New Course Request

Indiana University

Check Appropriate Boxes: Undergraduate credit ✔ Graduate credit ☐ Professional credit ☐

1. School/Division Informatics

2. Academic Subject Code NEWM-N

3. Course Number 444 (must be cleared with University Enrollment Services)

4. Instructor Albert William

5. Course Title Stereoscopic Production and Display

   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:N101: The production and display of stereoscopic imagery for various applications, including games, education, science, virtual reality, and marketing. Topics include human stereoscopic perception, types of stereoscopic displays, evolution of techniques, production issues for various types of stereoscopic media.

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 Behan
Department Chairman/Division Director

Date 6/29/2009

Approved by:

[Signature]
Dean

Date 7/28/2009

Dean of Graduate School (when required)

[Signature]

Date ______________

Chancellor/Vice-President

[Signature]

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.

UPS 724 University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
N444
Stereoscopic Production and Display

Course Info: 3 Credit Hours
Instructor: Staff

COURSE DESCRIPTION
The production and display of stereoscopic imagery for various applications, including games, education, science, virtual reality, and marketing. Topics include human stereoscopic perception, types of stereoscopic displays, evolution of techniques, production issues for various types of stereoscopic media.

PREREQUISITE: N243

REQUIRED TEXTBOOKS
There is no required text. Students will be required to conduct self-directed research.

COURSE OUTCOMES
Students will develop insight into the uses and meaning of stereoscopic displays and production. Students will learn to apply that insight to “real-world” challenges and opportunities, which they will define and investigate. Students will participate in the creation of projects that presents a hypothetical but plausible solution to a real-world need. These projects will be presented in formats and will demonstrate a familiarity with key components of any new media solution: content, technology, interface design, and usability.

MATERIALS NEEDED RELATED TO THE COURSE
Storage media: A portable HD is strongly recommended. A flash drive will be very useful. Writable media such as CDs or DVDs will also be required to turn in projects and are good for backup. Students will be required to bring writing materials, whether electronic or traditional, to class.

SOFTWARE USED
Autodesk Maya
Adobe Photoshop, Premiere Pro, After Effects
Audio Products: Sony SoundForge, or Adobe Audition
QuickTime
Pixologic Z brush

COURSE STRUCTURE OVERVIEW
The course structure is composed of these parts:
- Projects:
  o The semester will be composed of a team that will produce an animation.
CORE COMPETENCIES

Students must be able to conduct self-directed research, express and document ideas and themes in both written and spoken form. Expertise in Maya, Photoshop, Premiere, and After Effects will be an important part of this class, and students are responsible for understanding the existence of other technologies and the range of their applications as possibly applied to stereoscopic technologies.

DATE FOR EACH CLASS MEETING

N430 weekly schedule

Week 1  Intro, History of stereo
- An introduction to the history of stereoscopic viewing
- The biological basis for stereoscopy
- Discuss the current state of the industry

Week 2  Basic stereo concepts, displays
- Explore how stereoscopy works
- Understand the different methods and technologies, history and contemporary models
- Explore the different methods to view stereoscopy

Week 3  CG Theory, production and post production techniques
- Understand how cameras work in the CG world
- Adjustment of cameras in relation to stereo fields
- Assignment #1: small CG project

Week 4  Stereo photography theory and production
- Understand the basis for real world stereoscopy
- Explore the history and examples of stereo photography
- Examine techniques for one and two camera systems
- Explore compositional strategies
- Assignment #2: create photograph stereo pair

Week 5  Stereo photography production
- Review and assess round one of stereo photos
- Assignment #3: create photograph stereo pair

Week 6  Stereo video theory and production
- Understand how stereo video works and does not work
- Explore the history and examples of stereo videography
- Explore the issues related to video size, frame rate, synchronization
- Experiment with cameras and their effect on stereoscopy

Week 7  Stereo video theory and production
- Experiment with video footage
- Apply video techniques to post-production
- Assignment #4: create video piece

Week 8  Anaglyph, lenticular, and chromadepth theory and production
- Understand the uses and techniques in creating anaglyph, lenticular, and chromadepth images
- Explore the techniques and software that is used to create these media
- Assignment #5: create anaglyph images and movie
Week 9  Project Concept reviews and pre-production
  • Propose a concept for a final project
  • Assignment #6: Project concept presentation
  • Assignment #7: create chromadepth images

Week 10  Project based instruction

Week 11  Project based instruction

Week 12  Project based instruction

Week 13  Project based instruction
  • Update on project status
  • Assignment #8: Project Checkpoint

Week 14  Project based instruction

Week 15  Project based instruction

Week 16  Final presentations
  • Assignment #9: Final project

Assignments- All assignments must be turned in on CD (or data DVD) with name and assignment number, or place in the Oncourse drop box- this will vary by assignment, please check the assignment description in Oncourse. All assignments are due at the beginning of class. Late assignments will be reduced by 10% point value. Final project will not be accepted past due date.

Assignment 1- CG project (50 pts)
Assignment 2- Photograph stereo pair # 1 (50 pts)
Assignment 3- Photograph stereo pair #2 (100pts)
Assignment 4- Create Sports Video (100 pts)
Assignment 5- Create anaglyph images and movie (50 pts)
Assignment 6- Project concept (50pts)
Assignment 7- Chromadepth images (50pts)
Assignment 8- Project Checkpoint (50pts)
Assignment 9- Final project and presentation (400pts)

Attendance- (100 pts)

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<th>Date</th>
<th>Assignment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignment #1</td>
<td>Creation of computer generated stereo pair(critical thinking, application of knowledge)</td>
<td>5%</td>
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<tr>
<td>Assignment #2</td>
<td>Creation of digital photograph stereo pairs (critical thinking, application of knowledge)</td>
<td>5%</td>
</tr>
<tr>
<td>Assignment #3</td>
<td>Enhancement of digital photograph stereo pairs (critical thinking, application of knowledge)</td>
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<tr>
<td>Assignment #4</td>
<td>Creation of a stereoscopic video (critical thinking, application of knowledge)</td>
<td>10%</td>
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<tr>
<td>Assignment #5</td>
<td>Creation of anaglyph stereo pairs from digital photos and video (critical thinking, application of knowledge)</td>
<td>5%</td>
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<tr>
<td>Assignment #6</td>
<td>Proposal of final project (critical thinking, application of knowledge, oral presentation, written skills)</td>
<td>5%</td>
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<tr>
<td>Assignment #7</td>
<td>Creation of chromadepth images from digital photos and CG elements (critical thinking, application of knowledge, oral presentation)</td>
<td>5%</td>
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<tr>
<td>Assignment #8</td>
<td>Project checkpoint- presentation of final project assets (critical thinking, application of knowledge, oral presentation, written skills)</td>
<td>5%</td>
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<td>Assignment #9</td>
<td>Final project presentation (critical thinking, application of knowledge, oral presentation, written skills)</td>
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<tr>
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<td></td>
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**Grading Information:**

- These factors that will be evaluated in determining grades:
  - Technical competencies
  - Aesthetic appeal
  - Professional production
  - Participation in class discussion and class attendance
  - Lab assignments/ homework
  - Late assignments will be reduced by one letter grade
  - Work may be turned in any time prior to the due date. Work will be considered late if not turned in by the end of the class on the date expected. A 10% reduction in score will be assessed for any assignment deemed late. Late work will be accepted for one week past the due date- assignments will be given a score of 0 (zero) points after this time. Final projects will not be accepted past the expected due date- a score of 0 (zero) points will be assessed on any final project not turned in on time.

**Grading Standards**

A – Outstanding, high quality work.
A fully completed project that demonstrates mastery of skills.
Projects that display creative and innovative work.
Combinations of color schemes, space, lighting, and layout were effectively and chosen carefully.

B – Good to very good work.
The student completed the components of the project, but neglected to experiment with additional or more challenging technical approaches.
The work demonstrates good abilities in the respective new media applications, but may lack depth and level of skill.
The project could be lacking in areas of design, planning, or technical approach.
C – Average work.
The work demonstrates average skills in depth, design, and application.
No more than what was required of the course was completed.
The work is possibly incomplete in parts.
File formats had errors or were not compatible as expected

D – Below average work.
The work is largely incomplete and displays a lack of effort.
Very little time was put into the software and thusly resulted in poor quality work. The files handed in had errors or were not compatible as expected.

F – Failure to complete the objectives of the course.

Grade Scale

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<thead>
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<th>Grade</th>
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<tr>
<td>A</td>
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<tr>
<td>A-</td>
<td>90 - 92.99</td>
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<tr>
<td>B+</td>
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<td>D-</td>
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<tr>
<td>F</td>
<td>Below 60%</td>
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STATEMENT OF VALUES

- The Mission of IUPUI is to provide for its constituents excellence in Teaching and Learning, Research, Scholarship, and Creative Activity, and Civic Engagement. With each of these core activities characterized by: 1) collaboration within and across disciplines and with the community, a commitment to ensuring diversity, and 3) pursuit of best practices. IUPUI’s mission is derived from and aligned with the principal components – Communities of Learning, Responsibilities of Excellence, Accountability and Best Practices – of Indiana University’s Strategic Directions Charter. IUPUI values the commitment of students to learning; of faculty to the highest standards of teaching, scholarship, and service; and of staff to the highest standards of service. IUPUI recognizes students as partners in learning.
- IUPUI values the opportunities afforded by its location in Indiana’s capital city and is committed to serving the needs of its community. Thus, IUPUI students, faculty, and staff are involved in the community; both to provide educational programs and patient care and to apply learning to community needs through service. As a leader in fostering collaborative relationships, IUPUI values collegiality, cooperation, creativity, innovation, and entrepreneurship, as well as honesty, integrity, and support for open inquiry and dissemination of findings. IUPUI is committed to the personal and professional development of its students, faculty, and staff and to continuous improvement of its programs and services.

POLICIES for ATTENDANCE & ASSIGNMENT/PROJECT DEADLINES

1. **Missing class WILL impact your grade.** (For in-class students only.) Students are allowed two (excused or unexcused) absences before their grade will be effected. In other words, whether you are sick or have personal problems or issues for missing class, it will amount to the same. Missing class means
you do not show for the whole or majority of the session. The grade reduction policy works in this way.

- On the third missed class time your final grade will drop 5 points (regardless of the reason).
- On the fourth missed class your final grade will drop 10 points (regardless of the reason), and 5 additional points thereafter for each additional class missed.

2. **Responsible for due dates and related materials:** All weekly due assignments are each student’s responsibility. If class is missed, the student is still responsible for the assignment, as well as to find out what was covered in class, e.g., any new assignments or variations to an existing assignment. ALL assignment deadlines are outlined in the syllabus or syllabus supplemental documents provided on OnCourse. Ultimately, each student is responsible for the deadline. Also, weekly assignment deadlines should be adhered to, to insure fairness to all students. For the purpose of maintaining an equal and fair evaluation of each student’s work, no student will receive special treatment. As a result, the following rules will apply to this course:

- All assignments must be submitted through OnCourse at the designated time as stated on the assignment sheet, as communicated via email, or on the syllabus.
- All assignments (projects) handed in late will be reduced 10 points for every day late (24 hrs. from the due date and time). For example, if the assignment is due at 6PM on the due date and it is postmarked 6:01PM, it will be reduced automatically by 10 points. If the class meets in the class room, students must be ready to hand the assignment in at the start of class time.
- Incompletes will NOT be issued except under very extreme personal conditions that have been reviewed by the instructor and in some cases in consultation with the Dean’s Office.

**UNIVERSITY POLICIES** (*Does not apply to online students.)*

1. **University Attendance Policy:** *Attendance is required. The University regulations state: “Students are expected to be present for every meeting of the classes in which they are enrolled.” IUPUI faculty are required to submit to the Office of the Register a record of student attendance through the semester, on which they will take action if the record conveys a trend of absenteeism. As a result, ATTENDANCE WILL BE TAKEN IN ALL CLASSES. An Attendance sheet will be passed out in class for each student to sign their name. If you do not sign your name while in class you will be marked absent. The instructor is not expected to remember who attended when, so signing the sheet while in class is important. Signing the attendance sheet for another student is absolutely prohibited. Any student found doing so will be in violation of university policies on ethics and/or conduct.*

2. **Bringing your children to class:** *University Policy states that: “Children are not permitted to attend class with parents, guardians, or childcare providers. This conduct has the effect of unreasonably interfering with an individual’s work or academic performance creating an offensive learning environment.” “A student must not violate course rules as contained in a course syllabus, which are rationally related to the content of the course or to the enhancement of the learning process in the course.” [Code of Student Rights, Responsibilities, and Conduct, page 29]*

3. **Academic Dishonesty / Integrity / Plagiarism:** Using another student’s work on a project or assignment, cheating on a test, or any other form of dishonesty or plagiarism will result in a grade of zero on that assignment and possibly an "F" in the course, and will be referred to the Dean of Students. All students should aspire to high standards of academic honesty. This class encourages cooperation and the exchange of ideas. For further reference, students may see: http://life.iupui.edu/dos/code.htm.*

4. **Values and ethics:** Profanity or derogatory comments about or towards the instructor or any member of the class will NOT be tolerated. Violating this rule will result in a warning and if the offense continues, administrative action will be taken.

5. **Code of Student Rights, Responsibilities and Conduct:** All students are responsible for reading, understanding, and applying the Code of Student Rights, Responsibilities and Conduct of IUPUI. (students can access www.iupui.edu/code for further information regarding the above points)

6. **Disabilities Policy:** In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to "reasonable accommodations." Please notify the instructor during the first week of class of any accommodations needed for the course. Students with learning disabilities must provide written verification for this policy to be recognized.