

New Course Request

Indiana University

Indianapolis Campus

Check Appropriate Boxes: Undergraduate credit Graduate credit Professional credit

1. School/Division Informatics 2. Academic Subject Code NEWM-N
3. Course Number 442 (must be cleared with University Enrollment Services) 4. Instructor Clint Koch
5. Course Title Advanced 3D Animation Techniques

Recommended Abbreviation (Optional) _____
(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Fall 2010

7. Credit Hours: Fixed at 3 or Variable from _____ to _____

8. Is this course to be graded S-F (only)? Yes _____ No

9. Is variable title approval being requested? Yes No

10. Course description (not to exceed 50 words) for Bulletin publication: P: N342. Advanced techniques
in computer animation, including character development and dynamics. Possible
topics include story development, character facial animation and locomotion, dynamics,
special effects, composites, fluid effects and particle systems.

11. Lecture Contact Hours: Fixed at 3 or Variable from _____ to _____

12. Non-Lecture Contact Hours: Fixed at 0 or Variable from _____ to _____

13. Estimated enrollment: 25 of which 0 percent are expected to be graduate students.

14. Frequency of scheduling: F/S Will this course be required for majors? _____

15. Justification for new course: Redesign of New Media Curriculum

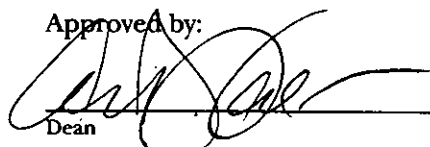
16. Are the necessary reading materials currently available in the appropriate library? Yes

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:
M. Pauline Behr Date 6/30/2009
Department Chairman/Division Director

Approved by:
 Date 1 July 2009
Dean

Date _____
Dean of Graduate School (when required)

Date _____
Chancellor/Vice-President

Date _____
University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

N442
Advanced 3D Animation Techniques

Credits 3 hours
Instructor Clinton Koch

Recommended Texts

Author: Eric Keller
Title: Introducing Zbrush (Paperback)
Publisher: Sybex, 2008
ISBN10: 0470262796
ISBN13: 978-0470262795

Author: Osipa
Title: Stop Staring
Publisher: Sybex, 2007
ISBN10: 0471789208
ISBN13: 9780471789208

Course Description

Advanced techniques in computer animation, including character development and dynamics. Possible topics include story development, character facial animation and locomotion, dynamics, special effects, composites, fluid effects and particle systems.

Prerequisite

N342

Course Outcomes

Students will develop concepts from completed storyboards in an animation/simulation productions from beginning to end. Concepts will be sketched on storyboards and production flow will be documented in a conceptual paper that defines the approach. High quality storyboards and papers must be completed before the beginning of your projects.

Software Used

Maya 2009, Zbrush 3.0

Expectations/Guidelines/Policies

Attendance: For success in this class I expect students to attend each class session. I will only allow missed classes if you give me notice a full week in advance. This class has a stringent attendance policy of 1 dropped letter grade for each 2 classes missed. I will take attendance at the beginning of each class.

Homework Assignments: I may require simple homework exercises following tutorials. I expect these to be completed by the next class.

Class Assignments: Class tutorials and demos must be completed with the instructor. Failure to do so can result in a detrimental effect on effort and class participation scores.

Class assignments/projects are expected to be finished and handed in on time. Late assignments will have a letter grade deduction after each day not completed. Final projects will not be accepted late.

Weekly Schedule

Week 1

Introduction to class: syllabus

Projects Overview – team based projects; Entire class?

Customization and hotkey usage in Zbrush is a key component to efficiency and comfort in the Package

Week 2

Interface Continued

Using Maya/Zbrush like an expert Demo

What's new in maya 8/Zbrush 3.0 features

Overview of fundamentals in modeling Polygons

Part 1 on anatomy and proportions for animals; the study of anatomical reference

Week 3

Zoo visit! Bring nice sketching paper, cameras, video cameras, and pencils!

Continued overview on Polygon modeling

Polygon Surfaces Modeling Polygon

Optimization features, components, faces, Extruding, Beveling, Reduction, Cut, Weld, and slice;

*Project #1 Handout: Team/Individual based storytelling short

Week 4

Zspheres in zbrush

Demo on using zspheres to create base mesh of animal

Week 5

Storyboards and Papers Due*: Class presentations for potential projects

Developmental Sketch Review: Each student will discuss their sketches, photos, and gathered reference for review in a short presentation

Storyboards and Papers for Project 1 due at beginning of class*

Week 6

Continued Modeling Exercise of Animal; Level 2 Proportions and Mass

Week 7

Continued Modeling Exercise of Animal; Detailing Level 1 and 2

Week 8

Continued Modeling Exercise of Animal; Detailing Level 3 and 4

Week 9

Texturing your animal in zbrush

Week 10

Texturing continued with Polypaint

Week 11

Setting up animal rig using reference

Interior/House, Rigging continued

Week 12

Character Animation: Walk Cycle 1

Week 13

Character Animation: Walk Cycle 2

Week 14

Character Animation: Facial Animation 1

Week 15

Character Animation: Facial Animation 2

Week 16

Final Projects Due (2 parts): Team Based Short Stories