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 meta-medium 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.

---

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

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

Choose one Computer Science sequence:

- CSE 11 Intro to Computer Science and Object-Oriented Programming: JAVA
- OR
- CSE 8A+8B Intro to Computer Science: Python + JAVA

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

---

### INTERMEDIATE LEVEL (6 Courses/24 units)

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

Choose two Computing in the Arts courses:

- VIS 141A• Computer Programming for the Arts I
- VIS 147A• Electronic Technologies for Art I
- VIS 143• Virtual Environments

Choose one Art Making course:

- VIS 105A• Drawing: Representing the Subject
- VIS 105D• Aesthetics of Chinese Calligraphy
- 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

---

(rev. 03 May 2021)
**Choose one Interdisciplinary course:**
VIS 100  Introduction to Public Culture  
VIS 101  Introduction to urban Ecologies  
VIS 102  Democratizing the City  
VIS 135  Design Research Methods  
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 173•  Electronic Music Production and Composition  
MUS 174 A-B-C•  Recording/MIDI Studio Techniques  

**ADVANCED LEVEL** (4 Courses/16 units)

**Choose one Computing course:**
VIS 141B•  Computer Programming for the Arts II  
VIS 145B•  Time and Process Based Digital Media II  
VIS 147B•  Electronic Technologies for Art II  

**Required two courses:**
VIS/MUS 160A•  Senior Project in Computer Arts I  
VIS/MUS 160B•  Senior Project in Computer Arts I  

**Choose one Interdisciplinary course:**
VIS 141A•  Computer Programming for the Arts I  
VIS 143•  Virtual Environments  
VIS 145B•  Time and Process Based Digital Media II  
VIS 147A•  Electronic Technologies for Art I  
VIS 147B•  Electronic Technologies for Art II  
VIS 149•  Seminar in Contemporary Computer Topics  
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  

**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/B/C  
Any Upper Division Art History Course VIS 120-129  
Any Upper Division Film Studies Course VIS 150-158D, 194S  

**NOTE:** Courses may be taken for the Intermediate or Advanced level but not both