SYLLABUS: COP 3331
Section: 01
Fall 2005
Course Meeting Time(s): Monday, Wednesday, and Friday, 10:10 – 11:00
Course Meeting Location(s): Love Building Room 301

CONTACT INFORMATION:

Course Instructor: Dr. Jean Muhammad
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Office Hours: Monday, Wednesday, and Friday 8-10 A.M.
Course Website: www.cs.fsu.edu/~cop3331

Note: Every member of the teaching faculty is normally expected to post and honor specific office hours each session in which he or she conducts classes. The statement of office hours should be posted in a conspicuous place.

COURSE MATERIALS:

Required Textbook: *Object-Oriented Software Development Using Java – Principles, Patterns and Frameworks,* Second Edition, Xiaoping Jia, Addison-Wesley, 2002, ISBN 0-201-73733-7

Suggested Textbook: *Introduction to Object-Oriented Analysis and Design with UML and the Unified Process, Stephen R. Schach, McGraw-Hill, 2004, ISBN 0-07-282646-0*

Reference Material: *Learning Java,* David Herst, Henry Yamauchi, Marc Adler, DDC Publishing, Inc. New York, NY, 1998, ISBN 158577020-5
How to Program in Java, Sixth Edition, H. M. Deitel, P.J. Deitel, Prentice Hall, Upper Saddle River, New Jersey, 2005, ISBN 0-13-148398-6
Other Materials*:* Class Notes as posted on the course web site,

COURSE DESCRIPTION:

This course introduces you to programming in Java, object oriented design as well as concepts in software engineering and ethics in computer science. Most importantly, this course focuses in on the important activities that should **precede** the writing of computer code. We will build on many of the concepts and procedures you learned in the previous courses. In the previous courses, you were acquainted with the fundamental concepts of computer science.

Thus far, you have dealt with small, relatively well-defined problems. In the world of commerce and industry, technological issues and problems are much larger and more complex. These problems are well beyond the scope of a single individual. Software engineers, in collaboration with others, often spend much of their time brainstorming, discussing, and creating documentation of problems and problem solutions (often incorporating complex diagrams), and a relatively small amount of time writing code.

Java will be introduced in this course as a means to illustrate the practices of object oriented design and as a mechanism to illustrate design features.

Analysis and *design* are two of the key activities involved in software development. These activities can be carried out using a number of different methods and tools. Many modern software development methods are based around the object-oriented approach. It is this approach that we will focus upon in this course, and it is assumed you are already familiar with the basic principles of object orientation.

It is important to recognize that there is no one right or wrong way to develop software. Two companies can organize the process of development very differently, yet both may produce successful systems. The overall efficiency of the development process is more critical to the success of the project than the particular method or tool that is used. In order to be efficient, software developers need to give as much consideration to their development process as they do to the product.

In this course, you will gain practical skill in analysis and design that will complement your skills in programming. You will learn about the problems of and approaches to developing large computer systems, and will acquire an understanding of what constitutes a development methodology. In this course, students will gain practice in developing designs to solutions of problems and then converting those designs into Java Code using the Object Oriented paradigm.

This course is designed to complement the programming course *COP 3330: Object-Oriented Programming*, in which you have gained the programming experience needed to convert completed designs into computer executable code.

COURSE OBJECTIVES:

1. Be able to describe the concepts of Object Oriented Design and Programming techniques
2. Write small Object Oriented style Java Programs using a Graphical User Interface (GUI)
3. Understand the issues of ethics in field of Computer Sciences
4. Describe and explain the main stages, methods, tools, techniques, and problems involved in systems and software engineering.
5. Explain the main concepts and goals of analysis and design.
6. Demonstrate practical skill in the use of an analysis and design notation using the Uniform Modeling Language (UML)

7. Be able to translate UML design into actual code.
8. Become proficient in the use of a UML tool such as Rational Rose

COURSE POLICIES:

Course Requirements:

To successfully complete this course you must read assigned texts, listen to lectures, and participate in discussions. Attendance will be taken in class and is required for the course. You must complete all assignments and tests in order to receive a grade for the class. Completing the assigned readings before their corresponding lectures and discussions will enable you to raise relevant questions and to improve your learning experience and your grade.

Late Policy
There will be a 10% penalty for late assignments turned in within 24 hours of the due date and a 50% penalty for assignments turned in more than 24 hours but less then 72 hours after the due date. Assignments submitted later than 72 hours will receive a grade of zero (0). Excuses for late assignments are made at the discretion of the instructor.

Exams

Exams are always given in the lecture hall or room assigned to the class during the times specified. If the maximum obtainable score for an exam is not 100, it will be converted to a 100-point scale. Students who miss exams and/or makeup exams without a legitimate reason will receive a zero (0) for that exam:

1. Questions, comments, concerns, and other issues about exams, homework, programming assignments, and other course related matters should be brought to the attention of the instructor in a reasonable amount of time.
2. A student will be allowed to make up a missed test if he or she has a notice of illness from the Student Heath Center or family physician. Any other excuses that are not medical or emergency related will be at the discretion of the instructor, and must be approved in advance.
3. Please turn OFF all cellular phones, beepers, etc. in the classroom
4. Attendance is required and will be taken during each period. Students will receive a score on their attendance based upon the percentage of classes they attend. For instance, if a student attends 85% of the classes for which attendance was taken, they will receive a score of 85.
5. COP 3330 is a PREREQUISITE for this course. Students who have not taken this course will be dropped without notice.

GRADING/EVALUATION:

Grading Policy:

The overall course grade is determined as follows:

Attendance	10%
Programming Assignments (3)	15%
Homework Assignments (3)	15%
Section Exams (3)	30%
Final Exam	30%
TOTAL	**100%**

Grading Scale:

92 - 100	A
90 - 91.99	A-
88 - 89.99	B+
82 - 87.99	B
80 - 81.99	B-
78 - 79.99	C+
72 - 77.99	C
70 - 71.99	C-
60 - 69.99	D
0 – 59.99	F

ASSIGNMENTS/RESPONSIBILITIES:

See the Course Schedule for an outline of reading and homework assignments.

COURSE CONTENT AND OUTLINE:

WEEK	HOUR	AREA	TOPIC	Reference Material
1	1	Introduction	Course Introduction	Syllabus Slides
	2	Java	OOP and Procedural Programming	Introduction
	3	Java	Classes and ADTs	Java Slides 1
2	4	Java	OOD and UML Basics	Java Slides 2
	5	Java	Introduction to Applets	Deitel Chapter 3
	6	Java	Introduction to Applets	Deitel Chapter 3
3	7	Java	Control Statements	Deitel Chapter 4
	8	Java	Control Statements Part 2	Deitel Chapter 5
	9	Java	Methods	Deitel Chapter 6
4	10	Java	Methods,Arrays,OOP	Deitel Chapter 7,8

	11	Java	OOP Inheritance,Strings	Deitel Chapter 9,11
	12	Java	GUI	Deitel Chapter 12,13,14
5	13	Java	GUI	Deitel Chapter 12,13,14
	14	Java	GUI	Deitel Chapter 12,13,14
	15	Java	GUI	Deitel Chapter 12,13,14
6	16	REVIEW	Java Review	
	17	EXAM	On Java	
	18	UML	Introduction	
7	19	UML	Relationship of Diagrams	
	20	UML	Use Case Diagrams	
	21	UML	Use Case	
8	22	UML	Class Diagrams	
	23	UML	Class Diagrams	
	24	UML	Class Diagrams	
9	25	UML	Sequence Diagrams	
	26	UML	Sequence Diagrams	
	27	UML	State Diagrams	
10	28	UML	State Diagrams	
	29	Review	OOD/UML	
	30	EXAM	OOD/UML	
11	31	OOD	Requirements Modeling	
	32	OOD	Requirements Modeling	
	33	OOD	Classes and Inheritance	
12	34	OOD	Classes and Inheritance	
	35	OOD	Classes and Polymorphism	
	36	OOD	Classes and Polymorphism	
13	37	Design Patterns	Adapter	
	38	Design Patterns	Bridge	
	39	Design Patterns	Creational	
14	40	Design Patterns	Abstract Factory	
	41	Design Patterns	Command	
	42	Ethics		
15	43	Ethics		
	44	Review	Ethics, Design Patterson, OOD	
	45	Exam	Ethics, Design Patterson, OOD	
16	46	Review	Final Exam	

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ACADEMIC HONOR CODE:

The following excerpt is taken from the student handbook from the following web site on the subject of the Academic Honor Code.
http://www.fsu.edu/Books/Student-Handbook/codes/honor.html

Academic Honor System

(a) Academic Honor Code. The Academic Honor System of Florida State University is based on the premise that each student has the responsibility

(1) to uphold the highest standards of academic integrity in the student's own work,
(2) to refuse to tolerate violations of academic integrity in the University community, and
(3) to foster a high sense of integrity and social responsibility on the part of the University community.

(b) Violations of the Academic Honor Code.

1. During examinations, violations of the Academic Honor Code shall include referring to information not specifically condoned by the instructor. It shall further include receiving information from a fellow student or another unauthorized source.
2. Regarding academic assignments, violations of the Academic Honor Code shall include representing another's work or any part thereof, be it published or unpublished, as one's own. It shall also include presenting or submitting any academic work in a manner that impairs the instructor's ability to assess the student's academic performance. For example, plagiarism includes failure to use quotation marks or other conventional markings around material quoted from any source.
3. Violations of the Academic Honor Code shall include obtaining, distributing, or referring to a copy of an examination which the instructor/department has not authorized to be made available for such purpose.
4. Violations of the Academic Honor Code shall include any act which impedes the ability of other students to have fair access to materials assigned or suggested by the instructor. For example, removal or destruction of library or other source materials violates the Academic Honor Code.
5. Academic dishonesty shall include tampering with another student's work or impairing in any way the instructor's ability to assess the academic performance of another student.
6. Violations of the Academic Honor Code shall include alteration of grades or any other records related to the academic performance of students. This shall also include submitting any false records in order to gain admission to the University.

7. Violations of the Academic Honor Code shall include assisting, attempting to assist, or conspiring to assist another student in committing the offenses as outlined above.
8. Violations of the Academic Honor Code shall include attempting to commit any offense as outlined above.

(c) Student Responsibilities.

1. Each student shall be responsible for abiding by the Academic Honor Code at all times. If required by the instructor, at the conclusion of each examination or submission of an assignment, each student shall sign a pledge that he or she has neither given nor received aid from any unauthorized source during the examination or in preparing the assignment.
2. Any student who violates the Academic Honor Code is expected to report the violation to the instructor and/or the University Judicial Officer.
3. If a student observes cheating during an examination, the student should consult with the instructor of the course as soon as reasonable so that the cheating may be stopped. If a student otherwise observes or learns of another student's violation of the Academic Honor Code, the student shall either (a) ask the student to report the violation to the instructor of the course and/or the University Judicial Officer, or (b) report the violation to the instructor of the course and the University Judicial Officer. In the event that a student asks an other student to report himself/her self and such student does not do so, then the student shall report, as soon as practicable, the violation to the instructor of the course and/or the University Judicial Officer. The student should provide the name of such student or students involved, if known, and furnish such evidence as is available to support his/her charge.

(d) Faculty Responsibilities.

1. Any instructor may require the students to sign a pledge at the conclusion of each examination stating that they have neither given nor received aid from any unauthorized source during the examination.
2. An instructor may further define in writing his/her specification of the acts which shall constitute a violation of the Academic Honor Code as set forth in Section 6(b). The definition shall be explained to each class and shall be effective thereafter for that class.
3. When an instructor believes that a student has violated the Academic Honor Code in one of the instructor's classes, the instructor should discuss the matter with the student. The instructor and student may resolve the problem in a manner acceptable to both. The instructor may consult with or invite the participation of the instructor's department chair or dean in the effort to reach acceptable agreement with the student. The student may discuss the appropriateness of any academic response with the instructor's department chair or dean. Any agreement involving an academic penalty shall be put in writing, signed by both parties concerned, and reported by the instructor to the chair or dean and, for information only, to the University Judicial Officer. The student shall not be further penalized based on this report alone.
4. If a satisfactory resolution is not reached at the departmental level, the instructor shall refer the matter to an Academic Honor System Hearing Panel. These panels shall consist of five members: one faculty member from the department (school) concerned and appointed by the chair (dean), one

faculty member not from the department concerned but appointed by the Dean of the Faculties, and two students appointed through procedures established by the Student Senate. The Panel shall be chaired by the Dean of the Faculties or designee, who shall vote only in case of a tie. Procedures of this Hearing Panel shall be in compliance with Rule 6C-6.105, Florida Administrative Code. The University Judicial Officer may sit as an ex-officio nonvoting member of the Hearing Panel. The decision of this Panel shall be final with respect to the student's guilt or innocence and the appropriate academic penalty, if any. The student shall have the right to continue in the course during the hearing procedures. Should no determination be made before the end of the term, the instructor shall record an appropriate grade to reflect the situation until a final decision is made.

5. The chair of the Academic Honor System Hearing Panel shall be responsible for reporting the decision to the student, the instructor, and the University Judicial Officer; the University Judicial Officer shall determine whether further action should be taken under the Academic Honor Code.

(e) Academic Penalties.

Examples of academic penalties include, but are not limited to, one or a combination of the following: (1) a lower or failing grade in the course, (2) a lower or failing grade or score on the assignment or examination, or (3) additional work to provide evidence of the student's academic performance and/or evidence that the student knows and understands the course material.

(f) University Judicial Officer Responsibilities.

1. The University Judicial Officer shall explore the circumstances and determine whether, in the light of the severity and frequency of the student's violations of the Academic Honor Code, any disciplinary penalty (Paragraph h) should be imposed. The student may elect a hearing before the Student Supreme Court.
2. The University Judicial Officer shall determine, with advice from the Student Supreme Court, appropriate disciplinary penalties for students found guilty of violations of the Academic Honor Code.
3. In all cases referred to the Student Supreme Court, the University Judicial Officer shall submit the report from the chair person of the Academic Honor System Hearing Panel and a record of the student's history regarding academic integrity. The University Judicial Officer shall report the disposition of each case to the student, to the Dean of the Faculties, and to the instructor involved.

(g) Student Supreme Court Responsibilities.

1. The Student Supreme Court shall be responsible for hearing all cases brought before it by the University Judicial Officer. These proceedings shall be conducted in accordance with the guidelines in the Student Conduct Code and other applicable University guidelines.
2. The Court shall, in the light of information concerning this violation and the student's entire history regarding academic integrity, hold hearings to determine a recommended disciplinary penalty in accordance with the procedures of the Court.

(h) Penalties. The following are the possible disciplinary penalties for violation of the Academic Honor Code, and they may be imposed singularly or in any combination.

1. Dismissal: An indefinite separation from the University. In order to be readmitted, a student dismissed for disciplinary reasons pursuant to the Academic Honor Code must file a petition for judicial clearance with the University Judicial Officer who will present the petition to the Honor System Committee for review and decision about whether or not the student shall receive a judicial clearance. All students who receive a judicial clearance will be permitted to return to the University on a probationary basis if the student has also met applicable readmission criteria.
2. Suspension: A separation from the University for a specified period of time, not to exceed two years. During the period of suspension, a student is excluded from classes and all other University privileges or activities. At the conclusion of the period of suspension, the student will be permitted to return to the University on a probationary basis if the student has also met applicable readmission criteria.
3. Probation: A conditional retention of student status until the student graduates from the University or is separated from the University for a period of not less than four years. During the period of the probation, a student's University privileges may be restricted at the discretion of the University Judicial Officer.
4. Reprimand: A written statement from the University Judicial Officer expressing disapproval of conduct.
5. Nothing in this code shall preclude the imposition of other reasonable sanctions or a combination of sanctions within the authority and discretion of the appropriate tribunal.
6. Disciplinary records shall be maintained under the auspices of the Vice President for Student Affairs.

(i) Honor System Committee.

An Honor System Committee shall be appointed by the University President. The Committee shall consist of three faculty, selected from a list of six provided by the Faculty Senate Steering Committee, and three students selected from a list of six provided by the Student Senate. Student members shall be appointed to serve terms of one year and faculty shall be appointed to serve terms of three years. The Committee shall be chaired by the Vice President for Student Affairs. The Committee shall keep students and faculty informed concerning the provisions of the Academic Honor System, monitor the operation and effectiveness of the Academic Honor System, and make recommendations to the Faculty Senate and the Student Senate that it may deem appropriate.

(j) Amendment Procedures.

Amendments to the provisions of the Academic Honor System may be initiated by the above named Committee, by the Faculty Senate, the Student Senate, or by the Vice President for Academic Affairs. Amendments to the Academic Honor System must be approved by the Faculty Senate and the Student Senate. After approval, amendments shall be forwarded to the University President for implementation.

AMERICANS WITH DISABILITIES ACT:

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

For more information about services available to FSU students with disabilities, contact the

Student Disability Resource Center
97 Woodward Avenue, South
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.fsu.edu/~staffair/dean/StudentDisability/

(This syllabus and other class materials are available in alternative format upon request.)

SYLLABUS CHANGE POLICY:

This syllabus is a guide for the course and is subject to change with advanced notice. Changes to this syllabus must be accomplished in writing and posted to the appropriate sites.