INFO I101
Introduction to Informatics
Department of Human-Centered Computing
Indiana University School of Informatics and Computing
IUPUI

Semester: Fall 2015
Section Number: 22957
Credit Hours: Four credit hours
Course Web Site: http://canvas.iu.edu

Instructor: Francesco Cafaro
Office Address: IT 579
Email Address: fcafaro@iu.edu

Course Description
Problem solving with information technology; introductions to information representation, relational databases, system design, propositional logic, cutting edge technologies; CPU, operating systems, networks; laboratory emphasizing information technology including web page design, word processing, databases, using tools available on campus.

Prerequisites
There are no prerequisites for this course.
Contact Information

Name: Francesco Cafaro  
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Office: IT 579  
Office hours: Tuesday 11:50 am to 1 pm, Thursday 11:50 am to 1 pm, and by appointment

Name: Shanglei Zhang  
e-mail: sz27@iu.edu
Office: IT 460  
Office hours: Monday 12:45 to 2:45 pm

Textbook

1) Jon Duckett, HTML and CSS: Design and Build Websites, Paperback
2) Jon Duckett, JavaScript and JQuery: Interactive Front-End Web Development, Paperback

On-line Discussion

Online resources for collaboration will be available on piazza.com, at https://piazza.com/class/idaqqdu0e65fp (Links to an external site.) You are encouraged to visit the piazza webpage frequently, and participate in the online discussion.

Learning Objectives:

By the end of the semester, you will be able to design websites on the basis of the users’ requirements; create webpages using HTML and CSS; write statements in Javascript -including defining variables and using Javascript constructs; use object-oriented programming languages; explain what is a script and how to create one; store and query data in databases; visualize data sets; and, explain introductory concepts of Human-Computer Interaction.

<table>
<thead>
<tr>
<th></th>
<th>RBT</th>
<th>PUL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define hardware and software terms.</td>
<td>1</td>
<td>3</td>
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<tr>
<td>2. Define hypertext terms.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3. Script webpages using HTML5 tags, attributes, and elements.</td>
<td>6</td>
<td>1B, 2</td>
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</tbody>
</table>
4. Use cascading style sheet (CSS) to specify the presentation of a webpage.  

5. Transfer files to a server and set permissions to display webpages on the Internet.  

6. Describe the roles of Internet addresses, domain names, and DNS servers in networking.  

7. Characterize different types of Internet protocols.  

8. Place data in a spreadsheet and correctly format a table and chart.  

9. Demonstrate how entities and attributes are used to design databases.  

10. Correctly execute SQL statements to query a database.  

11. Define the essential properties of an algorithm.  

12. Define variables and construct statements JavaScript.  

13. Write expressions using arithmetic, relational, and logical operators.  


15. Create JavaScript functions with correct syntax and semantics.  

16. Understand concepts in statistics at an introductory level (including descriptive statistics, inference, probability, and regression analysis).  

17. Program JavaScript to produce descriptive statistics as output from data.  

18. Apply functions in spreadsheets to manipulate data.  

19. Analyze current trends in computing.  

20. Discuss current topics related to social networking.
21. Describe current employment trends in informatics.  2  3, 4

22. Explain introductory concepts in human-computer interaction and user experience.  4  2, 3

23. Critique current software applications from a user’s perspective.  5  2, 3

24. Summarize current research being conducted at the School of Informatics and Computing.  2  4

25. Recognize and explore examples of big data use.  4  2, 3

RBT: Revised Bloom’s Taxonomy;

PUL: Principle of Undergraduate Learning

Principles of Undergraduate Learning (PULs)

The main PUL for this course is PUL 3 - Integration and Application of Knowledge, which includes problem solving, product creation, and group work (see http://ctl.iupui.edu/Resources/PULs/PUL-3-Integration-and-Application-of-Knowledge (Links to an external site.)).

Additional PUL are:

- 1A. Core communication: written, oral and visual skills
- 1B. Core communication: quantitative skills
- 1C. Core communication: information resources skills
- 2. Critical Thinking
- 4. Intellectual depth, breadth, and adaptiveness
- 5. Understanding society and culture
- 6. Values and ethics

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Course Requirements:

During this class, you will submit two individual assignments, deliver one short presentation, and work in a group to design, develop and test a website that allows users to visually explore one set of data.

There will also be one midterm, and one final exam.

There are NO surprise quizzes.
<table>
<thead>
<tr>
<th>Date</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Tue Aug 25, 2015</td>
<td>[INTRO] Introduction to the Course. Introduction to Informatics. Introduction to HTML.</td>
</tr>
<tr>
<td>Tue Sep 1, 2015</td>
<td>[CSS] Introduction to CSS. Colors. Text. Boxes.</td>
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<tr>
<td>Wed Sep 2, 2015</td>
<td>HW1 due at midnight- webpage with description of a dataset</td>
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<tr>
<td>Thu Sep 3, 2015</td>
<td>(1) [PRESENTATION] Webpage presentation (individual). (2) [CSS] Lists and Tables</td>
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<tr>
<td>Tue Sep 8, 2015</td>
<td>(1) [PRESENTATION] Webpage presentation (individual). (2) [CSS] Layout.</td>
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<tr>
<td>Wed Sep 9, 2015</td>
<td>HW2 due at midnight- critique and group formation</td>
</tr>
<tr>
<td>Thu Sep 10, 2015</td>
<td>(1) [CSS] Images. HTML5 layout and CSS. (2) [HTML and CSS] Forms.</td>
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<tr>
<td>Tue Sep 15, 2015</td>
<td>(1) [DESIGN] Design Process and Information Presentation</td>
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<td>Tue Sep 22, 2015</td>
<td>[GUEST LECTURE] Information Literacy (Willie Miller)</td>
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<tr>
<td>Wed Sep 23, 2015</td>
<td>HW3 due at midnight -Group roles</td>
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<tr>
<td>Thu Sep 24, 2015</td>
<td>[GROUP WORK] Webmaps and wireframes (website)</td>
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<tr>
<td>Tue Sep 29, 2015</td>
<td>(1) [DATABASES] Relational databases. Introduction to SQL. XML. Display XML data in a HTML page. (2) [REVIEW] Review before midterm.</td>
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<tr>
<td>Thu Oct 1, 2015</td>
<td>[MIDTERM] HTML, CSS, Design</td>
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<tr>
<td>Mon Oct 5, 2015</td>
<td>HW4 due at midnight -website with initial design</td>
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<tr>
<td>Tue Oct 6, 2015</td>
<td>(1) [PRESENTATION] Group presentation (design ideas). (2) [IUPUI] Tour of AVL</td>
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<tr>
<td>Thu Oct 8, 2015</td>
<td>(1) [PRESENTATION] Group presentation (design ideas). (2) [JAVASCRIPT] Introduction to Javascript. Basic Javascript Instructions.</td>
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<td>Tue Oct 20, 2015</td>
<td><del>FALL BREAK</del></td>
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<td>Tue Oct 27, 2015</td>
<td>[JQUERY] Introduction to JQuery.</td>
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<tr>
<td>Tue Nov 3, 2015</td>
<td>[USER TESTING] Introduction to Statistics for HCI. Type of data.</td>
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<td>Thu Nov 5, 2015</td>
<td>[GROUP WORK] User Testing</td>
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<td>Tue Nov 10, 2015</td>
<td>[GROUP WORK] User Testing</td>
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<tr>
<td>Thu Nov 12, 2015</td>
<td>[LOADING DATA] AJAX and JASON</td>
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<tr>
<td>Mon Nov 16, 2015</td>
<td>HW5 due at midnight -Testing Report</td>
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<tr>
<td>Tue Nov 17, 2015</td>
<td>[GROUP WORK] AJAX &amp; JASON</td>
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<tr>
<td>Thu Nov 19, 2015</td>
<td>[JAVASCRIPT] Filtering, Searching and Sorting</td>
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<tr>
<td>Tue Nov 24, 2015</td>
<td>[GROUP WORK] Filtering, Searching and Sorting</td>
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<tr>
<td>Thu Nov 26, 2015</td>
<td><del>THANKSGIVING</del></td>
</tr>
<tr>
<td>Tue Dec 1, 2015</td>
<td>[USER TESTING] Statistics for HCI part 2</td>
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<tr>
<td>Thu Dec 3, 2015</td>
<td>[FINAL PRESENTATION] Final Group Presentations</td>
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<tr>
<td>Tue Dec 8, 2015</td>
<td>[FINAL PRESENTATION] Final Group Presentations</td>
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<tr>
<td>Thu Dec 10, 2015</td>
<td>[REVIEW] Review before FINAL exam</td>
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<tr>
<td>Fri Dec 11, 2015</td>
<td>HW6 due at midnight -Final Website</td>
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<tr>
<td>Thu Dec 17, 2015</td>
<td>FINAL EXAM</td>
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GRADES

Assignments (Individual)

- 10% of Total
  - HW1 due at midnight - webpage with description of a dataset (6 points)
  - Dataset Presentation (2 points)
  - HW2 due at midnight - critique and group formation (2 points)

Exam

- 30% of Total
  - Midterm (12 points)
  - Final (18 points)

Participation

- 10% of Total (Bonus points)
  - Class Participation (5 points)
  - Participation on Piazza (5 points)

Group Project

- 60% of Total
  - HW3 due at midnight - Group roles (2 points)
  - HW4 due at midnight - website with initial design (10 points)
  - Initial Presentation (8 points)
  - HW5 due at midnight - Testing Report (10 points)
  - Final Presentation (10 points)
  - HW6 due at midnight - Final Website (20 points)
COURSE POLICIES

Grading

Grades will be assigned using the IUPUI grading scale: http://registrar.iupui.edu/gradecover.html (Links to an external site.). Note that the maximum score for this class is 110%. A score of 100% will result in A+.

A+ >=100%
A  >=93%
A- >=90%
B+ >=87%
B  >=83%
B- >=80%
C+ >=77%
C  >=73%
C- >=70%
D+ >=67%
D  >=63%
D- >=60%
F <60%

Attendance

Attending class is strongly encouraged, but not mandatory.

Remember, however, that part of your final grade will be based on class participation. You cannot accrue points if you are not in class or if you are in attendance, but disengaged.

Make-up Exams

You are required to take both a midterm and a final exam. If an unexpected event (e.g., illness) prevents you from taking the midterm, it is your responsibility to talk with the instructor asap, so that we can schedule a comprehensive exam for you on the day of the final exam. No exceptions.

Late Assignments

Assignments are due at 11:59 pm the day BEFORE class (unless otherwise specified). If you submit an assignment one day late, the penalty is 20% of the total score. If you submit with a delay of 25 hours or more, the assignment will count 0% towards your final score.

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University Policies:

Campus policies governing IUPUI courses may be found at: http://registrar.iupui.edu/course_policies.html (Links to an external site.)

Academic Integrity
Please refer to the IUPUI Student Code of Conduct: [http://www.iupui.edu/code/](http://www.iupui.edu/code/) for information regarding penalties and procedures in cases of academic misconduct: cheating, plagiarism, etc.

**Plagiarism**

Plagiarism will not be tolerated. Plagiarism occurs when using somebody's else work (including, but not limited to sources such as: the Internet, library books, or the work or other students) without proper citations and quotation marks.

**IMPORTANT!!** In order to avoid plagiarism, remember to put proper quotation marks and a citation when you refer to somebody's else work.

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**Resources for Students:**

**Student Advocate**

The Student Advocate Office is located in the Campus Center, Suite 350, and can be contacted by phone at 278-7594 or email at stuadvoc@iupui.edu. For more information, visit the Student Advocate website at [http://www.life.iupui.edu/advocate/](http://www.life.iupui.edu/advocate/) (Links to an external site.)

**Adaptive Educational Services**

Students needing accommodations because of physical or learning disabilities should contact Adaptive Educational Services, Taylor Hall (UC), Room 137: [http://aes.iupui.edu/](http://aes.iupui.edu/) (Links to an external site.)

**Counseling & Psychological Services**

Students who wish to seek counseling or other psychological services should contact the CAPS office by phone at 274-2548 or email at capsindy@iupui.edu. For more information, visit the CAPS website at [http://life.iupui.edu/caps/](http://life.iupui.edu/caps/) (Links to an external site.) (Links to an external site.)

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The Instructor reserves the right to make changes to the syllabus and course schedule, if necessary.