Syllabus: CSCI-A110 Section 1042
Introduction to Computers and Computing

Indiana University East

Spring, 2011


Course Web Site: http://mypage.iu.edu/~gdweber/csci/a110/

Scheduling Information

Time and location: Tues. Thurs. 9:30 a.m. – 10:45 a.m., TR 102

Frequency: Every semester

Start date: Tuesday, January 18

Last date to register: Jan 24

Final exam: Tuesday, May 3

Introduction

Course Description

A110 Introduction to Computers and Computing (3 cr.) MMCC (Multi-campus Modular Curriculum in Computing). Prerequisite: One year of high school algebra or equivalent. No computing experience assumed. How computers work, word processing, spreadsheets, file management, web browsing, etc. Emphasis on problem solving techniques. Lecture and laboratory. Credit given for only one of A106, A110, and Business K201.

Prerequisite

Students entering this course should be familiar with algebraic notation, and be able to solve equations, such as $x + 21 = 5(x - 10)$. Students who are currently enrolled in MATH-M123 should be okay.
Comments

Taking CSCI-A110 satisfies the IU East General Education requirement (approved fall 2006), “Skill and Knowledge of Information Retrieval Systems (Informatics),” unless the student’s academic program prescribes a different course. Other courses which may be taken to fulfill the requirement are COLI-S330 or -S360, EDUC-W200, INFO-I101 or higher.

Learning Objectives

Campus Learning Objectives

These course learning objectives relate to the campus learning objectives (see Indiana University East Course Catalog, 2010–11, pages 13–14) as follows:

• “1. [Breadth] Educated persons should be exposed to a broad variety of academic fields traditionally known as the Liberal Arts (humanities, fine arts, social sciences, natural sciences) in order to develop a critical appreciation of diversity of ideas and creative expression.”

• “3. [Expression] Educated persons should be able to express themselves clearly, completely, and accurately. Effective communication entails sharing ideas through a variety of techniques, including reading, writing, speaking, and technology.”

• “4. [Computation] Educated persons should be able to relate computational skills to all fields so that they are able to think with numbers. At a minimum, students should be able to carry out basic arithmetical and algebraic functions; they should have a working concept of simple statistics; and they should be able to interpret and use data in various forms.”

• “5. [Problem Solving and Critical Thinking] Educated persons should have the ability to develop informed opinions, to comprehend, formulate, and critically evaluate ideas, and to identify problems and find solutions to those problems. Effective problem solving involves a variety of skills including research, analysis, interpretation, and creativity.”

• “7. [Moral Knowledge] Educated persons should be expected to have some understanding of and experience in thinking about moral and ethical problems. A significant quality in educated persons is the ability to question and clarify personal and cultural values, and thus to be able to make discriminating moral and ethical choices.”

Course Learning Objectives

After successfully completing this course, students will have acquired basic computer skills to support their academic studies, basic concepts of computers (what they are and how they work), and the ability to teach themselves additional computer skills in life-long learning. The course-specific learning objectives listed below are keyed to the campus learning objectives: Breadth,

1 http://www.iue.edu/catalog/
Expression, Computation, identifying and solving Problem Solving, Moral Knowledge. The successful student will learn to:

- Develop **problem-solving strategies** that can be applied both to computers and to problems in other areas (P).
- Use a computer **operating system** to manage windows, tasks, and files (B, P).
- Use the World-Wide Web, email, and other **Internet services** to find and share information (E, P):
  - Set up a computer’s Internet connection (B).
  - Network etiquette and ethical computer usage (M).
  - Develop simple web pages using a Wiki (B, E).
- Use common **office computer applications**, including (C, E, P):
  - Formatting text documents (word processing)
  - Analyzing, graphing, and planning with numerical data (spreadsheet)
  - Presentation “slides”
- Understand **data representation, storage, and measurement**, including **database concepts** (B, C).
- Understand **algorithms** as recipes for solving problems (B, C, P).
- **Tell the computer what to do** using the visual scripting language Scratch (B, E, C).
- **Understand hardware** sufficiently to shop intelligently for a personal computer (B).
- Understand some of the **legal, social, and ethical issues** involving computer systems, including privacy, security, and “intellectual property” (M).
- Reason plausibly about the **future of computing** (B).

**Learning Resources**


**Workbook (‘recommended,’ but not really)** Sharon Scollard, *Computer Skills Workbook for Fluency with Information Technology: Skills, Concepts, & Capabilities*. Addison-Wesley, 3rd ed., 2008. ISBN-10: 0321522559; ISBN-13: 9780321522559. This workbook was ordered as a “recommended” textbook for all sections of CSCI A110. I do not recommend this book for most students. The workbook gives detailed, step by step instructions for using Microsoft software including Windows and Office. While a few people may need that level of instruction, one of the goals of this course is for students to become able to figure things out more on their own; so in a way, it is counter-productive.
**Oncourse** [https://oncourse.iu.edu/](https://oncourse.iu.edu/) (Please memorize or set a bookmark!)

**Course web site (required)** [http://mypage.iu.edu/~gdweber/csci/a110/](http://mypage.iu.edu/~gdweber/csci/a110/) (Please memorize or set a bookmark!) Some parts of the web site may be password protected.

**Coursepack (required)** Available on the course web site.

**Removable media (required)** Students will need either a USB flash drive or access to network file storage.

**Software** All software needed for this course is installed on the Microsoft Windows 7 operating system TR 102 (and much of it also on the Linux operating system in the same room). Some is installed in other IUE computer labs. The course web site has links to high-quality, free software, for students who wish to install it on their own computers.

**Learning Activities and Measurement of Learning**

**Reading, Attendance, Participation**

- Read the assigned chapters of the textbook and coursepack, and other readings which may be assigned.
- Attend class regularly.
  - Arrive on time so you do not disturb others.
  - Arrive prepared: you should have read the assigned chapters before class, and be ready to answer questions about what you understood from the reading or to ask questions about what you did not understand.
  - While in class, concentrate on the class: do not engage in side conversations, social network, play games, or do homework for other courses.

**Labs/HomeWork**

Ten homework assignments will be given. Mostly, these involve learning to do something on the computer, so they are also called “labs.” See the “Notices” section for the late homework policy.

**Quizzes**

Ten open book quizzes will be given, at least one of them through Oncourse. The best eight scores will count towards the course grade; i.e., the lowest two scores will not count. Oncourse quiz dates will be announced in class; each quiz will normally be open for one week. There will also be an ungraded practice quiz in Oncourse. Other quizzes (not in Oncourse) may be handed out in class; they are due on the following class day (one week later). No makeups or late quizzes will be accepted.
Component | Points | Percent
---|---|---
Quizzes (best 8 of 10, 20 points each) | 160 | 18
Homework (10 labs, 50 points each) | 500 | 58
Midterm exam | 100 | 12
Final exam | 100 | 12
**TOTAL** | **1000** | **100**

Table 1: Estimated Point Distribution

<table>
<thead>
<tr>
<th>Percent</th>
<th>Grade</th>
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<th>Percent</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>96.667–100.000</td>
<td>A+</td>
<td>93.333–96.666</td>
<td>A</td>
<td>90.000–93.332</td>
<td>A–</td>
</tr>
<tr>
<td>86.667–89.999</td>
<td>B+</td>
<td>83.333–86.666</td>
<td>B</td>
<td>80.000–83.332</td>
<td>B–</td>
</tr>
<tr>
<td>76.667–79.999</td>
<td>C+</td>
<td>73.333–76.666</td>
<td>C</td>
<td>70.000–73.332</td>
<td>C–</td>
</tr>
<tr>
<td>66.667–69.999</td>
<td>D+</td>
<td>63.333–66.666</td>
<td>D</td>
<td>60.000–63.332</td>
<td>D–</td>
</tr>
<tr>
<td>0.000–59.999</td>
<td>F</td>
<td></td>
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</tbody>
</table>

Table 2: Grading Scale

**Examinations**

Midterm and final exams.

*Makeup exams* are given only for serious and documented reasons. The request for a makeup should be made before the exam is given, or in case of emergency, by the end of the day of the exam.

**Activities Summary: Determination of Course Grade**

Table 1 shows an estimate of the number of pieces of graded work of each type and how they contribute to the course grade. Note the large percent due to homework.

Table 2 shows the grading scale.

**Advice**

1. An average student should expect to spend about *three hours of independent lab time per week* in order to complete the projects and learn the skills required for this class.

2. If you need help, *ask the instructor*. Do not hesitate. Ask early while there is still time.

3. If the instructor says anything incomprehensible, *ask about it*. Otherwise you’ll hear more incomprehensibles.
4. *Keep up* with the homework. In some cases, later homework assignments build on knowledge and skills developed in earlier assignments. Falling behind can result in a vicious cycle of failure.

5. *Read* the assigned textbook and coursepack chapters before class. Take *notes*. Write down *questions*. *Ask* them in class.

## Lab Facilities

During each 75-minute class session, the first 30 to 45 minutes will usually be presentation and/or discussion, and the remaining 45 or 30 minutes will be lab. Students can use the lab time to work on their lab assignments and to ask the instructor if they get stuck.

Students are excused from the lab *only* if they have turned in all currently open assignments.

## Notices

### Late Homework

One characteristic of good software is that it is delivered “on time,” and the same is true of homework, such as labs. Work that is turned in on time may earn full credit. Work turned in late will earn partial credit, up to 90% for one week late, up to 80% for two weeks late. I do not normally accept assignments that are more than two weeks late; however, in case of extraordinary circumstances, discuss the situation with me (earlier is better) and we may work something out.

### Attendance

IU requires students to attend class.

*Merely not attending does not* withdraw a student from a course; see “Withdrawal” below.

**Students who fail the course due to non-attendance will receive a grade of FN or FNN; these grades can result in termination and reversal (paying back) of financial aid.**

### Lab Attendance

Lab attendance is ordinarily required. However, you may be excused from lab if you have turned in all current assignments, and if there is no quiz or presentation of new material. Check with the instructor to be sure.
Withdrawal

Withdrawing from a course requires a withdrawal form. Normally, withdrawal must take place on or before the “last date for withdrawal with an automatic W”, which this semester is Mar 18. Withdrawal after that date requires the instructor to determine the grade as W, meaning the student was passing at the time of withdrawal, or WF, meaning the student was failing.

Helping, Cheating, and Academic Honesty

See the *IU East Standards of Student Conduct Policy*[^2] and the *Indiana University Code of Student Rights, Responsibilities and Conduct*,[^3] especially the section “Academic Misconduct.”[^4]

Strict academic honesty is expected of all students. The IU code of student conduct provides serious penalties for cheating. All work turned in for credit must be *substantially* the work of the student (or students, if teamwork is authorized) turning it in. Other students needing help, except for simple questions, should be referred to the instructor.

It is part of my responsibility as instructor to help students who are having difficulty with their assignments. Don’t be ashamed or embarrassed to ask me for help! I *want* to help! (By the way: usually, I will try to help a student to think through the solution rather than directly provide an answer.)

Copying another person’s work is cheating, and so is providing the original work to another student for copying. In such cases, *both* students are equally guilty and will be equally punished. Do not share your work with other students or leave it lying around for anyone to pick up. There are usually many different ways to solve a problem; therefore, identical or very similar solutions are *prima facie* evidence of cheating.

Restrictions on Copying and Distribution of Class Materials

All of the materials that I post that are my original material, including any of my own lecture notes that I post for your reference, are materials that you may use freely for the purposes of your study within this course and other academic courses. You may not copy or distribute them, electronically or otherwise, for any other purpose without asking me first. Similarly, photographing and audio or video recording of our classes (and posting said pictures/files to YouTube or another site) is not permitted, except as authorized for the purpose of accommodating a documented disability.

Disabilities

Students with disabilities (including physical, mental, sensory, and learning impairment) and wishing to receive auxiliary aids and services (“accommodations”) should fill out a Disability [^2]
[^3]: http://www.iu.edu/~code/
Accommodations Request Form\(^5\) and send it to the Student Support Services Office, early in the semester, and inform their instructor if appropriate. See the Services for Students with Disabilities Policy\(^6\) or contact Student Support Services for additional information.

**Religious Observances**

Students needing an accommodation for a religious observance (for example, rescheduling an exam from a date on which work is prohibited) should communicate their needs to the instructor, in accordance with the IU East “Religious Observances Policy”.\(^7\)

**Student Athletes**

Student athletes who are unable to attend class(es) because of any IU East athletic events must inform the instructor, during the first week of class, about the conflicting dates. The instructor will inform students if accommodations can be made, the nature of the accommodations, and the accommodations will be written and signed by instructor and student, with a copy available for the coach. For details, see the IU East “Policy for the Approved Absence of Students Participating in Athletic Events”.\(^8\)

**Contacting the Instructor**

**Name:** Gregory D. Weber

**Office locations:** HY 238 (may vary to computer lab)

**Ordinary office hours:** (“Walk-in” consulting, no appointment needed!)
- **Tentative:** Tues. Thurs. 11 a.m. – 12 noon, 3:30–4:30 p.m.

**Additional consulting:** Available by appointment.

**Email:** Please use Oncourse Messages for class-related communications.

**Jabber/XMPP chat:** magister.informaticae@jabber.org

**SIP phone:** magister.informaticae@ekiga.net

**Telephone:** (765) 973-8420 (voice); (765) 973-8550 (FAX).

**Personal home page:** [http://mypage.iu.edu/~gdweber/](http://mypage.iu.edu/~gdweber/) (this is not the course web site!)

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\(^5\)[http://www.iue.edu/support/documents/DisabilityAccommodationsRequestForm.pdf]

\(^6\)[http://www.iue.edu/support/manual.php]

\(^7\)[http://www.iue.edu/organizations/senate/documents/Policies/studentaffairs/ReligiousObservancesPolicy090303.pdf]

\(^8\)[http://www.iue.edu/organizations/senate/documents/Policies/studentaffairs/ExcusedAbsencesAthletes080821.pdf]
Schedule

CSCI-A110 tentative schedule as of January 10, 2011. Subject to change.

Precise dates of quizzes and labs will be announced.

Reading assignments are given as $C =$ coursepack, $FIT =$ Snyder, *Fluency with Information Technology*, followed by *chapter* or *chapter:pages*. These are to be read before class, except for the first day of class.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topics and Activities</th>
</tr>
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<tbody>
<tr>
<td>Jan 18</td>
<td>$C$ 1; $FIT$ 1. Introduction, terms, and problem solving.</td>
</tr>
<tr>
<td></td>
<td>Lab 1A: Basic skills.</td>
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<tr>
<td>Jan 20</td>
<td>$C$ 2; $FIT$ 2. Human-computer interaction, text editing.</td>
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<tr>
<td></td>
<td>Lab 1B: Text editing. Quiz 1.</td>
</tr>
<tr>
<td>Feb 1</td>
<td>$C$ 5; $FIT$ 5. Search. Lab 3A: Searching the Web.</td>
</tr>
<tr>
<td>Feb 8, 10</td>
<td>$C$ 8; $FIT$ 4. HTML and Wikis. Lab 4: Making wiki pages. Quiz 4.</td>
</tr>
<tr>
<td>Feb 15, 17</td>
<td>$C$ 9, 10; $FIT$ 8, 11. Digital Information. Lab 5: Data, multimedia. Quiz 5.</td>
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<tr>
<td>Feb 22</td>
<td>$C$ 7. Presentation tools.</td>
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<td>Feb 24</td>
<td>Review.</td>
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<td>Mar 1</td>
<td><strong>Midterm Exam: Introduction through Digital Information.</strong></td>
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<tr>
<td>Mar 3</td>
<td>Unix. Lab 6: Presentation tools, Unix.</td>
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<tr>
<td>Dates</td>
<td>Topics and Activities</td>
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<tr>
<td>Mar 8, 10</td>
<td><em>C 12; FIT 9.</em> Computer operations. Quiz 6.</td>
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<tr>
<td>Mar 18</td>
<td>Last date to withdraw with an automatic W.</td>
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<td>March 21–26</td>
<td>Spring break; no class</td>
</tr>
<tr>
<td>Mar 29</td>
<td><em>C 13; FIT 12.</em> Internet communication, computers and society. Lab 8: email and privacy.</td>
</tr>
<tr>
<td>Apr 5</td>
<td><em>C 14; FIT 15.</em> Spreadsheets II: charts. Lab 9: Spreadsheets II.</td>
</tr>
<tr>
<td>Apr 7, 12, 14</td>
<td>Handouts or online readings. <em>FIT 10.</em> Visual scripting with Scratch. Lab 10: Scratch.</td>
</tr>
<tr>
<td>Apr 26</td>
<td><em>FIT 23.</em> Limits of computation</td>
</tr>
<tr>
<td>Apr 28</td>
<td><em>FIT 24.</em> Summary and review.</td>
</tr>
<tr>
<td>May 3</td>
<td><strong>Final Exam: Spreadsheets through Summary.</strong></td>
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<tr>
<td>May 5</td>
<td>No class</td>
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