INFO I101

Introduction to Informatics

Department of Human-Centered Computing
Indiana University School of Informatics and Computing
IUPUI

Semester: Spring 2015
Section Number: 10989
Meeting Room and Time: IT 271, Mondays and Wednesdays, 2–3:50 pm
Credit Hours: Four credit hours
Course Web Site: http://canvas.iu.edu

Instructor: Jim Lyst
Office Address: IT 487
Office Phone: (317) 278-0044
Email Address: jlyst@iupui.edu
Office Hours: Tuesdays/Thursdays 12pm-1:30pm

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.
## Student Learning Outcomes

Upon completion of this course, students will

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<tbody>
<tr>
<td>1.</td>
<td>Define hardware and software terms.</td>
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<td>2.</td>
<td>Define hypertext terms.</td>
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<tr>
<td>3.</td>
<td>Script webpages using HTML5 tags, attributes, and elements.</td>
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<td>4.</td>
<td>Use cascading style sheets (CSS) to specify the presentation a webpage.</td>
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<td>5.</td>
<td>Transfer files to a server and set permissions to display webpages on the Internet.</td>
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<td>6.</td>
<td>Describe the roles of Internet addresses, domain names, and DNS servers in networking.</td>
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<td>7.</td>
<td>Characterize different types of Internet protocols.</td>
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<td>8.</td>
<td>Place data in a spreadsheet and correctly format a table and chart.</td>
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<td>9.</td>
<td>Demonstrate how entities and attributes are used to design databases.</td>
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<td>10.</td>
<td>Correctly execute SQL statements to query a database.</td>
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<td>11.</td>
<td>Define the essential properties of an algorithm.</td>
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<td>12.</td>
<td>Define variables and construct statements JavaScript.</td>
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<td>13.</td>
<td>Write expressions using arithmetic, relational, and logical operators.</td>
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<td>14.</td>
<td>Compose conditional and compound statements.</td>
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<td>15.</td>
<td>Create JavaScript functions with correct syntax and semantics.</td>
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<td>16.</td>
<td>Understand concepts in statistics at an introductory level (including descriptive statistics, inference, probability, and regression analysis).</td>
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<td>17.</td>
<td>Program JavaScript to produce descriptive statistics as output from data.</td>
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<td>18.</td>
<td>Apply functions in spreadsheets to manipulate data.</td>
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<td>19.</td>
<td>Analyze current trends in computing.</td>
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<td>20.</td>
<td>Discuss current topics related to social networking.</td>
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<td>21.</td>
<td>Describe current employment trends in informatics.</td>
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<tr>
<td>22.</td>
<td>Explain introductory concepts in human-computer interaction and user experience.</td>
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<td>23.</td>
<td>Critique current software applications from a user’s perspective.</td>
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<td>24.</td>
<td>Summarize current research being conducted at the School of Informatics and Computing.</td>
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<td>25.</td>
<td>Recognize and explore examples of big data use.</td>
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RBT: Revised Bloom’s Taxonomy; PUL: Principle of Undergraduate Learning
Principles of Undergraduate Learning

This course is designed to demonstrate IUPUI’s principles of undergraduate learning (PULs):

1A. Core communication: written, oral and visual skills
1B. Core communication: quantitative skills  
   Major emphasis
1C. Core communication: information resources skills
2. Critical thinking  
   Moderate emphasis
3. Integration and application of knowledge  
   Some emphasis
4. Intellectual depth, breadth, and adaptiveness
5. Understanding society and culture
6. Values and ethics

Required Texts

Title: *Naked Statistics: Stripping the Dread from the Data*
Author: Charles Wheelan
Publisher: W. W. Norton & Company, 2013
ISBN: 0393071952, 9780393071955

* The instructor will provide other course content as digital files or online links.

Required Software

1. A Code Editor – Free editors are available online. Notepad++, Brackets, TextWrangler, and Sublime Text will work well.
2. Microsoft Excel and Word - These are available for free through IUWare.
3. An FTP Client – CyberDuck, WinSCP, and FileZilla are free options available online.

Assignments

ASSIGNMENTS
Assignments are written to reinforce topics in lecture while giving you an opportunity to gain first-hand experience working with the various applications discussed throughout the course.

PROJECT PRESENTATIONS
You will develop three projects over the course of the semester and present your work to the class. Each project will apply technical skills learned in class to solve problems in the domains of information presentation, programming useful applications, and analysis of data.

PARTICIPATION
You will be expected to participate in class discussions as well as through online discussions. Online discussion posts at the close of each regular class will be used to document attendance.

Tests

There will be three tests over material presented in class discussions, exercises and readings.
The exams will not be cumulative. Each test will be administered entirely in Canvas.

**Tentative Weekly Schedule**

The schedule below is tentative. An active schedule will be maintained on Canvas.
GRADES

Below is a summary of the grade breakdown of the course. More detail is provided in Canvas.

Minimum percentage for each letter grade:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Minimum Percentile</th>
<th>Interpretation</th>
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<tbody>
<tr>
<td>A+</td>
<td>100</td>
<td>Professional level work, showing highest level of achievement</td>
</tr>
<tr>
<td>A</td>
<td>93</td>
<td>Extraordinarily high achievement, quality of work; shows command of the subject matter</td>
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<tr>
<td>A–</td>
<td>90</td>
<td>Excellent and thorough knowledge of the subject matter</td>
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<tr>
<td>B+</td>
<td>87</td>
<td>Above average understanding of material and quality of work</td>
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<tr>
<td>B</td>
<td>83</td>
<td>Mastery and fulfillment of all course requirements; good, acceptable work</td>
</tr>
<tr>
<td>B–</td>
<td>80</td>
<td>Satisfactory quality of work</td>
</tr>
<tr>
<td>C+</td>
<td>77</td>
<td>Minimally acceptable performance and quality of work</td>
</tr>
<tr>
<td>C</td>
<td>73</td>
<td>Minimally acceptable work; does not demonstrate mastery</td>
</tr>
<tr>
<td>C–</td>
<td>70</td>
<td>Minimally acceptable work; minimum course grade allowable for graduation</td>
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</table>
### Policies, Expectations, and Guidelines

#### Attendance Policy

A basic requirement of this course is that you will participate in all class meetings and conscientiously complete all required course activities and assignments. Attendance is required in this course. Attendance will be taken at the beginning of each class period. It is your responsibility to sign your name on the attendance sheet. This attendance sheet is the only valid document showing who attended what class sessions. The instructor is not expected to remember the attendance.

Each student is allowed to miss four class periods in the semester. Each absence beyond these is considered unexcused unless it falls under one of the excused absences listed below. Each unexcused absence will result in a reduction of 2% of the course score. Eight or more unexcused absences will result in an F of the course grade. For each absence, the student is responsible for all covered materials and assignments.

Only the following is considered an excused absence with appropriate documentation submitted to the instructor:
- Death in the immediate family (e.g. mother, father, spouse, child, or sibling);
- Hospitalization;
- Jury duty;
- Court ordered summons;
- Religious holiday;
- University/school coordinated athletic or scholastic activities.

#### Tardy Policy

Regular tardiness disrupts the class and affects the learning of other students. All students are expected to be on time each class. Punctuality is a measure of responsibility. An accumulation of regular tardiness could reduce your overall course grade. The tardy policy is structured as follows:
- Tardy (5 – 15) minutes = 1 tardy
- Tardy > 15 minutes = 1 absence
- 3 Tardies = 1 absence

#### Assignment Policy

This course may be difficult, and may involve concepts and terms you've never encountered. Budget time accordingly for all assignments. To ensure fairness to all students, no extra work, extra credit, or anything outside the regular homework and quizzes will be assigned.

- To receive full credit, any assignment must be turned in by its deadline.
- A late assignment may be accepted for partial credit at the instructor’s discretion.
- Partially completed work will also be accepted for partial credit in most cases.

#### Quiz and Exam Policy
There will be three exams over material presented in class and in the textbook. The exams will not be cumulative.

If you have the proper documentation from Adaptive Services, modifications to the exams will be made for you. Notify us at the beginning of the semester, not the week of the exam.

**Collaborative Learning**

One of the best ways to learn new materials is to collaborate in groups. You are encouraged to discuss class materials and homework assignments with your classmates to help each other. However, the homework you hand in must be your own work, in your own words, and your own explanation.

**Honor Code**

You may discuss your homework and projects with classmates. However, all submitted work must be your own. In the case of a group assignment, you must document who you worked with and describe the nature of your collaboration.

**Course Communications**

Communication for this course will be administered via Canvas. All announcements, assignments, grades, emails, etc. will take place in that medium. Please refrain from relying on direct email for course-related questions to the instructor if avoidable.

**Incomplete:**

The instructor may assign an Incomplete (I) grade only if at least 75% of the required coursework has been completed at passing quality and holding you to previously established time limits would result in unjust hardship to you. All unfinished work must be completed by the date set by the instructor. Left unchanged, an Incomplete automatically becomes an F after one year. [http://registrar.iupui.edu/incomp.html](http://registrar.iupui.edu/incomp.html)

**Code of Conduct**

All students should aspire to the highest standards of academic integrity. Using another student’s work on an assignment, cheating on a test, not quoting or citing references correctly, or any other form of dishonesty or plagiarism shall result in a grade of zero on the item and possibly an F in the course. Incidences of academic misconduct shall be referred to the Department Chair and repeated violations shall result in dismissal from the program.

All students are responsible for reading, understanding, and applying the *Code of Student Rights, Responsibilities and Conduct* and in particular the section on academic misconduct. Refer to The Code > Responsibilities > Academic Misconduct at [http://www.indiana.edu/~code/](http://www.indiana.edu/~code/). All students must also successfully complete the Indiana University Department of Education “How to Recognize Plagiarism” Tutorial and Test. [https://www.indiana.edu/~istd](https://www.indiana.edu/~istd) You must document the difference between your writing and that of others. Use quotation marks in addition to a citation, page number, and reference whenever writing someone else’s words (e.g., following the *Publication Manual of the American Psychological Association*). To detect plagiarism instructors apply a range of methods, including
Academic Misconduct:

1. Cheating: Cheating is considered to be an attempt to use or provide unauthorized assistance, materials, information, or study aids in any form and in any academic exercise or environment.
   a. A student must not use external assistance on any “in-class” or “take-home” examination, unless the instructor specifically has authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, calculators, computers, and wireless communication devices.
   b. A student must not use another person as a substitute in the taking of an examination or quiz, nor allow other persons to conduct research or to prepare work, without advanced authorization from the instructor to whom the work is being submitted.
   c. A student must not use materials from a commercial term paper company, files of papers prepared by other persons, or submit documents found on the Internet.
   d. A student must not collaborate with other persons on a particular project and submit a copy of a written report that is represented explicitly or implicitly as the student’s individual work.
   e. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.
   f. A student must not steal examinations or other course materials, including but not limited to, physical copies and photographic or electronic images.
   g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor or program to whom the work is being submitted.
   h. A student must not, without authorization, alter a grade or score in any way, nor alter answers on a returned exam or assignment for credit.

2. Fabrication: A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citation to the sources of information.

3. Plagiarism: Plagiarism is defined as presenting someone else’s work, including the work of other students, as one’s own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered “common knowledge” may differ from course to course.
   a. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.
   b. A student must give credit to the originality of others and acknowledge indebtedness whenever:
      1. directly quoting another person’s actual words, whether oral or written;
      2. using another person’s ideas, opinions, or theories;
      3. paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;
      4. borrowing facts, statistics, or illustrative material; or
      5. offering materials assembled or collected by others in the form of projects or collections without acknowledgment
4. **Interference:** A student must not steal, change, destroy, or impede another student’s work, nor should the student unjustly attempt, through a bribe, a promise of favors or threats, to affect any student’s grade or the evaluation of academic performance. Impeding another student’s work includes, but is not limited to, the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.

5. **Violation of Course Rules:** A student must not violate course rules established by a department, the course syllabus, verbal or written instructions, or the course materials that are rationally related to the content of the course or to the enhancement of the learning process in the course.

6. **Facilitating Academic Dishonesty:** A student must not intentionally or knowingly help or attempt to help another student to commit an act of academic misconduct, nor allow another student to use his or her work or resources to commit an act of misconduct.

**Other Policies**

1. **IUPUI course policies:** A number of campus policies governing IUPUI courses may be found at the following link: [http://registrar.iupui.edu/course_policies.html](http://registrar.iupui.edu/course_policies.html)

2. **Classroom civility:** To maintain an effective and inclusive learning environment, it is important to be an attentive and respectful participant in lectures, discussions, group work, and other classroom exercises. Thus, unnecessary disruptions should be avoided, such as ringing cell phones engagement in private conversations and other unrelated activities. Cell phones, media players, or any noisy devices should be turned off during a class. Texting, surfing the Internet, and posting to Facebook or Twitter during class are generally not permitted. Laptop use may be permitted if it is used for taking notes or conducting class activities. Students should check with the instructor about permissible devices in class. IUPUI nurtures and promotes “a campus climate that seeks, values, and cultivates diversity in all of its forms and that provides conditions necessary for all campus community members to feel welcomed, supported, included, and valued” (IUPUI Strategic Initiative 9). IUPUI prohibits “discrimination against anyone for reasons of race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or [veteran] status” (Office of Equal Opportunity). Profanity or derogatory comments about the instructor, fellow students, invited speakers or other classroom visitors, or any members of the campus community shall not be tolerated. A violation of this rule shall result in a warning and, if the offense continues, possible disciplinary action.

3. **Right to revise:** The instructor reserves the right to make changes to this syllabus as necessary and, in such an event, will notify students of the changes immediately.

4. **Bringing children to class:** To ensure an effective learning environment, children are not permitted to attend class with their parents, guardians, or childcare providers.

5. **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 accommodations needed for the course. Students requiring accommodations because of a disability must register with Adaptive Educational Services (AES) and complete the appropriate AES-issued before receiving accommodations. The AES office is located at UC 100, Taylor Hall (Email: aes@iupui.edu, Tel. 317 274-3241). Visit [http://aes.iupui.edu](http://aes.iupui.edu) for more information.

6. **Administrative Withdrawal:** A basic requirement of this course is that students participate in all class discussions and conscientiously complete all required course activities and/or assignments. If a student is unable to attend, participate in, or complete an assignment on time, it is the student’s
responsibility to inform the instructor. If a student misses more than half of the required activities within the first 25% of the course without contacting the instructor, the student may be administratively withdrawn from this course. Administrative withdrawal may have academic, financial, and financial aid implications. Administrative withdrawal will take place after the full refund period, and a student who has been administratively withdrawn from a course is ineligible for a tuition refund. Contact the instructor with questions concerning administrative withdrawal.

7. **Emergency Preparedness:** Safety on campus is everyone’s responsibility. Know what to do in an emergency so that you can protect yourself and others. For specific information, visit the emergency management website. [http://protect.iu.edu/emergency](http://protect.iu.edu/emergency)

8. **Course Evaluations:** Course evaluations provide vital information for improving the quality of courses and programs. Students are urged to complete one course and instructor evaluation for each section in which they are enrolled at the School of Informatics and Computing with the following three exceptions: (a) The student has withdrawn from the course; (b) fewer than five students are enrolled in the section (in which case anonymity is impossible); and (c) the section is a laboratory that must be taken with a course having a different section number. Course evaluations are completed at [https://soic.iupui.edu/app/course-eval/](https://soic.iupui.edu/app/course-eval/). Course evaluations are open from the eleventh week. Course evaluations are anonymous, which means that no one can view the name of the student completing the evaluation. In addition, no one can view the evaluation itself until after the instructor has submitted the final grades for the course. In small sections, demographic information should be left blank, if it could be used to identify the student.

9. **Email:** Indiana University uses your IU email account as an official means of communication, and students should check it daily for pertinent information. Although you may have your IU email forwarded to an outside email account, please email faculty and staff from your IU email account.

10. **Student Advocate:** The Student Advocate provides assistance to students with personal, financial, and academic issues. The Student Advocate Office is located in the Campus Center, Suite 350. The Student Advocate may also be contacted by phone at 317 274-4431 or by email at studvoc@iupui.edu. For more information visit [http://studentaffairs.iupui.edu/advocate](http://studentaffairs.iupui.edu/advocate).

11. **Counseling and Psychological Services (CAPS):** Students seeking 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 [http://life.iupui.edu/caps/](http://life.iupui.edu/caps/).

**Mission Statement**

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

- Collaboration within and across disciplines and with the community;
- A commitment to ensuring diversity; and
- 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.
Statement of Values

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.