

UC SAN DIEGO DEPARTMENT OF VISUAL ARTS

INTERDISCIPLINARY COMPUTING AND THE ARTS MAJOR

For Students Declared Fall 2025 and Later

Major Code: VA29

The Interdisciplinary Computing and the Arts major in the Music and Visual Arts Departments draws upon and aims to bring together ideas and paradigms from computer science, art, and cultural theory. It takes for granted that the computer has become a metamedium and that artists working with computers are expected to combine different media forms in their works. All of this makes the program unique among currently existing computer art or design programs which, on the one hand, usually focus on the use of computers for a particular media (for instance, specializing in computer animation, or computer music, or computer design for print) and, on the other hand, do not enter into a serious dialogue with current research in computer science, only teaching the students “off-the-shelf” software. The goals of the program are to prepare the next generation of artists who will be functioning in a computer-mediated culture; to give students necessary technical, theoretical and historical backgrounds so they can contribute to the development of new aesthetics for computer media; to prepare students to mediate between the worlds of computer science and technology, the arts, and the culture at large by being equally proficient with computing and cultural concepts; and to give students sufficient understanding of the trajectories of development in computing so they can anticipate and work with the emerging trends, rather than being locked in particular software currently available on the market.

LOWER DIVISION	8-9 courses / 34-38 units
UPPER DIVISION	12 courses / 48 units
TOTAL COURSES REQUIRED	20-21 courses / 82-86 units

ALL COURSES TAKEN FOR MAJOR REQUIREMENTS MUST BE TAKEN FOR A **LETTER GRADE**, AND ONLY GRADES OF **C- OR BETTER** WILL BE ACCEPTED. REFER TO COURSE DESCRIPTIONS FOR ENFORCED PREREQUISITES.

◆Indicates Production Course, suggested not to exceed two per quarter

FOUNDATIONAL LEVEL (8-9 Courses/34-38 units)

VIS 10	Computing in the Arts Lecture Series
VIS 22/22R	Formations of Modern Art
VIS 41	Design Communication
VIS 70N	Introduction to Media

Choose one Computer Science sequence:

VIS 42	Introduction to Creative Coding
CSE 6R	Intro to Computer Science and Object-Oriented Programming: Python
CSE 8A+8B	Intro to Programming and Computational Problem-Solving I+II
CSE 11	Intro to Programming and Computational Problem-Solving: Accelerated Pace
COGS 18	Intro to Python
DSC 20	Programming and Basic Data Structures
BILD 62	Intro to Python for Biologists

Choose one Mathematics course:

MATH 3C	Precalculus
MATH 4C	Precalculus for Science & Engineering
MATH 10A	Calculus
MATH 15A/CSE 20	Discrete Mathematics
MATH 18	Linear Algebra
MATH 20A	Calculus for Science and Engineering
PSYC 60	Introduction to Statistics

Choose one Art Making course:

VIS 1	Introduction to Art-Making: 2D
VIS 2	Introduction to Art-Making: Motion
VIS 3	Introduction to Art-Making: 3D
VIS 60	Introduction to Digital Photography
VIS 80	Introduction to the Studio Major

Choose one Interdisciplinary course:

VIS 30	Introduction to Speculative Design
VIS 31	Undead Media: All Things Zombie
VIS 32	Art, Design and the Brain
COGS 3	Introduction to Computing
COGS 9	Introduction to Data Science
COGS 10	Cognitive Consequences of Society
DSGN 1	Design of Everyday Things
MUS 4	Introduction to Western Music

INTERMEDIATE LEVEL (6 Courses/24 units)

VIS 142◆	Practices in Computing Arts
VIS 145A◆	Digital Media I: Time, Movement, Sound

Choose two Computing in the Arts courses:

VIS 141A◆	Computer Programming for the Arts I
VIS 143A◆	Virtual Environments I
VIS 146A◆	Computer Controlled Fabrication in Art I
VIS 147A◆	Electronic Technologies for Art I

Choose one Art Making course:

VIS 104A◆	Performance: Art Practice
VIS 105A◆	Drawing: Representing the Subject
VIS 106A◆	Painting: Image Making
VIS 107A◆	Sculpture: Making the Object
VIS 164◆	Photographic Strategies
VIS 165◆	Camera Techniques: Analog Futures
VIS 165A◆	The Photographic Print
VIS 165B◆	The Photographer's Studio
VIS 174◆	Media Sketchbook

Choose one Interdisciplinary course:

VIS 100	Introduction to Public Culture
VIS 101	Introduction to urban Ecologies
VIS 102	Democratizing the City
VIS 133	Lecture Topics in Speculative Design
VIS 134	Introduction to 3D Asset Design
VIS 135♦	Design Research Methods
VIS 163	Design Research and Criticism
COGS 108♦	Data Science in Practice
COGS 120♦	Interaction Design
COGS 187A♦	Usability and Information Architecture
MUS 170♦	Musical Acoustics
MUS 171♦	Computer Music I
MUS 172♦	Computer Music II
MUS 173A♦	Electronic Music Production and Composition
MUS 174 A-B-C♦	Recording/MIDI Studio Techniques

HISTORY AND THEORY (2 Courses/8 units)

VIS 159	History of Art and Technology
---------	-------------------------------

Choose one History course:

Any Upper Division Speculative Design Course: VIS 103, 103A-D

Any Upper Division Art History Course VIS 120-129

Any Upper Division Film Studies Course VIS 150-158D, 194S

ADVANCED LEVEL (4 Courses/16 units)

Choose two Computing in the Arts courses:

VIS 141B♦	Computer Programming for the Arts II
VIS 143B♦	Virtual Environments II
VIS 145B♦	Time and Process Based Digital Media II
VIS 146B♦	Computer Controlled Fabrication in Art II
VIS 147B♦	Electronic Technologies for Art II
VIS 160B♦	Honors Project in Computer Arts II

Choose one Senior Projects course:

VIS 160♦	Senior Project in Computer Arts
OR	
VIS 160A♦	Honors Project in Computer Arts I

Choose one Interdisciplinary course:

VIS 100A♦	Design of Public Culture
VIS 101A♦	Design of Urban Ecologies
VIS 107B♦	Sculpture: Practices and Genre
VIS 108♦	Advanced Projects in Art
VIS 110A-K♦	Advanced- Various Topics
VIS 130♦	Special Projects in Media
VIS 132♦	Installation Productions and Studio
VIS 133A♦	Studio Topics in Speculative Design
VIS 141A♦	Computer Programming for the Arts I
VIS 141B♦	Computer Programming for the Arts II
VIS 143A♦	Virtual Environments I
VIS 143B♦	Virtual Environments II
VIS 145B♦	Time and Process Based Digital Media II
VIS 146A♦	Computer Controlled Fabrication in Art I
VIS 146B♦	Computer Controlled Fabrication in Art II
VIS 147A♦	Electronic Technologies for Art I
VIS 147B♦	Electronic Technologies for Art II
VIS 149♦	Seminar in Contemporary Computer Topics
VIS 161♦	Systems and Networks at Scale
VIS 162♦	Speculative Science & Design Invention
VIS 167♦	Social Engagement & Photography
VIS 168♦	Pictorialism and Constructed Reality
VIS 169A♦	Photography in Exhibition/Artists Books
VIS 169B♦	Advanced Photographic Print
VIS 198♦	Directed Group Study
VIS 199♦	Special Studies in Visual Arts
AIP 197♦	Academic Internship Program

NOTE: Courses taken may fulfill one requirement within the major.