

University of Arkansas - Fort Smith
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General Syllabus

BSAT 3033 Motion for Applied Animation

Credit Hours: 3

Lecture Hours: 2

Laboratory Hours: 2

Prerequisites: Junior standing or CGT 2684 Digital Design Level II or CGT 2834 Machine Drawing and Design or CGT 2654 Architectural CAD Applications

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Focuses on the creation of natural appearing motion for animated characters. Subjects include motion, motion capture systems and procedures for representing motion in an animation.

B. Additional Information

This course is a required course for BSAT majors. Character motion can be found in various forms. Medical animation, terrain motion for 3D maps, animal motion, and mechanical motion for robots are just a few examples of how motion can be applied in animations.

II. Student Learning Outcomes

A. Subject Matter

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

1. Apply the concepts and elements of character motion.
2. Create a biped and fit a biped to a character.
3. Apply and edit physique to animal characters.
4. Apply and edit attributes for 3D maps.
5. Compare the differences between animal and robot motion.
6. Apply the physics of motion.
7. Apply the physical aspects of natural motion - fire, earth, air, and water.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Global and Cultural Perspectives

Students will reflect upon cultural differences and their implications for interacting with people from cultures other than their own when developing their applied animation projects. Student will deal with methods of communicating information between offices that can be located in various parts of the country and/or world where cultural issues must be addressed.

III. Major Course Topics

- A. Character Studio applications
- B. Physics of natural motion
- C. Physics of applied motion
- D. Creation of nature forces, i.e. wind, water, fire, air, etc.
- E. Motion capture
- F. Motion flow
- G. Freeform animation
- H. Human and animal movement
- I. Biped creation
- J. Footstep animation