New Course Request

Check Appropriate Boxes: Undergraduate credit ✓ Graduate credit □ Professional credit □

1. School/Division: Informatics
2. Academic Subject Code: NEWM-N
3. Course Number: 328 (must be cleared with University Enrollment Services)
4. Instructor: Prof. Mark Pfaff
5. Course Title: Visualizing Information
   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: N222. Exploration of techniques for using graphics and sound to present data and information. Topics include data types (including data that is geographical and/or time-varying), presentation techniques, effective use of design elements, and effective use of interaction methods.

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 □ No ✓
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: [Signature] Date: 6/30/2009
Department Chairman/Division Director

[Signature] Date: _____________
Dean

[Signature] Date: _____________
Dean of Graduate School (when required)

[Signature] Date: _____________
Chancellor/Vice-President

[Signature] Date: _____________
University Enrollment Services

Approved by:

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.
N328 – Visualizing Information

3 Credit Hours

Instructor: Dr. Mark Pfaff

Office Address: 1T 469

Office Phone: 278-4145

Office Hours: Wednesday and Thursday 2:00pm-4:00pm, and by appointment.

Email Address: mpfaff@iupui.edu

Course Description

Exploration of techniques for using graphics and sound to present data and information. Topics include data types (including data is geographical and/or time-varying), presentation techniques, effective use of design elements, and effective use of interaction methods.

Prerequisite

N222

Course Outcomes: After completing this course, you should be able to:
• Define and explain the core concepts of information visualization and human-computer interaction
• Analyze users and their goals, tasks, and actions
• Demonstrate visual organization and content organization skills
• Understand the principles underlying effective navigation controls
• Prototype multimedia designs using multimedia development tools
• Perform user testing of an interface design
• Demonstrate effective use of color, shape, perspective, motion, and typography
• Work together in teams to develop effective multimedia designs

Core Communication and Quantitative Skills learned in this class:
• Express ideas and facts to others effectively in a variety of formats
• Comprehend, interpret, and analyze texts
• Communicate orally in one-on-one and group settings
• Make efficient use of information resources and technology for personal and professional needs

Required Text:
• Author: Daniel D. McCracken and Rosalee J. Wolfe
• Title: User-Centered Website Development: A Human-Computer Interaction Approach
• Publisher: Pearson Prentice Hall
• ISBN: 0130411612
Additional Text (Highly recommended for learning Adobe Illustrator, which is one of the main pieces of software used in this class)

- Author: Adobe Creative Team
- Title: Adobe Illustrator CS3 Classroom in a Book
- Publisher: Prentice Hall
- ISBN: 0321492005

Equipment needed:
- Notebook – the real paper kind. You will need this at all times for taking notes and making the preliminary sketches which ALWAYS come before whatever it is you’re going to design on the computer. Trust me, this is important. Always have a spare pen or two, and pencils are usually the best for sketches.
- At least TWO things to store your work on, such as USB memory drives, network storage, rewriteable CDs or DVDs, etc. One is your primary storage, the rest are for backups. It’s so cheap and easy to store files in multiple places now that I will not accept lost data as a valid excuse for missing a deadline. I can help you develop effective backup strategies if you haven’t done this before.
- Blank CDs for delivery of your midterm and final projects.
Software used: Adobe Illustrator CS3, Microsoft Powerpoint, and Microsoft Word. These are available in the lab and are also available for purchase at surprisingly inexpensive educational prices in the campus bookstore and elsewhere.

**Schedule of Class Topics and Textbook Readings** (from *User-Centered Website Development: A Human-Computer Interaction Approach*)

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITIES</th>
<th>ASSIGNMENTS</th>
<th>WHAT IS DUE</th>
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</thead>
<tbody>
<tr>
<td>August</td>
<td></td>
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<tr>
<td>8/25</td>
<td>Syllabus, expectations, assignments, grading and general lecture/overview of semester</td>
<td>Read Chapters 1 and 2</td>
<td>BRING YOUR TEXT BOOK EACH WEEK</td>
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<tr>
<td>September</td>
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<tr>
<td>9/1</td>
<td><strong>LABOR DAY – NO SCHOOL</strong></td>
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<tr>
<td>9/8</td>
<td>Human Computer Interaction (HCI) and Human Factors</td>
<td>Read Chapter 3</td>
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<td>9/15</td>
<td>User Analysis</td>
<td>Read Chapter 4</td>
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<tr>
<td>9/22</td>
<td>Content Organization; Quiz #1</td>
<td>Design exercise #1; Read Chapter 5</td>
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<tr>
<td>9/29</td>
<td>Visual Organization</td>
<td>Read Chapter 6</td>
<td>Design Exercise #1 Due</td>
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<td>October</td>
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<tr>
<td>10/6</td>
<td>Navigation; Quiz #2</td>
<td>Design Exercise #2</td>
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<td>10/13</td>
<td>MIDTERM EXAM</td>
<td>Read Chapters 9 and 10</td>
<td>Design Exercise #2 Due</td>
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<tr>
<td>10/20</td>
<td>Color and Typography</td>
<td>Website Redesign Project; Read Chapter 7</td>
<td>Design Exercise #3 Due</td>
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<td>10/27</td>
<td>Prototyping</td>
<td>Read Chapter 8</td>
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<td>November</td>
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<tr>
<td>11/3</td>
<td>User Testing; Quiz #3</td>
<td>Group Project</td>
<td>Website Redesign Project Due</td>
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<td>11/10</td>
<td>Functional Specification and design rationale; in-class work time</td>
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<tr>
<td>11/17</td>
<td>Status reports, Group Q&amp;A; in-class work time</td>
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<td>11/24</td>
<td>Presentations of group projects</td>
<td>Website Analysis paper; Read chapters 12, 13, and 14</td>
<td>Group Project Due</td>
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<tr>
<td>December</td>
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<tr>
<td>12/1</td>
<td>Accessibility, Globalization, Personalization, and Trust</td>
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<td>12/8</td>
<td>Final Project Critiques, review for final exam</td>
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<td>Website Analysis Paper Due</td>
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<tr>
<td>TBA</td>
<td><strong>FINAL EXAM</strong></td>
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*Instructor has the right to change any assignment, schedule or class event and instruction to fit with the overall class curriculum.

Class Policies and Expectations: Reading Assignments. Reading assignments will be assigned regularly. You should complete all assigned readings BEFORE class and come prepared with notes and questions from the reading. Reading assignments cover the conceptual aspects of the course. It is very important for you to keep up with the readings so that you obtain a conceptual understand of topics, which may or may not be covered during class time. I will not be using class time to simply repeat what’s in the book.

Class Format and Participation. The course will be a mixture of demonstration, discussion, critiques, and hands-on experiences. Much of the class time will be spent developing materials and applying concepts individually or in groups. You will share the results of your efforts with the class through project demonstrations and presentations. Topics from the assigned readings will also be discussed in class and you should actively participate in class discussions. We will often critique design homework in class on the day it is due, which is all the more reason to have your homework completed on time. Come prepared to ask questions and to have questions asked of you!

All work done in the class must pertain to the class objectives. All other work is prohibited during the class period. The use of instant messaging and playing of video games is strictly prohibited during the entire class period.

Attendance. IUPUI police is attendance is mandatory. I take attendance during every class, so please be sure to sign the attendance sheet. Students should demonstrate professional behavior by attending class and actively participating in class activities. Missing more than 3 classes without a reasonable excuse will reduce your course grade by 10% (that is, your class participation score will be reduced to 0).

Learning Activities. Assignments are due throughout the semester as shown on the tentative course schedule. The assignments represent a significant portion of your course grade. They are intended to help you learn a variety of software applications and effective design principles. Several assigned activities require that you have your own file storage media (USB drive, network storage, CD-R or DVD-R, etc.).

- **File Storage.** Most of your homework assignments will be in digital form. It is important for you to keep backup copies of your work and to backup your work frequently. Disk errors, computer viruses, or accidental erasures can destroy your files (so can losing your USB drive). No special considerations will be given if your files are lost and so please take every precaution to protect your work.
- **Assignments.** All assignments will be discussed during the class and posted on ONCOURSE. There will be some portions of class set aside for you to work on these assignments, but you will mainly need to work on your own time. The assignments are meant to be challenging not overwhelming. Each assignment will have detailed instructions on what you are to turn in on the due date. These may include hard copies,
Files submitted to OnCourse, an in-class presentation, or a combination. Make sure to read the assignments carefully!

* Due Dates.
Assignments are due at the beginning of class, unless specified otherwise. Assignments not turned in on time will only be accepted within 24 hours, and only for half-credit. There are no exceptions! Any work turned in more than 24 hours late will not be accepted, unless excused for medical reasons or other reasons discussed with me prior to the due date.

You are beginning your careers as New Media professionals, so now is the time to develop strong time-management skills.

* Student Presentations and Critiques. Many of the assignments will be presented before the class and critiqued. Many of you may have not experienced a critique before, but it's nothing to be afraid of. It is a constructive and positive process where students can discuss each other's work and learn from everyone's successes and mistakes (not just your own).

* OnCourse. Homework assignments will be posted online and submitted via OnCourse unless specified otherwise. The filename of every assignment must include your name and the title of the assignment. For example, for a Word document containing a project proposal, "jones-proposal.doc" is a suitable filename. If you do not label assignments appropriately, the assignment may get lost and you will not receive credit. I will often ask for specific file formats (for example, GIFs or Adobe Illustrator .ai files). Make sure you give me the right files!

Quizzes. Three quizzes will be given during class throughout the semester. These help you test your knowledge of the content covered so far. Quizzes cannot be made up.

Test. A midterm and a final exam will be given. The exams will be made up of multiple-choice and short-answer questions. They may also include "hands-on" testing (using the computer to make a design).

Make-up tests. Make-up tests can only be given if you provide appropriate documentation (e.g., a note from a physician) indicating the reason for your absence. Making up a test for planned absences (e.g., participating in an athletic event) should be arranged prior to the test.

Communication. All class documents including assignments and syllabus are posted on ONCOURSE. You can also email me at anytime with concerns, assistance outside of class or other issues.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework and quizzes</td>
<td>50%</td>
</tr>
<tr>
<td>Midterm and final exam</td>
<td>20% each</td>
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<tr>
<td>Attendance and participation</td>
<td>10%</td>
</tr>
</tbody>
</table>

Grading scale
Your performance in the course is measured by the points you accumulate on all quizzes, tests, and learning activities (in-class and out-of-class).

Suggestions for Success in this Course:
1. Attend all classes and come to class prepared and on time.
2. Read any necessary materials for the week prior to the lecture of the week.
Review reading assignments and **participate in class discussions**.

Do not leave early unless excused by the instructor.

Execute all assignments to the best of your ability.

Hand in your assignments **on time**

Read and **follow the directions** of the assignments

**Ask questions** if you are unclear about anything.

Check OnCourse for email and communications

**Do your best**

**Class Courtesy:**

- Come to class on time and be prepared.
- NEVER do homework or answer EMAIL in this class or you will be asked to leave. If you are typing, it should be the notes you are taking.
- Turn off your cell phones and other noisy devices
- Pay attention to your classmates when they are presenting/talking/demonstrating.
- All students are responsible for reading the Code of Student Rights, Responsibilities, and Conduct of Indiana University Purdue University Indianapolis.
- Children are NEVER permitted to attend class with parents, guardians, or childcare providers.

**University Expectations/Guidelines/Policies**

**Attendance**

University Regulations state: “Students are expected to be present for every meeting of the classes in which they are enrolled.” Only the instructor can excuse a student from classes or course responsibilities. There are always legitimate reasons for missing class. Personal illness, accident, a death or serious illness in the immediate family, athletic trips, scheduled interviews, plant visits, and field trips, or other circumstances may make your class attendance impossible. Each of these situations will be evaluated on an individual basis. Students should make direct contact with his/her instructor preferably before a class. If the instructor cannot be reached in person, by e-mail, or by telephone, the student should leave a message in the instructor’s department mailbox. Students can only make up work from an authorized absence and permission from the instructor.
Students will be expected at all times to maintain the university’s standards of academic honesty and integrity. All students are responsible for reading the Code of Student Rights, Responsibilities and Conduct of IUPUI. Plagiarism will be considered to have occurred when a student presents as original, in either written or oral form, any idea that the student has acquired from an outside source. Because of the rapidly evolving nature of new media concepts, and the very wide range of cross-referenced possible sources, and to the extent that good ideas are often “in the air,” so to speak, it is acknowledged that ideas may form independently in students’ minds when clear sources or even nearly identical iterations of those ideas may be available in external sources. To that extent, and to the extent that innovation in new media is often judged by the slightest variation, and to the extent the instructor does not wish to inhibit the often spontaneous processes by which ideas grow and flower in an individual’s mind while the seed of that idea may be forgotten in the rush of development, plagiarism will be judged by degree and intent rather than a strict letter of the law. If it is determined, however, that plagiarism has occurred, it will be considered grounds for dismissal from class and other sanctions as stated in the Code of Student Rights, Responsibilities and Conduct of IUPUI. 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.

Incompletes
The IUPUI Campus Bulletin presents the campus policy on incompletes, noting that a grade of incomplete may be assigned by an instructor when exceptional circumstances, such as illness, prevent students from finishing all works required in a course. The grade of I will be awarded only if the work is mostly complete, generally 75 to 80 percent, and of passing quality. The key decision in deciding whether or not to give an incomplete involves assessing whether or not the student has completed, at a passing level, enough of the course and whether "exceptional circumstances" apply. Exceptional circumstances can include the serious illness of the student, spouse or partner, child, or parent; or a fire or accident that interrupts the end of the semester. Note that an incomplete is never warranted as a remedy for procrastination.

Academic Honesty
All students in New Media should aspire to high standards of academic honesty. This class encourages cooperation and the exchange of ideas. However, students are expected to do their own work.

Plagiarism (adapted from the definition by the School of Liberal Arts) Plagiarism is the use of the work of others without properly crediting the actual source of the ideas, words, sentences, paragraphs, entire articles, music or pictures. Using other students’ work (with or without their permission) is still plagiarism if you don’t indicate who initially did the work. Plagiarism, a form of cheating, is a serious offense and will be severely punished. When an instructor suspects plagiarism, he/she will inform the student of the charge; the student has the right to respond to the allegations. Students whose work appears to be plagiarized may be asked to produce earlier drafts of the work. Students should, for this reason and as a protection in cases of lost papers, diskettes, retain rough drafts, notes and other work products for 2 or 3 weeks after
the end of each semester. The penalties for plagiarism include reprimands, being failed for a particular exam, paper, project or the entire course, disciplinary probation, or dismissal. Faculty, after consulting with their chair and or the dean must notify students in writing of their decision. Students have the right to appeal such decisions by the submitting a petition. All students are responsible for reading the Code of Student Rights, Responsibilities, and Conduct of Indiana University Purdue University Indianapolis.

**Liability Warning**

Your student ID and password are private! Under no circumstance are you to give them out to anyone. If another person uses your ID or password you will be held personally responsible for any and all activity on your computer account. If plagiarism is involved you run the risk of being dismissed from the school. If a computer or software is damaged you are responsible for repair and replacement. Loaning out your ID or password involves too much risk.

“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]

“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.”
Human–computer interaction (HCI) researches the design and use of computer technology, focused on the interfaces between people (users) and computers. Researchers in the field of HCI both observe the ways in which humans interact with computers and design technologies that let humans interact with computers in novel ways. As a field of research, human–computer interaction is situated at the intersection of computer science, behavioral sciences, design, media studies.