DIGITAL ARTS AND SCIENCES | BACHELOR OF SCIENCE

The Digital Arts and Sciences (DAS) program crosses college boundaries between engineering and the arts. This degree is an interdisciplinary engineering program.

About this Program

- **College:** Herbert Wertheim College of Engineering (http://catalog.ufl.edu/UGRD/colleges-schools/UGENG)
- **Degree:** Bachelor of Science in Digital Arts and Sciences
- **Credits for Degree:** 120
- **More Info**

To graduate with this major, students must complete all university, college, and major requirements.

Department Information

The mission of the Department of Computer & Information Science & Engineering is to educate students, as well as the broader campus community, in the fundamental concepts of the computing discipline; to create and disseminate computing knowledge and technology; and to use expertise in computing to help society solve problems.

Website (https://www.cise.ufl.edu)

CONTACT

Email (ug-coordinator@cise.ufl.edu) | 352.505.1578 (tel) | 352.392.1220 (fax)

P.O. Box 116120
E301 CSE BUILDING
GAINESVILLE FL 32611-6120
Map (http://campusmap.ufl.edu/#/index/0042)

Curriculum

- Combination Degrees
- Computer and Information Science and Engineering Minor
- Computer and Information Science and Engineering Minor
- Computer Science UF Online
- Computer Science | CLAS
- Computer Science | Herbert Wertheim College of Engineering
- Digital Arts and Sciences | Bachelor of Science

Related Programs

- Digital Arts and Sciences Minor
- Digital Arts and Sciences | Bachelor of Arts
- Digital Arts and Sciences | Bachelor of Arts UF Online

The Digital Arts and Sciences (DAS) degree is a core computer science degree with special emphasis on human-centered computing, which includes art, design and computing courses that are related to digital media, interaction and communication.

Graduates will be well versed in issues and solutions for basic art techniques and graphic art design as well as modeling 3D virtual worlds. The DAS graduate also will be well versed in collaborative multidisciplinary team models. Intermediate and final class projects are centered around a balanced-team composition focusing on multimedia productions.

Department Requirements

Students must complete all critical-tracking courses with minimum grades of C in each course and the critical-tracking GPA must be 2.5 or higher. A minimum grade of C is required in all other courses that are prerequisites to a required course:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAP 3027</td>
<td>Introduction to Digital Arts and Sciences</td>
<td>3</td>
</tr>
<tr>
<td>CDA 3101</td>
<td>Introduction to Computer Organization</td>
<td>3</td>
</tr>
<tr>
<td>COP 3502</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>COP 3530</td>
<td>Data Structures and Algorithm</td>
<td>4</td>
</tr>
<tr>
<td>COP 4600</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>COT 3100</td>
<td>Applications of Discrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>MAS 3114</td>
<td>Computational Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, CISE requires all DAS students to maintain a cumulative, upper-division and department GPA minimum of 2.0.

Students who do not meet these requirements will be placed on academic probation and will be required to prepare a probation contract with a CISE advisor. Students normally are given two terms in which to remove their deficit points or to remedy their probation status; however, students who do not satisfy the conditions of the first term of probation may be dismissed from the department.

Critical Tracking

Critical Tracking records each student’s progress in courses that are required for progress toward each major. Please note the critical-tracking requirements below on a per-semester basis.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (http://www.flvc.org/cpp/displayRecord.jsp?cip=500102&track=01) may be used for transfer students.

Semester 1

- Complete 1 of 8 critical-tracking courses with a minimum grade of C within two attempts: ARH 2051, CHM 2045 or CHM 2095, MAC 2311, MAC 2312, MAC 2313, MAP 2302, PHY 2048, PHY 2049
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 2

- Complete 1 additional critical-tracking course with a minimum grade of C within two attempts
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 3

- Complete 2 additional critical-tracking courses with minimum grades of C within two attempts
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required
**Semester 4**
- Complete 2 additional critical-tracking courses with minimum grades of C within two attempts
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

**Semester 5**
- Complete all 8 critical-tracking courses with minimum grades of C in each course within two attempts
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

**Semester 6**
- Complete COP 3503 and COT 3100
- 2.0 departmental GPA required
- 2.0 UF GPA required

**Semester 7**
- Complete COP 3530
- 2.0 departmental GPA required
- 2.0 UF GPA required

**Semester 8**
- Complete CAP 3020
- 2.0 departmental GPA required
- 2.0 UF GPA required

### Model Semester Plan

Students are expected to complete the general education international (GE-N) and diversity (GE-D) requirements. This is often done concurrently with another general education requirement (typically, GE-C, H or S).

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

*This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester One</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select one:</td>
<td></td>
<td></td>
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<tr>
<td>CHM 2045</td>
<td>General Chemistry 1 <em>(Critical Tracking; Gen Ed Physical Sciences)</em></td>
<td>3</td>
</tr>
<tr>
<td>CHM 2095</td>
<td>Chemistry for Engineers 1 <em>(Critical Tracking)</em></td>
<td>3</td>
</tr>
<tr>
<td>COP 3502</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MAC 2311</td>
<td>Analytic Geometry and Calculus 1 <em>(Critical Tracking; State Core Gen Ed Mathematics)</em></td>
<td>4</td>
</tr>
<tr>
<td>Quest 1 (Gen Ed Humanities)</td>
<td></td>
<td>3</td>
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<tr>
<td><strong>Semester Two</strong></td>
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<tr>
<td>CAP 3032</td>
<td>Interactive Modeling and Animation 1</td>
<td>3</td>
</tr>
<tr>
<td>COP 3503</td>
<td><em>(Critical Tracking)</em></td>
<td>3</td>
</tr>
<tr>
<td>MAC 2312</td>
<td>Analytic Geometry and Calculus 2 <em>(Critical Tracking; Gen Ed Mathematics)</em></td>
<td>4</td>
</tr>
<tr>
<td>PHY 2048</td>
<td>Physics with Calculus 1 <em>(Critical Tracking; State Core Gen Ed Physical Sciences)</em></td>
<td>3</td>
</tr>
<tr>
<td>PHY 2048L</td>
<td>Laboratory for Physics with Calculus 1 <em>(Gen Ed Physical Sciences)</em></td>
<td>1</td>
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<td>State Core Gen Ed Social and Behavioral Sciences (<a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a>)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Three**
- CAP 3220  Introduction to Computer-Aided Modeling  3
- COT 3100  Applications of Discrete Structures *(Critical Tracking)*  3
- MAC 2313  Analytic Geometry and Calculus 3 *(Critical Tracking; Gen Ed Mathematics)*  4
- PHY 2049  Physics with Calculus 2 *(Critical Tracking; Gen Ed Physical Sciences)*  3
- PHY 2049L Laboratory for Physics with Calculus 2  1

**Semester Four**
- ARH 2051  Introduction to the Principles and History of Art 2 *(Critical Tracking; Gen Ed Humanities and International)*  3
- CAP 3034  Introduction to Computer-Aided Animation  3
- COP 3530  Data Structures and Algorithm *(Critical Tracking)*  4
- MAP 2302  Elementary Differential Equations *(Critical Tracking)*  3
- Gen Ed Social and Behavioral Sciences  3

**Semester Five**
- CAP 3027  Introduction to Digital Arts and Sciences  3
- CEN 3031  Introduction to Software Engineering  3
- MAS 3114 or MAS 4105 Computational Linear Algebra  3
- PHI 2010  Introduction to Philosophy *(State Core Gen Ed Humanities)* *(http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext); Writing Requirement: 6,000 words)*  3
- Interdisciplinary elective *(Gen Ed Composition; Writing Requirement: 6,000 words)*  3

**Semester Six**
- ART 2305C  Perceptual Drawing  3
- CAP 3020  Theory and Practice of Multimedia Production *(Critical Tracking)*  3
- COT 4501  Numerical Analysis: a Computational Approach  3
- CISE elective  3
- Interdisciplinary elective  3

**Semester Seven**
- ART 2701C  Sculpture: Shaping Form and Space  3
- CIS 4930  Special Topics in CISE  3
- ENC 3246  Professional Communication for Engineers *(State Core Gen Ed Composition)* *(http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext); Writing Requirement: 6,000 words)*  3
- CISE elective  3
Academic Learning Compact

The major crosses college boundaries between engineering and the arts. This degree is an interdisciplinary engineering program combining developing skills in art and computers. Students will be well-versed in issues and solutions for basic art technique and graphic art design, as well as modeling 3D virtual worlds. Students will be experienced in collaborative multidisciplinary teams, compositions and projects focusing on multimedia productions.

Before Graduating Students Must

• Pass assessment of performance on a major design experience, according to department grading rubric.
• Pass assessment in one or more core courses of individual assignments targeted to each SLO.
• Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes (SLOs)

Content
1. Apply knowledge of mathematics and science to computer science problems.
2. Apply knowledge of multimedia, human-computer interaction, computer graphics and simulation to application domains.

Critical Thinking
3. Design a human-computer interface involving animation, sound and immersive virtual environments.

Communication
4. Communicate technical information in a collaborative team environment.

Curriculum Map

<table>
<thead>
<tr>
<th>Courses</th>
<th>SLO 1</th>
<th>SLO 2</th>
<th>SLO 3</th>
<th>SLO 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAP 4730</td>
<td>I, A</td>
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<td>CEN 3031</td>
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<td>CIS 4914</td>
<td>A</td>
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</tbody>
</table>

Assessment Types

• Assignments
• Exams