

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
- **Degree:** Bachelor of Science in Digital Arts and Sciences
- **Credits for Degree:** 120
- **Additional Information**
- **Related Digital Arts and Sciences Programs**

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

Critical Tracking records each student's progress in courses that are required for entry to 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 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

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.

Course	Title	Credits
Semester One		
Select one:		
CHM 2045	General Chemistry 1 (Critical Tracking ; Gen Ed Physical Sciences)	3
CHM 2095	Chemistry for Engineers 1 (Critical Tracking)	
COP 3502	Programming Fundamentals 1	3
IUF 1000	What is the Good Life (Gen Ed Humanities)	3
MAC 2311	Analytic Geometry and Calculus 1 (Critical Tracking ; State Core Gen Ed Mathematics)	4
Credits		13
Semester Two		
CAP 3032	Interactive Modeling and Animation 1	3
COP 3503	Programming Fundamentals 2	3
MAC 2312	Analytic Geometry and Calculus 2 (Critical Tracking ; Gen Ed Mathematics)	4
PHY 2048	Physics with Calculus 1 (Critical Tracking ; State Core Gen Ed Physical Sciences)	3
PHY 2048L	Laboratory for Physics with Calculus 1 (Gen Ed Physical Sciences)	1
State Core Gen Ed Social and Behavioral Sciences		3
Credits		17
Semester Three		
CAP 3220	Introduction to Computer-Aided Modeling	3
COT 3100	Applications of Discrete Structures	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
Credits		14
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	4
MAP 2302	Elementary Differential Equations (Critical Tracking)	3
Gen Ed Social and Behavioral Sciences		3
Credits		16
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 or Linear Algebra 1	3
PHI 2010	Introduction to Philosophy (State Core Gen Ed Humanities; Writing Requirement: 6,000 words)	3

Interdisciplinary elective (Gen Ed Composition; Writing Requirement: 6,000 words)	3
Credits	15
Semester Six	
ART 2305C Perceptual Drawing	3
CAP 3020 Theory and Practice of Multimedia Production	3
COT 4501 Numerical Analysis: a Computational Approach	3
CISE elective	3
Interdisciplinary elective	3
Credits	15
Semester Seven	
ART 2701C Sculpture: Shaping Form and Space	3
CAP 4800 Systems Simulation or CIS 4930 or Special Topics in CISE	3
ENC 3246 Professional Communication for Engineers (State Core Gen Ed Composition; Writing Requirement: 6,000 words)	3
CISE elective	3
Interdisciplinary elective	3
Credits	15
Semester Eight	
CAP 4730 Computational Structures in Computer Graphics	3
CIS 4914 Senior Project	3
COP 4020 Programming Language Concepts or COP 4600 or Operating Systems	3
Interdisciplinary electives	6
Credits	15
Total Credits	120

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

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3	SLO 4
CAP 4730	I, A	I, A		
CEN 3031				I, A
CIS 4914	A	A	A	A

Assessment Types

- Assignments
- Exams
- Reports
- Exit survey