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: 321 (must be cleared with University Enrollment Services)
4. Instructor: Prof. Polly Baker
5. Course Title: ActionScript in 3D

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 3.0 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: N222. Introduces skills for the design and development of interactive 3D applications for the Web and the desktop. Topics include 3D concepts, 3D code libraries, interactivity, system performance issues, and potential applications.

11. Lecture Contact Hours: Fixed at 3.0 or Variable from _______ to _______

12. Non-Lecture Contact Hours: Fixed at 0.0 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 Baker  Date 6/23/2009
Department Chairman/Division Director

Approved by:
Dean  Date 7/1/2009

Dean of Graduate School (when required)

Chancellor/Vice-President  Date 

University Enrollment Services  Date 

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.

UPS 724 University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
Course Outline

Course Number: N321

Course Title: ActionScript in 3D

Credits: 3 hours

Instructor: Prof. Polly Baker
Office Address: IT 400
Office Phone: 278-8150
Office Hours: TBA
Email Address: baker@iupui.edu

Course Description: Introduces skills for the design and development of interactive 3D applications for the Web and the desktop. Topics include 3D concepts, 3D code libraries, interactivity, system performance issues, and potential applications.

Prerequisites: N222

Course Outcomes: After completing this course, you should be able to:
• Design, build, and populate a 3D world
• Import 3D models created in common modeling packages
• Support user navigation and interaction with a 3D world
• Incorporate handheld devices into the user interface
• Discuss the challenges involved in 3D navigation
• Analyze and explain differences between various approaches to 3D
• Profile an application and understand performance implications of design decisions
• Read and interpret documentation
• Use modular design concepts and techniques

IUPUI PULs: This course incorporates the IUPUI Principles of Undergraduate Learning, especially Critical Thinking. Building software tools involves analyzing requirements, evaluating alternative designs, and applying knowledge to create a good result, all elements of critical thinking. The course also involves Core Communication and Quantitative Skills, in that you will discuss your designs with other class participants.

Recommended Texts: none

Software: This course uses Adobe FlashBuilder and Adobe ActionScript. Software is available in the Lab. Adobe also makes FlashBuilder available to students at no cost. We will discuss how to acquire and install these packages on your laptop or home computer.
Topic, by Week (tentative schedule)

1. The 3D Space
2. FlashPlayer 3D Capabilities
3. Building 3D Models
4. Importing Models
5. Transformations
6. Applying Materials
7. Using Bitmapped Materials
8. Using SWF’s as Materials
9. Cameras, Viewing models, Lights
10. Analyzing Application Performance
11. Techniques to Improve Application Performance
12. Using Billboards
13. Building Terrain Models
14. Travel and Navigation
15. Applications on 3D on the Web
16. Looking Forward: What’s on the Horizon?

Equipment: You will need some form of portable storage, such as a USB thumb drive, for saving your work.

Communication: All class documents, including the syllabus and assignments, will be posted on OnCourse. Feel free to email me at any time with questions or concerns.

Class Format: Our time in the classroom will combine lecture, demonstration, discussion, and hands-on lab exercises.

Reading Assignments: Reading materials will be available through OnCourse.

Homework: All assignments will be discussed during class and posted on OnCourse. In some cases, we will use classroom time to get started on an assignment, but you will also need to work on your own outside of class time to complete some assignments.
**Workload:** Becoming proficient in anything requires an investment of time and effort. This class will include a number of homework assignments, designed to let you practice and experiment with the concepts we are learning. As you budget your time for the semester, you should anticipate spending several additional hours per week on this course.

**Due Dates:** Assignments are due at the beginning of class, unless specified otherwise. Late assignments will be accepted only in a 24-hour window past the assignment date, and only for half-credit. There are no exceptions.

**Grading:** Your performance in the course is measured by the points you accumulate on homework assignments, lab exercises and presentations, and quizzes, with weights as follows:

- Lab activities: 40%
- Homework assignments: 30%
- Quizzes: 30%

Grades are based on points according to the following:

90 to 100 → A, 80 to 89 → B, 70 to 79 → C, 60 to 69 → D, 0 to 59 → F

**Attendance:** Attendance in class has been shown to contribute to academic success. At IUPUI, attendance in class is mandatory.

**Class Courtesy:** Come to class on time and be prepared. Turn off your cell phone and other noisy devices. Don’t do homework, answer email, or engage in conversation during class. Listen to your classmates when they are asking questions or presenting their work. Do not bring children with you to class.

**Plagiarism:**
Plagiarism is the use of the work of others without properly crediting the actual source of the ideas, words, sentences, paragraphs, articles, music, or pictures. Using other students’ work (with or without their permission) is plagiarism if you don’t indicate who did the work. Plagiarism is cheating. It is a serious offense and will be punished. If an instructor suspects plagiarism, the instructor will initiate a conversation with the student or students, who have the right to respond. Students might be asked to produce documentation, such as earlier drafts, notes, sketches, etc., that shows that the work is their own. The penalties for plagiarism include reprimands, a failing score for an exam or assignment or course, disciplinary probation, or dismissal from the University. Faculty must notify students of their decision in writing. Students have the right to appeal the decision by filing a petition for review of the case.

**Liability:** Your student ID and password are private! Protect yourself! Never share or loan your ID or your password to anyone!

All students should read the IUPUI Code of Student Rights, Responsibilities, available at [http://www.iupui.edu/code](http://www.iupui.edu/code). This document describes your rights and responsibilities as an IUPUI student.