University of Arkansas - Fort Smith
5210 Grand Avenue
P. O. Box 3649
Fort Smith, AR 72913-3649
479-788-7000

General Syllabus

BSAT 4013 Science and Medical Applications

Credit Hours: 3 Lecture Hours: 2 Laboratory Hours: 2

Prerequisites: Senior standing in BSAT program or consent of department head.

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

3D software programs will be used to create and animate videos associated with science and medical applications. Advanced modeling techniques used for building organic and structured surface objects and environments will be explored.

B. Additional Information

This course is a requirement for general animation majors. It is also required of all students in the Science/Medical Animation track.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Define elements required to produce a three dimensional model of the scientific or medical application project.
2. Examine drawings and illustration of medical or scientific process to extract required information for modeling the object in three dimensions.
3. Apply the concepts and elements of materials application to three-dimensional scientific and medical models.
4. Practice skills towards the accurate representation of specific medical or scientific models.
5. Accurately animate the motion of scientific or medical processes.
6. Analyze the resulting model to determine if the process did produce a model which accurately reflects the original or intended purpose.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Communication Skills (written and oral)

Students will prepare and deliver written and oral presentations.

Analytical Skills

Quantitative Reasoning: Students will use math and science applications to read and examine drawings and illustrations of medical or scientific processes to extract required information for modeling the object in three dimensions.

Ethical Decision Making

Students will apply ethical frameworks to resolve a variety of ethical dilemmas.

III. Major Course Topics

A. Animating scientific and medical processes
B. Proper application of materials to models
C. Proper lighting and compositional factors associated with medical and scientific models
D. Explanatory text and over voice added to animation
E. Motion, communication, and lighting skills
F. Team work and self-management of production teams