The University of Texas at Tyler
Bachelor of Science in Computer Information Systems

**COSC 3375 Syllabus**

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>COSC 3375</th>
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<tbody>
<tr>
<td>Course Title:</td>
<td>Analysis and Logical Design</td>
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<tr>
<td><strong>Course Description:</strong></td>
<td>This course introduces the systems development process. Topics covered include structured and object-oriented analysis and design, use of modeling tools and the methodological life cycle and project management. It includes the study of interpersonal skill development with clients, users, team members, and others associated with the development, operation and maintenance of systems.</td>
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<tr>
<td>Pre-requisites:</td>
<td>COSC 2325</td>
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<tr>
<td>Credits:</td>
<td>3</td>
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**Text(s):** *Systems Analysis and Design, Eighth Edition: Video Enhanced*  
*Shelly Rosenblatt (ISBN: 978-0-538-47443-6)*

**Languages Used:**

| (If applicable) |

**Topics:**

- Introduction to systems analysis and design including the systems development life cycle (SDLC) and the role of systems analyst in support organizational needs.
- Introduction to systems analysis and design.
- Analyzing the business case.
- Requirements modeling.
- Enterprise modeling.
- Development strategies.
- Interface data, input, and output design.
- System architecture.
- System implementation.
- Systems operation.
- Systems analyst’s and software engineer’s code of professional ethics.

**Additional Materials:**

- There will be additional material supplied by the publisher on both the CD accompanying the textbook and on the textbook web site.
- Additional PowerPoint and multimedia material developed by the professor.

**Evaluation Method: (only items in dark print apply)**

| 1. Examination/Quiz |
| 2. Homework |
Course Objectives: By the end of this course students are expected to:

1. To specify the starting point of systems analysis including strategic systems planning, review of systems requests, risk assessment, feasibility analysis, and steps in performing preliminary systems investigation. [1,2,4]
2. To perform requirements modeling and fact-finding techniques. [1,2,3,4]
3. To apply basic approaches to the development of application software. [1,3]
4. To identify current IT issues and major trends in systems development. [1,2,3,4]
5. To describe team-based modeling methods, including JAD and RAD. [1,2,3,4]
6. To carry out enterprise modeling using entity relationship diagrams and data flow diagrams. [1,2,3,4]
7. To explain the transition from the analysis phase to the design phase. [1,2,3,4]
8. To implement data modeling and database design. [1,2,3,4]
9. To perform user interface, input, and output design. [1,2,3,4]
10. To describe systems implementation procedures including structure charts, system testing, user training, data conversion, changeover methods, and post-implementation evaluation. [1,2,5]
11. To explain systems operation, management, and maintenance. [1,2]
12. To discuss the role of ethics in the information systems profession. [4]

Relationship to Program Outcomes: (only items in dark print apply )
This course supports the following Computer Information Systems Program Outcomes, which state that our students at the time of graduation are expected to:

1. Be prepared to contribute immediately as information systems professionals. [1-12]
2. Be able to design and implement information systems that satisfy user requirements. [1-12]
3. Possess a knowledge of computer security and computer security management.
4. Demonstrate effective written, visual, and oral communication skills[4,5,6,7,8,9,10,11]
5. Understand the global context in which computer information systems are practiced including:
   a. Contemporary issues related to business and technology
   b. The impact of computers on society
   c. The role of ethics in the practice of information systems profession. [10,11,12]
6. Be able to contribute effectively as members of systems development teams. [1-12]
7. Recognize the need to pursue continued learning throughout their professional careers. [1-12]

*Numbers in brackets refer to course objective(s) that address the Program Outcome.*
Instructor: Dr. Howard Baker  
Office: RBN 3008  
Email: hbaker@uttyler.edu  
Internet address for the course: www.learningleader.com  
When chapters are made available the password is COSC3375.

Lecture: Monday only at 2:00 PM to 2:50 p.m. Ratliff Building North (RBN) 3039  
The other part of the hybrid class is done individually on or off campus via CD and Internet.

Office Hours: Monday 3:15 p.m. to 5:00 p.m. and by appointment.

Lab Hours: Dr. Baker is available to help students working on assignments on campus in the lab Monday 3:15 p.m. to 5:00 p.m.

USB thumb drive highly recommended.

Software: Microsoft Office 2007 or 2010 highly recommended, and Visio 2010 (in the lab and available free of charge to students).

Course Description:  
This course introduces the systems development process. Topics covered include structured and object-oriented analysis and design, use of modeling tools and the methodological life cycle and project management. It includes the study of interpersonal skill development with clients, users, team members, and others associated with the development, operation and maintenance of systems. Prerequisite: COSC 2325.

Course Objectives:  
The overriding objective for the class is to provide students exposure to the theory and practice of systems analysis and design. Students will be expected to demonstrate effective written, visual, and oral communication skills. Students will also be expected to demonstrate an understanding of all glossary terms in the text.

Theory:  
1. An ability to describe the different major approaches (e.g., traditional and object oriented approaches) to systems analysis and design as well as the strengths and weaknesses of each.  
2. An ability to describe the tools used in systems analysis and design and the management of analysis and design projects.  
3. Knowledge of how and when it makes sense to apply these approaches and tools in a practical setting.  
4. An ability to describe the processes and problems of change in an organization that are often produced by a new systems analysis and design project.
Practice:

1. Hands-on skills in performing analysis and design.
2. Practical experience and skill working on a semester project utilizing software to visualize, explore, and communicate complex information.
3. Hands-on experience drawing system models with general purpose graphics software tools.

Course Objectives: By the end of this course students are expected:

1. To specify the starting point of systems analysis including strategic systems planning, review of systems requests, risk assessment, feasibility analysis, and steps in performing preliminary systems investigation.
2. To perform requirements modeling and fact-finding techniques.
3. To apply basic approaches to the development of application software.
4. To identify current IT issues and major trends in systems development.
5. To describe team-based modeling methods, including JAD and RAD.
6. To carry out enterprise modeling using entity relationship diagrams and data flow diagrams.
7. To explain the transition from the analysis phase to the design phase.
8. To implement data modeling and database design.
9. To perform user interface, input, and output design.
10. To describe systems implementation procedures including structure charts, system testing, user training, data conversion, changeover methods, and post-implementation evaluation.
11. To explain systems operation, management, and maintenance.
12. To discuss the role of ethics in the information systems profession.

Grading:

There will be three Phase exams (Phase 1, 2, and 3) during the semester and a final exam covering Phases 4 & 5. There will be a series of in-class quizzes and exercises. Attendance is required on regular class days (Mondays). Unexcused absences cannot be made up. Quizzes and exercises will focus on material assigned within the last week. Quizzes and exercises will be included in the calculation of the final grade. However, the lowest quiz/exercise grade will be dropped.

There will be a semester project. The project will be graded progressively throughout the semester. Additional information on the project will be given via the Internet and during the second Monday class meeting.

Late work may be penalized or not accepted. The professor will determine this based on the circumstance. Grades are assigned as follows:

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<tbody>
<tr>
<td>Phase 1 Exam</td>
<td>15%</td>
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<tr>
<td>Phase 2 Exam</td>
<td>15%</td>
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<tr>
<td>Phase 3 Exam</td>
<td>15%</td>
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<tr>
<td>Phase 4 &amp; 5 Final Exam</td>
<td>15%</td>
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<tr>
<td>Quizzes/Exercises (lowest grade dropped)</td>
<td>20%</td>
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<tr>
<td>Semester Project (progressive grading)</td>
<td>20%</td>
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### Points and Grades

<table>
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<th>Grade</th>
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<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-89.9</td>
<td>B</td>
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<tr>
<td>70-79.9</td>
<td>C</td>
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<tr>
<td>60-69.9</td>
<td>D</td>
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<tr>
<td>&lt;60</td>
<td>F</td>
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**Grade Replacement:**

If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to file an intent to use grade forgiveness will result in both the original and repeated grade being used to calculate your overall grade point average. A student will receive grade forgiveness (grade replacement) for only three (undergraduate student) or two (graduate student) course repeats during his/her career at UT Tyler. (2008-10 Catalog, p. 26)

**Student Learning Outcomes (SLO):**

1. Learn the basics of a systematic process for developing information systems.
2. Understand the basics of project and process management.
3. Learn the importance of and the differences between analysis and design.
4. Learn important aspects of user interfaces for information systems.
5. Appreciate external influences in information systems design.

**Relationship of Student Learning Outcomes to Program Outcomes:**

1. Be prepared to contribute immediately as information systems professionals (SLO’s 1,2,3,4,5)
2. Be able to design and implement information systems that satisfy user requirements (SLO’s 1,2,3,4,5)
3. Demonstrate effective written, visual, and oral communication skills (SLO’s 1,2)
4. Understand the global context in which computer information systems are practiced, including:
   a. contemporary issues related to business and technology (SLO’s 1,2,5)
   b. the impact of computers on society (SLO’s 4,5)
   c. the role of ethics in the practice of information systems profession (SLO’s 1,2,5)
5. Recognize the need to pursue continued learning throughout their professional careers (SLO’s 1,5)

(The program outcomes above are, respectively, those at numbers 1, 2, 4, and 6, on page 182 of 2008-2010 Catalog)

**Course Policies:**

**Students Rights and Responsibilities**
To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: [http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html](http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html)

**Grade Replacement/Forgiveness**
If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to do so will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates will receive grade forgiveness (grade replacement) for only three course repeats; graduates, for two course repeats during his/her career at UT Tyler.
State-Mandated Course Drop Policy
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the 12th day of class (See Schedule of Classes for the specific date).
Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

Disability Services
If you have a disability, including a learning disability, for which you request disability support services/accommodation(s), please contact Ida MacDonald in the Disability Services office so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability services/accommodation(s) must provide appropriate documentation of his/her disability to the Disability Services counselor. In order to assure approved services the first week of class, diagnostic, prognostic, and prescriptive information should be received 30 days prior to the beginning of the semester services are requested. For more information, call or visit Disability Services located in the University Center, Room 3150. The telephone number is (903) 566-7079. Additional information may also be obtained at the following UT Tyler Web address: http://www.uttyler.edu/disabilityservices.

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor’s directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do Not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.
**Tentative Schedule:**

<table>
<thead>
<tr>
<th>AUG</th>
<th>30</th>
<th>Syllabus, Course Objectives, Policies, &amp; MyGradebook</th>
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<tbody>
<tr>
<td>SEPT</td>
<td>6</td>
<td>No Class – Labor Day</td>
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<tr>
<td></td>
<td>13</td>
<td>Chapter 01 Quiz &amp; A Question of Ethics p. 31</td>
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<td>20</td>
<td>Chapter 02 Quiz &amp; A Question of Ethics p. 77</td>
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<td>27</td>
<td>Chapter 03 Quiz &amp; A Question of Ethics p. 122</td>
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<tr>
<td>OCT</td>
<td>4</td>
<td>Phase 1 Exam &amp; System Planning Case Assignments Due</td>
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<tr>
<td></td>
<td>11</td>
<td>Chapter 04 Quiz &amp; A Question of Ethics p. 171</td>
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<td>18</td>
<td>Chapter 05 Quiz &amp; A Question of Ethics p. 228</td>
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<td>Chapter 06 Quiz &amp; A Question of Ethics p. 265</td>
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<td>NOV</td>
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<td>Chapter 07 Quiz &amp; A Question of Ethics p. 317</td>
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<td>Phase 2 Exam &amp; Systems Analysis Assignments Due</td>
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<td>15</td>
<td>Chapter 08 Quiz &amp; A Question of Ethics p. 369</td>
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<td>Chapter 09 Quiz &amp; A Question of Ethics p. 431</td>
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<td>29</td>
<td>Chapter 10 Quiz &amp; A Question of Ethics p. 482</td>
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<td>DEC</td>
<td>6</td>
<td>Phase 3 Exam &amp; Systems Design Assignments Due</td>
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<td></td>
<td>13</td>
<td>Chapters 11 &amp; 12 Quiz &amp; A Question of Ethics pp. 537 &amp; 598</td>
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<td>14-18</td>
<td>Phase 4 &amp; 5 Final Exam &amp; A Question of Ethics p. 598, Systems Implementation, &amp; Systems Support and Security Assignments Due</td>
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