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.

**FOUNDATION LEVEL** (8-10 Courses/34-42 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 4</td>
<td>Introduction to Western Music</td>
</tr>
<tr>
<td>VIS 10</td>
<td>Computing in the Arts Lecture Series</td>
</tr>
<tr>
<td>VIS 22</td>
<td>Formations of Modern Art</td>
</tr>
<tr>
<td>VIS 41</td>
<td>Design Communication</td>
</tr>
<tr>
<td>VIS 70N</td>
<td>Introduction to Media</td>
</tr>
<tr>
<td>CSE 11</td>
<td>Intro to Computer Science and Object-Oriented Programming: JAVA</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>CSE 8A+8B</td>
<td>Intro to Computer Science: JAVA</td>
</tr>
<tr>
<td>Choose one Computer Science sequence:</td>
<td></td>
</tr>
<tr>
<td>MATH 15A/CSE 20</td>
<td>Discrete Mathematics</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MATH 20A+20B</td>
<td>Calculus for Science and Engineering</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MATH 10A+10B+10C</td>
<td>Calculus</td>
</tr>
<tr>
<td>Choose one Mathematics sequence:</td>
<td></td>
</tr>
<tr>
<td>VIS 1</td>
<td>Introduction to Art-Making: 2D</td>
</tr>
<tr>
<td>VIS 2</td>
<td>Introduction to Art-Making: Motion</td>
</tr>
<tr>
<td>VIS 3</td>
<td>Introduction to Art-Making: 3D</td>
</tr>
<tr>
<td>VIS 60</td>
<td>Introduction to Digital Photography</td>
</tr>
<tr>
<td>VIS 80</td>
<td>Introduction to the Studio Major</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIS 142•</td>
<td>Practices in Computing Arts</td>
</tr>
<tr>
<td>VIS 145A•</td>
<td>Digital Media I: Time, Movement, Sound</td>
</tr>
<tr>
<td>MUS 171•</td>
<td>Computer Music I</td>
</tr>
<tr>
<td>Choose two Art Making courses:</td>
<td></td>
</tr>
<tr>
<td>VIS 141A•</td>
<td>Computer Programming for the Arts I</td>
</tr>
<tr>
<td>VIS 147A•</td>
<td>Electronic Technologies for Art I</td>
</tr>
<tr>
<td>VIS 143•</td>
<td>Virtual Environments</td>
</tr>
<tr>
<td>MUS 170•</td>
<td>Musical Acoustics</td>
</tr>
<tr>
<td>MUS 172•</td>
<td>Computer Music II</td>
</tr>
<tr>
<td>MUS 173•</td>
<td>Electronic Music Production and Composition</td>
</tr>
<tr>
<td>MUS 174 A-B-C•</td>
<td>Recording/MIDI Studio Techniques</td>
</tr>
</tbody>
</table>

**HISTORY AND THEORY** (2 Courses/8 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIS 159</td>
<td>History of Art and Technology</td>
</tr>
</tbody>
</table>

**TOTAL COURSES REQUIRED**

**LOWER DIVISION** 8-11 courses / 34-46 units

**UPPER DIVISION** 12 courses / 48 units

**20-23 courses / 82-94 units**

**Enrollment in production courses is limited to two per quarter. Production courses are indicated with a diamond:**

*Indicates Production Course, enrollment in production courses is limited to two per quarter

(rev. 05 October 2018)
ADVANCED LEVEL (4 Courses/16 units)

Choose one Art Making 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 108• Advanced Projects in Art
VIS 109• Advanced Projects in Media
VIS 110A-J Advanced- Various Topics
VIS 130• Special Projects in Media
VIS 131• Special Projects in Media
VIS 132• Installation Productions and Studio
VIS 141A• Computer Programming for the Arts I
VIS 143• Virtual Environments
VIS 147A• Electronic Technologies for Art I
VIS 148• Visualizing Art Practice
VIS 149• Seminar in Contemporary Computer Topics
VIS 167• Social Engagement & Photography
VIS 168• Pictorialism and Constructed Reality
VIS 198• Directed Group Study
VIS 199• Special Studies in Visual Arts
AIP 197• Academic Internship Program

NOTE: VIS 141A, 147A, and VIS 143 may be taken for the Intermediate or Advanced level but not both.