Southern Methodist University 2021-2022 Undergraduate Catalog

Creative Computing, B.A.

Admission to the program is competitive. A minimum overall GPA of 3.000 is required, as well as at least a 3.500 GPA in courses listed under Computing Fundamentals in the table below. Students are admitted to the major through consultation with the program director.

The major requires a final capstone project, where students, working with a faculty adviser, develop an independent project in creative computing. Projects may include an art installation, performance, original software (tool, library or application) or a scholarly article. It is expected that students will present their projects in a public forum.

SMU Degree Requirements

An SMU undergraduate degree requires a minimum of 120 credit hours and must include completion of the <u>University's Common Curriculum</u>, one major and a combination of electives and/or other majors or minors. Completion of certain majors requires more than 120 hours to finish the degree. The credit hours within this curriculum are distributed as follows:

Requirements for the Major

Computing Fundamentals (9 Credit Hours)

• CRCP 1310 - Creative Coding I

or

ASIM 1310 - Creative Coding I

or

- CS 1341 Principles of Computer Science
- <u>CRCP 3305 Creative Computing II</u>

or

ASIM 3305 - Creative Computing II

or

- CS 1342 Programming Concepts
- <u>CRCP 5320</u> / <u>ASIM 5320 Aesthetics and Computation</u>
- CS 2341 Data Structures

Creative Fundamentals (9 Credit Hours)

Any 1000- or 2000-level courses in the Meadows School of the Arts may be substituted for up to 6 hours of the courses listed below, with adviser approval.

Three from the following:

- ASCE 1300 Introduction to Ceramics
- ASDR 1300 Introduction to Drawing
- ASPH 1300 The Basics of Photography
- ASPR 3300 Printmaking Workshop
- ASPT 1300 Introduction to Painting
- ASSC 1300 Introduction to Sculpture

- ENGL 2390 Introduction to Creative Writing
- FILM 1301 Art of Film and Media
- FILM 1302 Contemporary Media Industries

Creative Computing (21 Credit Hours)

Seven from the following:

- ASIM 1300 Introduction to Digital/Hybrid Media
- ASIM 1330 Intermediate Digital/Hybrid Media
- ASIM 1340 Computational Sculpture
- ASPH 3390 Experimental Camera
- ASIM 3305 Creative Computing II
- ASIM 3310 Digital/Hybrid Media Workshop (topic: international digital atelier)
- ASIM 3320 Advanced Digital/Hybrid Media
- ASIM 3350 Digitally Augmented Performance and Installation
- ASIM 5302 Digital/Hybrid Media Directed Studies
- ASPH 3304 Digital Tools
- CEE 5373 Prestressed Concrete
- CRCP 1330 Sound and Code
- <u>CRCP 1350 The Art of 3-D Modeling and Animation</u>

or

- CS 5360 Introduction to 3-D Animation
- CRCP 2310 Nature and Code
- CRCP 2330 Nand to Tetris: Elements of Computing Systems
- CRCP 3310 Data: Meaning, Narrative, and Discovery
- CRCP 3320 Postmodern Software Design
- <u>CRCP 3382 Introduction to Graphics Programming</u>

or

- CS 5382 Computer Graphics
- <u>CS 3345 Graphical User Interface Design and Implementation</u>
- ECE 1301 Modern Electronic Technology
- ECE 5390 Special Topics
- FILM 1304 Production 1
- FILM 3384 Sound 1
- FILM 4304 Project Development
- FILM 4308 Postproduction Visual Fx
- MSA 3310 Fundamentals of Audio and Sound
- MSA 3330 Special Topics (topic: creative visualization or synthesizing nature)
- MUTH 4310 Introduction to Electro-Acoustic Music
- MUTH 4311 Advanced Topics in Music Technology
- PHYS 1320 Musical Acoustics
- PHYS 3320 Physics of Music
- PHYS 3340 Computational Physics
- THEA 2275 Technical Theatre Laboratory
- THEA 2333 Technical Drawing for the Theatre
- THEA 3379 Computer-Assisted Design I
- THEA 3380 Computer-Assisted Design II

Math, Sciences and Engineering (9 Credit Hours)

Any courses within the math, sciences or engineering disciplines may be substituted for up to 6 credit hours of the courses listed below, with adviser approval.

One from the following:

- MATH 3304 Introduction to Linear Algebra
- MATH 3311 Introduction to Proof and Analysis

At least 6 credit hours from the following:

- ANTH 2415 Human Evolution: Biological and Social Beginnings of Humankind
- ANTH 2463 The Science of Our Past: An Introduction to Archaeology
- BIOL 1301 Introductory Biology
- BIOL 1101 Introductory Biology Lab (or BIOL 1401 prior to Fall 2017)
- BIOL 1302 Introductory Biology
- BIOL 1102 Introductory Biology Lab (or BIOL 1402 prior to Fall 2017)
- BIOL 1300 Introductory Biology
- BIOL 1305 The Natural Environment
- BIOL 1308 Plant Biology
- CHEM 1301 Chemistry for Liberal Arts
- CHEM 1303 General Chemistry
- CHEM 1304 General Chemistry
- CS 2240 Assembly Language Programming and Machine Organization
- CS 2353 Discrete Computational Structures
- GEOL 1301 Earth Systems
- GEOL 1305 Oceanography
- GEOL 1307 The Solar System
- GEOL 1313 Earthquakes and Volcanoes
- PHYS 1303 Introductory Mechanics
- PHYS 1304 Introductory Electricity and Magnetism
- PHYS 3305 Introduction to Modern Physics

Advanced Engineering (9 Credit Hours)

• Any Lyle applied technology courses at the 3000 level or above, with adviser approval.

Advanced Arts (9 Credit Hours)

• Any Meadows studio or performance arts courses at the 3000 level or above, with adviser approval.

Theory (3 Credit Hours)

One from the following:

- ARHS 3369 Contemporary Art: 1965-Present
- CS 2240 Assembly Language Programming and Machine Organization
- CS 3353 Fundamentals of Algorithms
- MATH 3304 Introduction to Linear Algebra
- MATH 3311 Introduction to Proof and Analysis
- PHIL 1301 Elementary Logic

- PHIL 3363 Aesthetic Experience and Judgment
- PSYC 3310 Memory and Cognition
- SOCI 3345 Construction of Social Identities in the Media

Capstone (3 Credit Hours)

• CRCP 5301 - Creative Computing Major Capstone

Minor or Second Major and Free Electives

Hours vary as needed to meet University residency and degree requirements.

Total for the Major Only: 72 Credit Hours