Course Description: Advanced study of structured analysis and design for producing logical methodologies for dealing with complexity in the development of information systems.

Rationale: To understand the role of Object-Orientated Development techniques as they pertain to complex information systems. Understand the application of systems modeling and Use-Case analysis theories in systems design.

Course Goals: To familiarize the student with object-oriented development techniques design. Provide an understanding of the necessity of utilizing modularity when developing complex programs. Provide the student with the knowledge to identify classes of objects and how the class will interact with the other classes that make up an application.

Competencies:
1. Understand the principles and terminology of Object-Oriented Analysis.
2. Determine systems and users requirements utilizing use-case analysis techniques.
3. Utilize systems modeling theory to describe a proposed or existing system.
4. Transform the classes identified during analysis into the actual objects that make up a system.
5. Development of test plans and test cases to insure the development of a quality system that meets the users needs.

Text: Object-Oriented Systems Analysis and Design
Joey F. George, Dinesh Batra, Joseph S. Valavich and Jeffrey A. Hoffer
Prentice Hall, 2004
Planned Schedule:

01/10/2005  Review Syllabi
Chapter 1  Pages  2 - 33
Foundations for Object-Oriented Systems Development

01/14/2005  Chapter 2  Pages  34 - 55
Introduction to Object-Orientation

01/19/2005  Chapter 3
Managing the Object-Oriented Systems Project  Pages  56 – 99

01/26/2005  Chapter 4  Pages  100 – 141
Project Management and Planning

02/02/2005  Exam 1 Chapters 2, 3, 4

02/04/2005  Review Exam
Chapter 5  Pages  142 – 177
Determining Object-Oriented Systems Requirements
Problem Analysis – Determining O-O Library system requirements.

02/11/2005  Chapter 6  Pages  178 – 203
Structuring Systems Requirements: Use Case Description and Diagrams
Problem Analysis – Develop use case and diagrams for the library system.

02/18/2005  Exam 2 Chapter 5, 6

02/21/2005  Review Exam
Chapter 7  Pages  204 - 233
Conceptual Data Modeling
Problem Analysis – Develop data models for the library system.

02/28/2005  Chapter 8  Pages  234 – 257
Object Related Modeling

03/07/2005  Exam 3 Chapter 7, 8

03/09/2005  Review Exam
Chapter 9  Pages  258 - 287
Analysis Classes
03/23/2005    Chapter 10  Pages 288 - 319
                 Selecting the Best Alternative Strategy

03/30/2005    Exam 4 Chapter 9, 10

04/01/2005    Review Exam  Chapters 11  Pages 320 – 355
                 Physical Database Design

04/08/2005    Chapter 12  Pages 356 - 387
                 Design Elements

04/15/2005    Exam 4 Chapter 11, 12

04/18/2005    Review Exam  Chapters 13  Pages 436 - 477
                 Object-Oriented Design
                 Problem Analysis – Develop Object-Oriented
                 System Design for the library

04/25/2005    Chapter 14  Pages 478 – 506
                 OOSAD Implementation and Operation

05/06/2005    Final Exam Chapter 13 and 14  10:00am

Course Duration: 16 weeks plus Final Exam

Grade Components:  5 Exams (100 Points each)  500
                 Problem Analysis  200
                 Total Points  700

Grading Scale:  90% - A, 80 % - B, 70% - C, 60% D, Below 60% - F

Attendance Policy:  Attendance will be taken on a daily basis. There are no excused
                 absences, regular attendance is mandatory if the student hopes
                 to make normal progress. It is the responsibility of the student
                 to make up any work that is missed, whatever the reason for the
                 absence.

The MVC attendance policy is as follows:  Any student
                 missing more then 50% of class at any given point in time
                 during the semester or two consecutive weeks of class will be
                 dropped from that class and a Withdrawal Fail grade will be
                 assigned.
Assignments:  **No Credit Will Be Given To Late Work**
All assignments are to be completed and submitted on time with no excuses. Any student that is aware they will be missing class on the date an assignment is due needs to meet with the instructor *Prior* to missing class to make other arrangements.

Extra Help:  The student is encouraged to seek help whenever it is needed. I will be available during my posted office hours or by prior arrangement.

Bibliography:  An Introduction to Object-Oriented Analysis
Objects and UML in Plain English
David William Brown
John Wiley & Sons, Inc. 2002

Object-Oriented Systems Analysis and Design
Joey F. George, Dinesh Batra, Joseph S. Valavich and Jeffrey A. Hoffer
Prentice Hall Publishing, 2004