UNIVERSITY OF ARKANSAS
SAM M. WALTON COLLEGE OF BUSINESS

COURSE SYLLABUS

Course: **ISYS 4373 Application Development with Java**
Prerequisite: ISYS 3293

Welcome:
Welcome to ISYS 4373, an introduction to Java programming. The purpose of this course is to provide students with a basic understanding of the essential principles of the Java programming language and, more generally, an understanding of object-oriented programming. Students are expected to become familiar with object-oriented software design using Java.
Note: Prior knowledge, or a basic understanding, of at least one other programming language is assumed.

Course Description:
This course covers object-oriented programming concepts and illustrates them via an appropriate object-oriented programming language. Students will be exposed to the design of software objects, creation of software objects, and the use of objects in constructing an information system.

Course Objectives:
The specific objectives of this course are threefold:
1. To familiarize the student with the basics of the Java programming language;
2. To introduce the student to basic object-oriented programming principles; and
3. To allow the student to solve small problems using Java and object oriented principles.

Text Materials:
Richard A. Johnson (2007). *An Introduction to Java Programming and Object-Oriented Application Development*. Thompson Course Technology. ISBN: 0-619-21746-4.

Development Environment:
An important thing to note about Java is that there are numerous environments (including the Notepad editor) within which applications can be developed. There are also numerous different compilers that can be used to compile and debug your programs once they have been coded. For the purpose of this course, we will be using the NetBeans software development kit (SDK). NetBeans is an integrated development environment (IDE) that can be used to develop code in a variety of programming languages, including Java. This environment should contain the components necessary to code, compile, and run Java applications. NetBeans can be downloaded for free at the following URL: http://netbeans.org/downloads/index.html Please download the Java SE version. A user manual for the NetBeans is located at http://netbeans.org/kb/docs/java/quickstart.html The Java API located at http://docs.oracle.com/javase/7/docs/api/ is also an important source of information for java programmers

Academic Honesty:
The University of Arkansas' policy on academic honesty will be followed. You will be protected by and expected to conduct yourself, in accordance with this system. For a complete description see: http://provost.uark.edu
Dishonest students suffer the risk of failing the course and being expelled from the university.

Accommodations:
Any student requiring special accommodation (e.g. disability, religious observance) should contact me as soon as possible so we can work within the university and college guidelines or refer to http://test.uark.edu/accommodations/

Blackboard:
This course will utilize Blackboard to provide supplementary information for the course. Blackboard will contain class notes, PowerPoint slides, class announcements, the course syllabus, assignments, and other information for the course. All assignments must be submitted electronically through Blackboard. All programming assignments must include a screen shot of the output and the .java file. I will post power point slides on each chapter on Blackboard.
The discussion forum on Blackboard will play a particularly important role for your assignments. Software developer communities often seek help from each other through discussion fora. Hence, students will be able to ask questions related to assignments. The forum is only as useful as you students make it. The more students participate in providing responses to posted questions the more everyone benefits. Students have benefited from the discussion forum in the past. I would encourage you to make use of it.

Grading:

Grading	**Pts**	**%**
Midterm Exam	150	15%
Final Exam	200	20%
Assignments	250	25%
Quizzes	100	10%
Project Presentation 1	100	10%
Project Presentation II	100	10%
Project Report	150	15%
TOTAL	1000	100%

Grades will be assigned as follows:
A > 90%
B = 80-89%
C = 70-79%
D = 60-69%
F < 60%.

Grade Appeals:
All grade appeals are to be made in writing (email is ok) within 48 hours of posting grades. You should include your name, the specific item you are appealing, your original response and an explanation why that item should be re-scored (e.g. text page number and quote). This process is

designed to document the process and ensure grade equity across the class.
As the table on the previous page indicates, your grade in this course will be determined by your performance on midterm exams, assignments, quizzes, topic presentations, and a final project. Further details of each of these components are provided next.

Exams:
There are two exams in this course that, collectively, represent 35% of your grade. By their nature, examinations are cumulative and will consist of multiple choice and short answer (mostly coding). Students will have an opportunity to ask questions about the exam prior to each examination. Makeup examinations will be allowed only in cases of documented health or family emergencies or for official, university-sanctioned activities. The instructor reserves the right to use a percentage score of the other examinations to make up for missed examinations. Advanced notification of missing an examination is required. Any uncoordinated absence from an exam will result in a score of 0 for the exam.

Assignments:
To aid in your learning there will be a number of **individual** computer projects–many of them small program segments focused to reinforce learning and gain insights. Several computer projects will be turned in for grading. Some projects will be considerably more extensive and expansive than others. There are no extra credit projects; however, several of the assignments will provide opportunities to earn extra credit. All projects must be compiled and execute without errors. Points will be deducted for programs that do not compile or execute. Assignments are due by midnight on the due date. These assignments should be turned in through Blackboard. For late assignments I will subtract 2 points of the point total for the assignment for each day it is late. If you have not submitted your homework by the 5th day after it is due, I will not accept it. Collectively, assignments will account for about 25% of your course grade.

Quizzes:
There will be *approximately* 8 quizzes over the semester worth 10 points each. Only your best 5 quiz scores will count towards your course grade. Any missed quiz will result in a score of 0 for that quiz. *There are no make-ups for unexcused absences*. If you are prepared for class the quizzes should be easy five- to ten-minute exercises. Quizzes will constitute approximately 10% of your course grade.

Final Project:
An important aspect of being a successful software developer is the ability to collaborate with others. Students will form to 2- to 3-person teams to collaborate on a class project. All teams must be formed in Blackboard by September 11. The project will be comprehensive in that it will incorporate concepts and skills covered during the semester. More details regarding the project will be provided later in the semester. The group project is worth 350 points (approximately 35% of the course grade). Thus, it is important that all team members actively contribute to the project. Peer evaluations will be used to determine each team member's overall project grade.

Extra Credit:
A maximum of 30 points (3% points) of extra credit can be earned over the course of the semester. These points can be earned in a couple of ways. Faculty members often conduct scientific research that benefits from student participation. You can earn extra credit by participating in faculty research studies. Participation in each study is worth 15 points. Thus, you can participate in a maximum of two such studies. Alternatively, you can write a 10-page (double-spaced) paper on a topic of the instructor's choosing. Each paper will be worth 15 points. Therefore, you can submit a maximum of 2 such papers. In sum, your 30 extra credit points can be comprised of participation in 2 research studies, submission of 2 10-page papers, or a combination of participation in 1 research study and submission of 1 10-page paper.

GRADUATE STUDENTS
Graduate students taking this class for graduate credit will be differentiated in terms of grading and projects (may be required to do an additional project).

Inclement Weather Policy:
I will "officially" cancel classes only if the University cancels all classes. I will also email everyone (if possible). It is your responsibility to determine if it is safe for you to attend class due to inclement weather. If weather prevents you from attending class, please notify me immediately.

Disclaimer:
I reserve the right to deviate from the schedule and any changes to the schedule will be posted on Blackboard. It is your responsibility to remain up-to-date. Additional information about the exams, assignments, and project will be provided in class. The scheduled dates for exams, etc... are subject to change, but changes will be discussed in class. Students are expected to attend classes and are responsible for obtaining information from missed classes from other students (including changes to due dates and assignments).

Schedule of Topics:

A flexible schedule of topics and reading assignments follows. You are responsible for checking the schedule, coming to class prepared, and finding out if assignments were made in case of your absence. The chapters assigned refer to the textbook, and additional reading may be provided occasionally.

NO.	DATE	TOPIC	READINGS & ASSIGNMENTS
WK 1	Tue, Aug. 21	Class Overview & Introductory Remarks	
	Thur, Aug. 23	Computers, Programming and Application Development	Ch.1 (A1)
WK2	Tues, Aug. 28	Fundamentals of Java Programming	Ch. 2
	Thur, Aug. 30	Fundamentals of Java Programming	Ch. 2 (A1 Due)
WK3	Tue, Sept. 4	Making Decisions with Java	Ch. 3
	Thu, Sept. 6	Making Decisions with Java	Ch. 3 (A2)
WK4	Tue, Sept. 11	Repeating Program Statements	Ch. 4 (Teams Formed)
	Thur, Sept. 13	Repeating Program Statements	Ch. 4 (A2 Due), A3
WK5	Tue, Sept. 18	Methods and Classes	Ch. 5
	Thur, Sept 20	Methods and Classes	Ch. 5 (A3 Due)
WK6	Tue, Sept. 25	Arrays	Ch. 6
	Thur, Sept. 27	**Arrays**	**Ch. 6 A4**
WK7	Tue, Oct. 2	Characters, Strings and Formatting	Ch. 7 (Project Defined)
	Thur, Oct. 4	Characters, Strings and Formatting	Ch. 7 A4 Due
WK8	Tues, Oct. 9	Review Exams 1	Ch (1-7)
	Thur, Oct. 11	**Exams 1**	
WK9	Tue, Oct. 16	**FALL BREAK NO CLASSES**	
	Thur, Oct. 18	Object Oriented Programming	Ch. 11
WK10	Tue, Oct. 23	Object Oriented Programming	Ch. 12
	Thur, Oct. 25	Project Work	A5
WK11	Tues, Oct. 30	**Project Presentation I**	
	Thur, Nov. 1	Graphical User Interfaces	Ch. 10 (A5 Due) A6
WK12	Tue, Nov. 3	Graphical User Interfaces	Ch. 10
	Thur, Nov. 8	File Input and Output	Ch. 9 (A6 Due) A7
WK13	Tues, Nov. 13	File Input and Output	Ch. 9
	Thur, Nov. 15	Exceptions and Assertions	**Ch. 8 (A7 Due) A8**
WK14	Tue, Nov. 20	Exceptions and Assertions	Ch. 8
	Thur, Nov. 22	**THANKSGIVING BREAK: NO CLASSES**	
WK15	Tue, Nov 27	Project Work/Meet With Instructor	Ch. 11 (A8 Due) A9
	Thur, Nov. 29	Project Work/Meet With Instructor	
WK16	Tues, Dec. 4	**Project Presentation II/ Final Report Due**	
	Thur, Dec. 5	Review Final Exams	(1-12) A9 Due
WK17	Tue, Dec. 11	**Final Exams**	