:
ds-advising@berkeley.edu
https://data.berkeley.edu/academics/undergraduate-programs/data-science-major/information-prospective-transfer-students

LOWER DIVISION PREREQUISITES

DATA/COMPSCI/INFO/STAT/C8 - Foundations of Data Science

MATH 1A - Calculus
and
MATH 1B - Calculus

MATH 54 - Linear Algebra and Differential Equations
or
EECS 16A - Designing Information Devices and Systems I (formerly known as Electrical Engineering EL ENG 16A)
and
EECS 16B - Designing Information Devices and Systems II (formerly known as Electrical Engineering EL ENG 16B)

COMPSCI 61A - The Structure and Interpretation of Computer Programs (preferred)
or
ENGIN 7 - Introduction to Computer Programming for Scientists and Engineers

COMPSCI 61B - Data Structures

A note about CS 61B / "Articulation subject to completion of a university course"
Any course/s approved as comparable to COMPSCI 61B must include coverage of object-oriented programming, hashing, heaps, priority queues and graphs, together with at least one programming assignment of 1000 or more lines of code. If any of these topics are missing, the missing material may be acquired by taking a bridge course, COMPSCI 47B, at UC Berkeley. If you see "Articulation subject to completion of a university course'" below the community college course, then in addition to completing the community college course, you must complete COMPSCI 47B after enrollment at UC Berkeley.

DATA C8 - Foundations of Data Science (4.00)
Same-As: STAT C8, INFO C8, COMPSCI C8

← No Course Articulated

MATH 1A - Calculus (4.00)

←

MATH 1A - Calculus (5.00)

--- And ---

MATH 1B - Calculus (5.00)

- *Regular and honors courses may be combined to complete this series*

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)

--- And ---

MATH 1BH - Calculus - HONORS (5.00)

- *Regular and honors courses may be combined to complete this series*

MATH 1B - Calculus (4.00)

←

MATH 1B - Calculus (5.00)

--- And ---

MATH 1C - Calculus (5.00)

- *Regular and honors courses may be combined to complete this series*

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

--- And ---

MATH 1CH - Calculus - HONORS (5.00)

- *Regular and honors courses may be combined to complete this series*

MATH 54 - Linear Algebra and Differential Equations (4.00)	←	**MATH 2A** - Differential Equations (5.00) **--- And ---** **MATH 2B** - Linear Algebra (5.00) • *Regular and honors courses may be combined to complete this series* **--- Or ---** **MATH 2AH** - Differential Equations - HONORS (5.00) **--- And ---** **MATH 2BH** - Linear Algebra - HONORS (5.00) • *Regular and honors courses may be combined to complete this series*
--- Or ---		
EECS 16A - Designing Information Devices and Systems I (4.00)	←	No Course Articulated
--- And ---		
EECS 16B - Designing Information Devices and Systems II (4.00)	←	No Course Articulated

COMPSCI 61A - The Structure and Interpretation of Computer Programs (4.00) • *Preferred course*	←	No Course Articulated
--- Or ---		
ENGIN 7 - Introduction to Computer Programming for Scientists and Engineers (MATLAB) (4.00)	←	No Course Articulated
COMPSCI 61B - Data Structures (4.00)	←	**CIS 22C** - Data Abstraction and Structures (4.50) • *Articulation subject to completion of a university course* **--- Or ---** **CIS 22CH** - Data Abstraction and Structures - HONORS (4.50) • *Articulation subject to completion of a university course* **--- Or ---** **CIS 26B** - Advanced C Programming (4.50) • *Articulation subject to completion of a university course*

END OF AGREEMENT