

State University of New York at Albany
ACC 681. Accounting Information Systems (Fall, 2006)
Class Time: M: 5:45-8:35 PM; Room: BA223

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Office Hours: M 3:30 – 5:30 or by appointment
Class Page: tbd

0. MESSAGES FROM THE CLASS OF FALL 2000

- "10+ hours of work per week. One programming homework every week."
- "...If someone loses his interest in the program, any warning won't be effective. I suggest doing a review for the whole course in the first class to alert students what they will learn in the semester. Show them some codes as example."
- "Challenge yourself with lots of homework. Do you want to know what your potential ability is?"
- "Assignment small. Effort huge!! We are not MIS majors any more. Now our concentration is JAVA."
- "This course requires an extreme amount of patience because spending 10+ hours does not guarantee that expected results will be achieved. It is extremely important to get a solid start in this course as soon as it begins."
- "10+ hours of struggling and suffering, and 10- minutes of excitement & happiness."
- "10+ hours of work is not quite concise. 30+, 40+ would be more descriptive."
- "Loss of confidence in myself. Extremely frustrating."
- "Achieve a lot, or lose everything."
- "You will not have much time to concentrate on other courses!!!"
- "Although you believe that you understand the contents of the textbook, it doesn't mean that you can solve the problems in the test."
- "Less time to prepare for other courses. A lot of benefits though. Very challenging!!"
- "The final individual project is another extreme workload to the beginner programmer. The programming project is tough and challenging to each student."
- "This course is tough. You might never imagine. However, many students took this course until the end, and certainly appreciate the hardworking time."

1. WELCOME

AICPA's General IT Education Requirements No. 12: "All professional accountants, irrespective of their primary work domain or role, must acquire both relevant theoretical knowledge and practical IT skills. The essential body of knowledge of the accounting IT is represented by the following basic content categories: (1) Information technology concepts for business systems, (2) Internal control in computer based business systems, (3) Development standards and practices for business systems, (4) Management of information technology adoption, implementation, and use, and (5) Evaluation of computer based business systems." (<http://www.aicpa.org/members/div/infotech/itc/cap12.htm>)

In this course, we will study the analysis, design, development and implementation of accounting systems. Principles of object-oriented systems will be introduced. The course will be a healthy mix of theoretical, applied, and hands-on materials. We will study the subject matter through the use of UNIX operating system with programming in the Java programming language, which is very popular especially in the context of web-based systems.

To help you understand fundamental systems concepts, this course will in general use a command line approach. We will learn using the emacs/vi editors, using the javac compiler, and developing simple java applications. Graphical User Interfaces (GUI) will be introduced after the students have acquired the fundamental systems concepts. A good resource for VI is <http://www.eng.hawaii.edu/Tutor/vi.html>.

This course is rigorous, but your efforts will be rewarded. Knowledge of the materials covered in this course should amply increase your competitiveness in future professional careers in accounting, auditing, and information systems.

This course has a strong systems flavor. Weekly programming exercises will be used to reinforce systems concepts. Programming skills will be tested in the exams. To do well in the AIS concentration, you should take the programming assignments in this class VERY seriously, since writing programs is the only way to learn programming. You are strongly encouraged to try out additional programming exercises and select a project that requires intense programming. Remember that I am here to help you learn.

2. LEARNING OBJECTIVES

At the end of this course, you should be able to:

- Integrate technological perspectives into decision-making processes;
- Manage assigned tasks to meet deadlines in developing and maintaining business systems;
- Understand the functions of accounting information systems, and the interrelationship among hardware and software components of such systems (NSA 4001 Requirement B);
- Solve business problems by writing programs to manage and analyze quantitative data;
- Develop specifications for accounting information systems, and implement them in Java and UNIX scripts;
- Understanding in-depth Object-Oriented methods for systems development;
- Communicate intelligently with systems professionals.

3. REQUIRED TEXT BOOK

Java Software Solutions: Foundations of Program Design, 5/E Publisher: Addison-Wesley

Copyright: 2007 ISBN-10: 0321409493

Check Web site accompanying the textbook at <http://duke.csc.villanova.edu/jss1/>

4a. RECOMMENDED REFERENCES

Ellie Quigley, UNIX Shells by Example

2nd ed (1999) Prentice-Hall. ISBN: 0130212229

Roberts, Tuck, Heller, Complete Java 2 Certification Study Guide

2nd Bk&CD ed (September 2000) Sybex. ISBN: 0782128254

A.A. Arens & D.D. Ward, Systems Understanding Aid

5th ed. (2001) Armond Dalton Publishers, Inc. ISBN: 0912503165

4b. OTHER USEFUL REFERENCES

David Flanagan & Paula Ferguson (Editor), Java in a Nutshell: A Desktop Quick Reference

3rd ed. (November 1999) O'Reilly & Associates, Incorporated. ISBN: 1565924878

Harvey Deitel, Paul Deitel, Java How to Program

4th ed (2002) Prentice Hall. ISBN: 013.341517

Bruce Exkel, Thinking in Java

2nd ed. (2002) Prentice Hall. ISBN 0130273635 <http://www.mindview.net/Books/TIJ/>

5. ONLINE RESOURCES

Official Java sites

<http://java.sun.com/>

The above is the official java site linking to resources such as java products and tutorials.

<http://java.sun.com/j2se/1.4/docs/api/>

This site is the most important to Java learners. It contains the full, constantly undated Application Programming Interfaces (APIs) that describe all standard java packages, classes, and methods.

Java Tutorial

<http://java.sun.com/docs/books/tutorial/index.html>

UNIX Tutorials

<http://www.utsc.utoronto.ca/~szamosi/b09/tut.shtml>

Sun's Java Certification

<http://suned.sun.com/US/certification/>

HTML Tutorial

<http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html>

Program Flowchart

<http://www.wiley.com/college/busin/icmis/oakman/outline/chap05/slides/symbols.htm>

Algorithms and data structures

<http://www.ics.uci.edu/~eppstein/161/glossary.html>

<http://www.nist.gov/dads/>

Textpad Editor

www.textpad.com

6. COMPUTER ACCOUNT & FACILITIES

For information on obtaining a UNIX account, please visit:

http://www.albany.edu/its/new_students/accounts_email.html

The class newsgroup (sunya.class.acc681) will be extensively used for announcements regarding tests, homework, quizzes, added links to this course homepage, etc. The newsgroup is the primary means of communication outside of the class. You should communicate with me via e-mail only for personal questions. You should post to the newsgroup all other questions. You are strongly encouraged to answer queries posted by others, and such responses will count towards class participation points for grading. You will learn important teamwork skills from participating in this virtual classroom.

Subscribe to the newsgroup sunya.class.acc681 through pine. Choose FOLDER LIST and go to News-Collection section. Use the (a)dd command to subscribe for sunya.class.acc681. Read and respond to messages in newsgroup as if they were emails.

You can work on any computer linked to the machine cayley.bus.albany.edu in the Accounting Lab at Room 363. This machine can be accessed via xwin-32 in the lab, or remotely through telnet.

7. COURSE CONDUCT

The course will consist of lectures, programming assignments, an individual project (with project presentation at semester end) where you will design and implement part of an accounting system. Any programming based course, of necessity, is time-consuming and requires you to be well organized. Late homework submissions are not acceptable.

Grading

You will be arranged in descending order of total points scored. Gaps in that order will form the cut-off points for letter grades, including +/- grades, assigned in the course. The letter grade for each student is therefore determined relative to the rest of the class.

240 points: assignments

100 points: Project and Presentation (proposal constituting 2 out of 20 points due Oct 20)

60 points: Class Participation and Quizzes

50 points: Test I

50 points: Test II

500 points: Total (max 500 points)

Home Work Assignments

Homework will be assigned every week. Such homework must be done ***individually***. While you are welcome to discuss with anyone, **the submitted homework must faithfully represent your *own* work**. Homework is due and will be collected at the beginning of class. Late submissions will not be evaluated. Missed homework also cannot be made up. Homework submission must be in printed hardcopies to facilitate grading. As far as I know I will not have a TA or a GA so all questions will have to go through me or through your classmates.

Individual Project & Presentation

The individual project will consist of designing & implementing a part of a small accounting system. You may optionally refer to the packet entitled Systems Understanding Aid. The programming part of the project must be undertaken using the Java programming language. You will be graded on the basis of the quality of specifications of the accounting system that you design, describe, and implement. A written project report (design, description, and codes) is due on the data of presentation. Presentation includes project description, code explanation, & program demonstration.

Tests

Two tests will be conducted during class time. These tests will examine your understanding of lecture materials and homework as regards systems design and implementation, object-oriented concepts, the Java language, and related concepts. Test materials include, among others, lectures, textbook, homework description, homework exercise, discussions on the class newsgroup, and course syllabus.

Class Participation & Quizzes

I will ask you questions in the class. You are strongly encouraged to participate in class discussions. Quizzes, if and when given, may be at any time.

8. TENTATIVE SCHEDULE

	<u>Lecture</u>	<u>Chapters</u>	<u>Assignments</u>
Sep 11	Number Systems Unicode Character Set HTML Java Class Library Program flowchart Internet, UNIX, emacs and vi	Appendix B	number system & program flow chart (due Sep 18) apply for UNIX account
Sep 18	Internet, UNIX, emacs and vi	1, 2	download & install jdk1.5 http://java.sun.com/j2se/1.5/docs/api UNIX shell scripts (due TBD) Pre-lab section of lab 1 and 2
Sep 25	Chapters 1-3	3	Lab 1 , 2
Oct 9	Chapters 4 and 5	4, 5	Lab 3, 4
Oct 16	Chapter 6	6	Lab 5, 6
Oct 23	Test I	materials from Sep 11 to Oct 16	
Oct 30	Chapter 7	7	Lab 7
Nov 6	Chapter 8	8	Lab 8 Pre-Lab 9
Nov 13	Chapter 9, 10	9, 10	Lab 9, Pre Lab 10
Nov 20	Chapter 10, 11	10, 11	Lab 10, 11
Nov 27	Chapter 12	12	Lab 12
Dec 4	Project Presentation		
Dec 11	Test II	materials from Oct 30 to Nov 27	