INSY 4305 Section 001
Advanced Application Development
Fall 2016

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Office Hours: TR 1:00pm – 2:30pm or by appointment
Course Number, Section Number, and Course Title
INSY 4305 Class 87852 (Section 001)
Advanced Application Development
Time and Place of Class Meetings: COBA 243 on TR 8:00am – 9:20pm

Course Description
This is a comprehensive Java programming course that not only covers the fundamental object-oriented programming (OOP) topics but also includes advanced Java programming concepts. Topics include structured programming concepts like control structures and methods; OOP concepts like encapsulation, composition, inheritance, polymorphism, dynamic binding, and interfaces; and advanced Java topics like Swing components, exception and error handling, multithreading, files and streams, networking, and JDBC.

Student Learning Outcomes
1. The student will be able to write structured programming statements in Java using the structured programming concepts of sequence, selection, and iteration.
2. The student will be able to write object-oriented programs to demonstrate polymorphism, composition, and inheritance using concrete classes, abstract classes, interfaces and exception handling.
3. The student will be able to apply Swing components to a graphical user interface.
4. The student will be able to write programs to open a file and read/write data from/to that file.
5. The student will be able to write programs using JDBC to connect to a database program and read/write data from that connection.

Required Textbooks and Other Course Materials
Java How to Program, 10th edition, by Deitel and Deitel, Prentice Hall, 2015.
You are expected to read and study this textbook! You will be responsible for any assigned material in the textbook regardless of class coverage. So if you don't understand the material, be sure to ask your instructor.

If you use a previous version of the text, it is your responsibility to keep track of the differences between the texts. All assignments, readings, and lectures come from the recommended text and the instructor is not responsible for mapping the old text to the new text. There is no guarantee that the older text will be exactly like the recommended text.

Development Environment: Classroom samples will be done on a low-level editor. You can use any development environment you would like, but no environment will be taught. You will be responsible for learning the environment you choose. Remember, all code must run at the command prompt for grading.

The recommended text editors for Windows are Notepad (comes pre-installed) and Notepad++ (requires installation), and for Mac are TextEdit and Textmate (requires installation).

Other Requirements

Prerequisite: INSY 3300 – Introduction to Programming

An introductory programming course that teaches students how to solve business problems using the scripting language, Python. Students will be exposed to object-oriented programming concepts, file handling, database access, and graphical user interfaces.

Attendance: At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I will consider attendance mandatory for all lectures. If you miss a class, you are responsible for the materials covered. Quizzes are in-class exercises. If you miss a quiz, there will be no makeup quizzes (no exceptions).

Grading Policy

Descriptions of Major Assignments and Examinations: There will be five homework assignments, three exams, and one final. See the tentative schedule below for further details.

Homework

You will have five homework assignments. Homework must be turned in electronically (via BlackBoard) **by the due date posted on Blackboard.** There will be no makeup homework or homework for extra credit. **Late homework will not be accepted.** Late submissions will receive a score of 0 (no exceptions).

Homework Submission

1. You are required to submit your assignments electronically in Blackboard. Just click on the Assignment listing under the Assignments link. Download the assignment, complete the assignment, and upload your file. The link is available up to the due time/date.
2. You will follow the instructions for submission as specified on the homework description; i.e. naming conventions, zip conventions, etc.
3. Make sure to write your full name as a comment at the very beginning of each .java file submitted for grading.
4. Only homework submitted through Blackboard will be graded. Grades will be posted on Blackboard.

Program Grading

1. Program does not compile, no more than 20% of the maximum points.
2. Program compiles but does not execute, no more than 35% of the maximum points.
3. If your program compiles and executes yet does not give the required output, you will not receive more than 50% of the maximum points.
4. You will get the maximum points only if your program compiles properly and executes according to the requirements specified in the assignment.
5. Your .java files must open in Notepad (Windows) or TextEdit (Mac) for full credit.
6. To be graded, your .java files must execute at the command prompt; not within an IDE.
7. You must name the .java files as specified or they will not be graded.

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 9 hours per week of their own time in course-related activities, including reading required materials, completing assignments, and preparing for exams/quizzes.

The Business school has a tutoring lab on the first floor, room 136. If you need help with programming, please come see me or the INSY tutors that are available.

"Incomplete" Grades

A grade of incomplete will only be given under extraordinary unforeseen circumstances at the instructor's discretion and must be approved prior to the end of the course. Poor performance, absences, forgetting to drop, or travel are not considered sufficient grounds for incompletes. Instructors are not obligated to give "incomplete" grades. To receive an incomplete, 95% of the course must have been completed.

Exams

You are responsible for everything that is covered in the classroom, including additional materials that the instructor may discuss in class. Exams are closed book and include coding problems and possibly some short questions or multiple choice questions. **There will be no makeup exams under any circumstances.** Under extenuating circumstances (e.g., medical emergency, family emergency, work-related travel, etc.), the average score of other exams will replace the missed exam score. You can only use this excuse for one exam. The final exam will be comprehensive covering all the contents, where regular exams will cover partial contents (as described in Course Schedule).

Distribution of points:

Exam 1	20%
Exam 2	20%
Final	40%
Homework	15%
Quiz	5%

Grading: The following criteria will be used to assess your grade:
A (>=90%), B (>=80%), C (>=70%), D (>=60%), F (<60%)

UNIVERISTY AND COLLEGE POLICIES

Grade Grievances: We will follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA),* and *Section 504 of the Rehabilitation Act.* All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD).** Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos. For information regarding Title IX, visit* www.uta.edu/titleIX.

Academic Integrity: Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Cheating is not acceptable and will be handled in accordance with the policy and procedures of the University of Texas at Arlington. **If a student is caught cheating, he/she will receive a 0 for that quiz/assignment/exam. If the student is caught cheating a second time, he/she will receive an F in the course and the issue will be referred to the Office of Student Conduct.**
Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In

addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located [insert a description of the nearest exit/emergency exit]. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at http://www.uta.edu/universitycollege/resources/index.php.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381

Tentative Schedule

Week	Date	Reading	Topic	Event	Homework
1	08/25	First day of classes	Install JDK		
2	08/30	Chapter 2,4	Introduction to Java Applications Control Statements		
	09/01	Chapter 4,5	Control Statements		
3	09/06	Chapter 3	Introduction to Classes, Objects, Methods, and Strings	Quiz	
	09/08	Chapter 6	Methods: A Deeper Look		
4	09/12	Census Date			
	09/13	Chapter 7	Arrays and ArrayLists		
	09/15	Chapter 7	Arrays and ArrayLists		HW 1 Due
5	09/20	Chapter 8	Classes and Objects: A Deeper Look		
	09/22	Chapter 8	Classes and Objects: A Deeper Look		
6	09/27	Chapter 9	Object Oriented Programming: Inheritance	Quiz	
	09/29		(Chapters 2, 4, 5, 6, 7)	Exam 1	
7	10/04	Chapters 9	Object Oriented Programming: Inheritance		
	10/06	Chapter 10	Object Oriented Programming: Polymorphism and Interfaces		HW 2 Due
8	10/11	Chapter 10	Object Oriented Programming: Polymorphism and Interfaces		
	10/13	Chapter 11	Exception Handling: A Deeper Look		
9	10/18	Chapter 11	Exception Handling: A Deeper Look		
	10/20	Chapter 14	Strings, Characters and Regular Expressions		
10	10/25	Chapter 14	Strings, Characters and Regular Expressions	Quiz	
	10/27	Chapter 15	Files, Streams and Object Serialization		HW 3 Due
11	11/01	Chapter 15	Files, Streams and Object Serialization		
	11/02		Last Day to drop classes		
	11/3		(Chapters 3, 8, 9, 10)	Exam 2	
12	11/8	Chapter 15			
	11/10	Chapter 12	GUI Components: Part 1		
13	11/15	Chapter 12	GUI Components: Part 1	Quiz	
	11/17	Chapter 12	GUI Components: Part 1		HW 4 Due
14	11/22	Chapter 12	GUI Components: Part 1		
	11/24	Chapter 24	Accessing Databases with JDBC		
15	11/29	Chapter 24	Accessing Databases with JDBC		
	12/1	Chapter 24	Accessing Databases with JDBC		
16	12/6		Last day of classes	Quiz	HW 5 Due
	12/13		Comprehensive	Final Exam	8:00am – 10:30am

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. -RD