**INSY 4306:** Advanced System Development

Spring 2016

**Instructor(s):** Dr. Yoon Sang Lee

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**Faculty Profile:**

**Office Hours:** MW,4:30-5:20PM or by appointment.

**Section Information:** INSY4306-001

**Time and Place of Class Meetings:** MW, 5:30PM – 6:50PM, Rm. 153 COBA

**Description of Course Content:** This course will introduce advanced systems design principles and techniques for developing Object-Oriented systems using C#. This course introduces concepts of designing and developing Windows applications using the Microsoft .Net technology. The course will cover a range of topics starting with simple console applications, proceeding to more complex Windows applications using various techniques and objects available in the .Net technology. Applications will include using complex data structures and design using the framework and class structures available in the Microsoft .Net architecture.

**Student Learning Outcomes:**

Upon successful completion of this course, the student will:

* Understand basic principles of Object-Oriented application development
* Know what classes and objects are and how to use them in an application.
* Understand how to design, code, test and implement complete C# applications
* Understand class structures and design used in the .net Framework.
* Familiarity with the .net Framework classes and structures and how to use them in applications
* Know the activities involved in designing, developing, testing, debugging and implementing Windows-based applications

**Required Textbooks and Other Course Materials:**

**- Textbook**

Visual C#® 2012: How to Program, Fifth Edition by Paul Deitel, Harvey Deitel

eText: ISBN-10 0133379361, ISBN-13 9780133379365

Paperback: ISBN-10 0133379337, ISBN-13 9780133379334

Publisher: Prentice Hall

**- Other Course Materials**

**Hardware & Software** - Microsoft Visual Studio 2012 must be downloaded and installed from Dreamspark.com. The course involves using a Windows PC or laptop. The student should have access to a desktop or Laptop. Use of a Laptop in the classroom in encouraged and advisable.

**C# Tutorials**:

<http://msdn.microsoft.com/en-us/library/aa288436(VS.71).aspx>

<http://www.csharp-station.com/tutorial.aspx>

**Descriptions of major assignments and examinations:** There will be 5 assignments and 1 project throughout the semester. Late assignment will not be accepted. There will be 3 exams (including final exam) during the semester. Exams will closed book and will include coding problems.

**Attendance:** I allow students to attend class at their own discretion. If you miss a class, however, you are responsible for the materials covered.

**Grading**:

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| Assignment | Value | Grades |
| Assignments (each worth 6%) | 25% | A = 90% and above  B = 80% - 89%  C = 70% - 79%  D = 60% - 69%  F = 0% - 59% |
| Exams (each worth 10%) | 30% |
| Project  (Presentation + Documentation) | 35% |
| Popup Quizzes & Attendance to Reviews | 10% |
| **TOTAL** | **100%** |

**Make-up Exams**: There will be NO Make-Up exams. If a student wants to take the exam at a time BEFORE the scheduled time, the student can do so if the student can provide proper reasons and related documents. The requests will be reviewed on a case-by-case basis and there is no assurance that the request will be granted.

**Grade Grievances** University policy will be followed to handle any grade grievance. A student should first contact the instructor and discuss the matter by email or in person with supporting material for your grievance. If the grievance is not satisfactorily resolved, you can follow the University Guidelines for further action. Please refer to the University Catalog for details.

**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](http://www.uta.edu/disability) or calling 817-272-3364.

**Counseling and Psychological Services, (CAPS)** [www.uta.edu/caps/](http://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](http://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*](http://www.uta.edu/hr/eos/index.php)*. For information regarding Title IX, visit* [www.uta.edu/titleIX](http://www.uta.edu/titleIX).

**Academic Integrity:** Students enrolled all UT Arlington courses 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.

**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 on the right side of hallway. 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](mailto:resources@uta.edu), or view the information at http://www.uta.edu/universitycollege/resources/index.php

**Course Schedule**

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| **Date** | **Assignment and Topic** | **Chapters** |
| 1/20 | Course Introduction, Project Team Building |  |
| 1/25  1/27 | Introduction Visual Studio 2012 and Installation Introduction to C# Apps  Classes, Objects, Methods and Strings  Assignment #1 Assigned (1/27) | 3  4 |
| 2/1  2/3 | Control Statements, Methods-Deeper Look  Arrays, LINQ  Assignment #1 Due (2/3)  Assignment #2 Assigned (2/3)  Project Team Building Due (2/3) | 5, 6, 7  8, 9 |
| 2/8  2/10 | **Exam 1**  Objects, Interfaces and Polymorphism  Assignment #2 Due (2/10) | 3, 4, 5, 6, 7  10, 11 |
| 2/15, 2/17 | **Introduction to Project Topic – Project Initiation**  GUI Programming  Assignment #3 Assigned (2/17)  Project Interview Question Sheet Due (2/17, Hard Copy) | 14, 15 |
| 2/22, 2/24 | **Project Interview**  Assignment #3 Due (2/24) |  |
| 2/29, 3/2 | GUI Programming  Assignment #4 Assigned (3/2)  UI Design Due (3/2, Hard Copy) | 14, 15 |
| 3/7, 3/9 | **UI Design (Prototyping) Review**  Assignment #4 Assigned (3/9) |  |
| 3/14, 3/16 | **Spring Break** |  |
| 3/21  3/23 | **Exam 2**  Database Access and Applications  Assignment #5 Assigned (3/23)  Class and ER Diagram Due (3/23, Hard Copy) | 8, 9, 10, 11, 14, 15  PPT file |
| 3/28, 3/30 | **Class and ER Diagram Review**  Assignment #5 Due (3/30) |  |
| 4/4  4/6 | Database Access and Applications  Files and Streams  Test Case Due (4/6, Hard Copy) | PPT file  17 |
| 4/11, 4/13 | **Test Case Review** |  |
| 4/18  4/20 | Files and Streams  Project Working Day | 17 |
| 4/25, 4/27 | Project Presentation (5 teams/class) | Group 1-10 |
| 5/2  5/4 | Project Presentation (5 teams/class)  Project Due (5/2 by the end of the class)  (Source code - Blackboard and Documents - Hard Copy)  Final Exam Preparation | Group 11-15 |
| 5/9 | **Final Exam – Monday, 5:30PM-8:00PM** | 17 and PPT file for Database Access |

**Syllabus Changes:** The instructor reserves the right to make changes to the above syllabus as necessary; students are responsible to be aware of changes announced in class and/or via the Internet.

**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