

# Assistive Technology Minor 2024-2025 Curriculum Chart

\*This minor cannot be combined with the Assistive Tech concentration of the former Bioengineering major or the Robotics Engineering BS\*  
\*ECE 121, ECE 141, and ECE 167 cannot also be used to satisfy Electrical Engineering B.S. electives\*

## Mathematics & Statistics

**MATH 19A**  
Calculus  
Prerequisites:  
Math 3 or  
Math Placement Score of 400 or  
more

**AM 10**  
Math Methods for  
Engineers I  
Prerequisites: Math  
Placement score of  
400 or higher or Math 3

OR

**MATH 21**  
Linear Algebra  
Prerequisites:  
Math 19A

**MATH 19B**  
Calculus  
Prerequisites:  
Math 19A

**AM 20**  
Math Methods for  
Engineers II  
Prerequisites:  
Math 19B and Am 10  
or Math 21

OR

**MATH 24**  
Ordinary Differential  
Equations  
Prerequisites:  
Math 22 or Math 23A

## Computer Engineering

**CSE 12 (7 units)**  
Computer Systems &  
Assembly Language/Lab  
[Prerequisite(s): CSE 20, or  
CSE 30, or BME 160, or equivalent]

**ECE 13 (7 units)**  
Computer Systems & C  
Programming  
Prerequisites:  
CSE 12

**CSE 100/L**  
Logic Design/Lab  
Prerequisites:  
CSE 12  
  
Requires declared  
major status in CE, EE,  
or RE.

## Electronics

**ECE 101/L**  
Intro to Electronic  
Circuits/Lab  
Prerequisites:  
Phys 5C/N or 6C/N; and  
Math 24 or PHYS 116A  
or previous or concurrent  
enrollment in AM 20

**ECE 118 (10 units)**  
Mechatronics  
Prerequisites:  
ECE 101/L, CSE 100/L, ECE 13

**ECE 103**  
Signals & Systems  
Prerequisites:  
ECE 101/L and AM 20 or Math 24

**ECE 167\* (7 units)**  
Sensing & Sensor  
Technologies  
Prerequisites:  
ECE 13 and ECE 103/L

**ECE 121  
(7 units)**  
Microcontroller  
System Design  
Prerequisites:  
CSE 12 and ECE 13

OR

**ECE 141**  
Feedback Control  
Systems  
Prerequisites:  
ECE 103

\* Additional pre-requisites required

## Science

**PHYS 5A/L**  
Intro to Physics I/Lab  
Prerequisites:  
Math 19A; Concurrent or  
previous enrollment in  
Math 19B

**PHYS 5C/N**  
Intro to Physics III/Lab  
Prerequisites:  
Phys 5A/L; Math 19B

**CHEM 3A**  
General Chemistry  
Prerequisites:  
Previous or concurrent  
enrollment in Math 2 or  
Math placement score of 200  
or more

OR

**CHEM 4A**  
Advanced General  
Chemistry  
Prerequisites:  
Previous or concurrent  
enrollment in Math 3 or  
Math placement score of 300  
or more

**BIOL 20A**  
Cell & Molecular Biology  
Prerequisites:  
Chem 1A, 3A, or 4A

**BIOE 20B**  
Development &  
Physiology  
Prerequisites:  
BIOL 20A

**METX 135/L**  
Functional Anatomy/Lab  
Prerequisites:  
BIOL 20A and  
BIOE 20B

# Assistive Technology Minor

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Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

The assistive technology minor is designed for students interested in helping people with movement disabilities. The emphasis is on designing exoskeletons and robots built on two core cross-disciplinary courses: Mechatronics(ECE 118) and Functional Anatomy (METX 135/L).

The minor requirements may satisfy the requirements of other majors or minors under the campus policy discussed under Major and Minor requirements. Because of the large number of courses required, it is most suitable for students in majors already requiring a substantial number of these courses. The minor cannot be combined with the Assistive Technology: Motor concentration of the former bioengineering major or the Robotics Engineering B.S. major. ECE 121, ECE 141, and ECE 167 cannot also be used to satisfy electrical engineering B.S. electives.

The prerequisites listed on this curriculum chart are accurate as of August 15, 2024 according to UCSC's general catalog. Prerequisites listed on this chart are subject to change and students should refer to the catalog for the most up to date requirements.