

# Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, San Diego  
2022-2023 General Catalog, Quarter

From: De Anza College  
2022-2023 General Catalog, Quarter

## Cognitive Science: Cognitive and Behavioral Neuroscience B.S.

### GENERAL INFORMATION

**DATED MATERIAL, SUBJECT TO CHANGE. PLEASE CONSULT CURRENT UCSD GENERAL CATALOG FOR ANY ADDITIONAL INFORMATION.**

Cognitive and Behavioral Neuroscience is a joint major between the Department of Cognitive Science and the Department of Psychology. Students may choose to be advised by either department.

Cognitive science is a diverse field which is unified and motivated by a single basic inquiry: What is cognition? How do people, animals, or computers 'think', act, and learn? In order to understand the mind/brain, cognitive science brings together methods and discoveries from neuroscience, psychology, linguistics, philosophy, and computer science. UCSD has been at the forefront of this exciting field and our Cognitive Science Department was the first of its kind in the world. It is part of an exceptional scientific community and remains a dominant influence in the field it helped create. In addition to preparing undergraduates for careers in a variety of sciences, the major also provides an excellent background for many professional fields, including medicine, clinical psychology, and information technology.

For more details, please visit our main website at <http://www.cogsci.ucsd.edu/> and undergraduate program at <http://www.cogsci.ucsd.edu/undergraduates/major/index.html>

#### Special Advising Notes:

**Transfer students seeking to major in Cognitive and Behavioral Neuroscience are strongly advised to complete as many preparatory courses as early as possible before enrolling at UC San Diego. Preparing well for the major helps students move efficiently toward graduation.**

Students can petition for courses not articulated to count at an equivalent academic level **ONLY** for the Cognitive and Behavioral Neuroscience Major, meaning that a lower-division course can **ONLY** be petitioned to count towards a lower-division major requirement. Lower-division courses cannot be petitioned for upper-division major requirements. All Community College courses are considered lower-division. It is highly recommended that students choose their courses from those listed below.

Students who plan to pursue graduate study and/or research in Cognitive and Behavioral Neuroscience or a related field are advised to select a course equivalent to UC San Diego's COGS 18 or CSE 7. These preferred courses are critical to future success.

UC San Diego Advanced Placement (AP) and International Baccalaureate (IB) credit policies are detailed in the links below:

Advanced Placement (AP) <https://www.ucsd.edu/catalog/pdf/APC-chart.pdf>

International Baccalaureate (IB) [https://catalog.ucsd.edu/\\_files/international-baccalaureate-credits-chart.pdf](https://catalog.ucsd.edu/_files/international-baccalaureate-credits-chart.pdf)

**COGNITIVE AND BEHAVIORAL NEUROSCIENCE B.S. MAJORS ARE REQUIRED TO COMPLETE COGS SEVENTEEN AND A TOTAL OF TWO LOWER-DIVISION NATURAL SCIENCE COURSES FROM BIOLOGY, CHEMISTRY, AND/OR PHYSICS.**

**COGS 17** - Neurobiology of Cognition (4.00)

← **PSYC 24** - Introduction to Psychobiology (4.00)

**BILD 1** - The Cell (4.00)



**BIOL 6A** - Form and Function in the Biological World (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6C** - Ecology and Evolution (6.00)

--- Or ---

**BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6CH** - Ecology and Evolution - HONORS (6.00)

**BILD 2** - Multicellular Life (4.00)



**BIOL 6A** - Form and Function in the Biological World (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6C** - Ecology and Evolution (6.00)

--- Or ---

**BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6CH** - Ecology and Evolution - HONORS (6.00)

**BILD 3** - Organismic and Evolutionary Biology (4.00)



**BIOL 6A** - Form and Function in the Biological World (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6C** - Ecology and Evolution (6.00)

--- Or ---

**BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6CH** - Ecology and Evolution - HONORS (6.00)

**BILD 10** - Fundamental Concepts of Modern Biology (4.00)



**BIOL 10** - Introductory Biology (5.00)

--- Or ---

**BIOL 10H** - Introductory Biology - HONORS (5.00)

**BILD 20** - Human Genetics in Modern Society (4.00)



No Course Articulated

**BILD 26** - Human Physiology (4.00)



**BIOL 40A** - Human Anatomy and Physiology (5.00)

--- And ---

**BIOL 40B** - Human Anatomy and Physiology (5.00)

--- And ---

**BIOL 40C** - Human Anatomy and Physiology (5.00)

**CHEM 4** - Basic Chemistry (4.00)



**CHEM 30A** - Introduction to General, Organic, and Biochemistry I (5.00)

<b>CHEM 6A</b> - General Chemistry I (4.00)	←	<b>CHEM 1A</b> - General Chemistry (5.00) --- Or --- <b>CHEM 1AH</b> - General Chemistry - HONORS (5.00)
<b>CHEM 6B</b> - General Chemistry II (4.00)	←	<b>CHEM 1B</b> - General Chemistry (5.00) --- Or --- <b>CHEM 1BH</b> - General Chemistry - HONORS (5.00)
<b>CHEM 6C</b> - General Chemistry III (4.00)	←	<b>CHEM 1C</b> - General Chemistry and Qualitative Analysis (5.00) --- Or --- <b>CHEM 1CH</b> - General Chemistry and Qualitative Analysis - HONORS (5.00)
<b>CHEM 11</b> - The Periodic Table (4.00)	←	No Course Articulated

<b>PHYS 1A</b> - Mechanics (3.00)	←	<b>PHYS 2A</b> - General Introductory Physics (5.00)
<b>PHYS 1B</b> - Electricity and Magnetism (3.00)	←	<b>PHYS 2B</b> - General Introductory Physics (5.00)
<b>PHYS 1C</b> - Waves, Optics, and Modern Physics (3.00)	←	<b>PHYS 2C</b> - General Introductory Physics (5.00)
<b>PHYS 2A</b> - Physics - Mechanics (4.00)	←	<b>PHYS 4A</b> - Physics for Scientists and Engineers: Mechanics (6.00)
<b>PHYS 2B</b> - Physics - Electricity and Magnetism (4.00)	←	<b>PHYS 4B</b> - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
<b>PHYS 2C</b> - Physics - Fluids, Waves, Thermodynamics, and Optics (4.00)	←	<b>PHYS 4C</b> - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
<b>PHYS 10</b> - Concepts in Physics (4.00)	←	No Course Articulated
<b>PHYS 11</b> - Survey of Physics (4.00)	←	No Course Articulated

**COGNITIVE AND BEHAVIORAL NEUROSCIENCE B.S. MAJORS ARE REQUIRED TO COMPLETE A TOTAL OF FOUR LOWER-DIVISION FORMAL SKILLS COURSES, INCLUDING ONE IN RESEARCH METHODS. STUDENTS MAY SELECT COURSES FROM THE LISTED COURSES BELOW.**

<b>MATH 10A</b> - Calculus I (4.00)	←	No Course Articulated
--- Or ---		
<b>MATH 20A</b> - Calculus for Science and Engineering (4.00)	←	<b>MATH 1A</b> - Calculus (5.00) --- Or --- <b>MATH 1AH</b> - Calculus - HONORS (5.00)

<b>MATH 10B</b> - Calculus II (4.00)	←	No Course Articulated
--- Or ---		
<b>MATH 20B</b> - Calculus for Science and Engineering (4.00)	←	<b>MATH 1B</b> - Calculus (5.00) --- Or --- <b>MATH 1BH</b> - Calculus - HONORS (5.00)

<b>MATH 10C</b> - Calculus III (4.00)	←	No Course Articulated
--- Or ---		
<b>MATH 20C</b> - Calculus and Analytic Geometry for Science and Engineering (4.00)	←	<div><div><b>MATH 1C</b> - Calculus (5.00)</div><div>--- And ---</div><div><b>MATH 1D</b> - Calculus (5.00)</div></div> <div>--- Or ---</div> <div><div><b>MATH 1CH</b> - Calculus - HONORS (5.00)</div><div>--- And ---</div><div><b>MATH 1DH</b> - Calculus - HONORS (5.00)</div></div>

<b>COGS 14A</b> - Introduction to Research Methods (4.00)	←	<b>PSYC 2</b> - Research Methods in Psychology (6.00)
--- Or ---		

**PSYC 70** - Research Methods in Psychology (4.00)



**PSYC 3** - An Introduction to Cognitive Psychology (4.00)

--- Or ---

**PSYC 2** - Research Methods in Psychology (6.00)

**COGNITIVE AND BEHAVIORAL NEUROSCIENCE B.S. MAJORS ARE REQUIRED TO COMPLETE ONE LOWER DIVISION COMPUTER PROGRAMMING COURSE**

**BILD 62** - Introduction to Python for Biologists (4.00)



No Course Articulated

**COGS 18** - Introduction to Python (4.00)



**CIS 40** - Introduction to Programming in Python (4.50)

**CSE 6R** - Introduction to Computer Science and Object-Oriented Programming: Python (4.00)



**CIS 41A** - Python Programming (4.50)

**CSE 8A** - Introduction to Programming and Computational Problem Solving I (4.00)



**CIS 22A** - Beginning Programming Methodologies in C++ (4.50)

--- Or ---

**CIS 36A** - Introduction to Computer Programming Using Java (4.50)

--- Or ---

**CIS 40** - Introduction to Programming in Python (4.50)

**CSE 8B** - Introduction to Programming and Computational Problem Solving II (4.00)



**CIS 36B** - Intermediate Problem Solving in Java (4.50)

**CSE 11** - Introduction to Programming and Computational Problem Solving - Accelerated Pace (4.00)



**CIS 35A** - Java Programming (4.50)

--- Or ---

**CIS 36A** - Introduction to Computer Programming Using Java (4.50)

--- And ---

**CIS 36B** - Intermediate Problem Solving in Java (4.50)

**CSE 12** - Basic Data Structures and Object-Oriented Design (4.00)



**CIS 22C** - Data Abstraction and Structures (4.50)

--- And ---

**CIS 28** - Object Oriented Analysis and Design (4.50)

--- Or ---

**CIS 22CH** - Data Abstraction and Structures - HONORS (4.50)

--- And ---

**CIS 28** - Object Oriented Analysis and Design (4.50)

**COGNITIVE AND BEHAVIORAL NEUROSCIENCE B.S. MAJORS ARE REQUIRED TO COMPLETE ONE LOWER-DIVISION STATISTICS COURSE. THIS COURSE MUST BE TAKEN FOR A LETTER GRADE.**

**COGS 14B** - Introduction to Statistical Analysis (4.00)



**MATH 10** - Introductory Statistics (5.00)

--- Or ---

**PSYC 15** - Statistics and Research Methods in Social Science (4.00)  
Same-As: SOC 15

--- Or ---

**PSYC 60** - Introduction to Statistics (4.00)



**MATH 10** - Introductory Statistics (5.00)

--- Or ---

**MATH 10H** - Introductory Statistics - HONORS (5.00)

--- Or ---

**MATH 17** - Integrated Statistics 2 (5.00)

--- Or ---

**PSYC 15** - Statistics and Research Methods in Social Science (4.00)  
Same-As: SOC 15

**END OF AGREEMENT**