**MIS 320 – Spring 2011**

**The University of Alabama**

**Application and Information Architecture**

**Syllabus**

***Instructor***: **Shane Givens**

**Office**: Bevill 1103

**Phone**: 348-5525 **E-Mail**: [sgivens@cba.ua.edu](mailto:sgivens@cba.ua.edu)

**Office Hours**: By appointment

**Grader**: Tedd Meyer; tameyer@cba.ua.edu

**All classes meet T/TH 11:00am - 12:15 p.m., Bidgood 340**

**Pre-requisites: CS391 or CS114 or CS150, AND CS491 or CS124 or CS250**

***Description:***

This course builds on your prior problem solving and programming exposure. It explores designing and constructing Enterprise Applications using defined application architectures and programming patterns. The class will cover topics including, but not limited to, and in no particular order:

* Application Architecture and Patterns
  + History of Application Architecture
  + Components
  + Coupling & Cohesion
  + Classes as components
  + Interfaces
  + Architecture in solution design
    - Reuse and Maintainability
    - Frameworks
  + Logical vs. Physical Architecture
  + Configuration vs. Convention
  + Examples
    - Physical
      * Desktop
      * Client-Server
      * Web Apps
      * “Cloud”-based
    - Logical
      * Legacy (COBOL)
      * Client Server
      * N-Tier
      * MVC
      * SOA/Web Services
* Web Programming Techniques
  + HTML, XML, CSS
  + Server-Side Scripting
    - ASP.NET
    - JSP
    - PHP

***Textbooks***: None. A student membership to ACM is required.

***Additional Required Materials****:*

Thumb drive, Google docs or windows live skydrive to store files

**GRADES:** The final grades for this course will be based upon the following components:

Quizzes, Homework & Programs 50% Exams 40% Participation 5% Mentoring 5%

**Final Exam:** Your final exam will be team-graded. Your grade will be calculated by taking the average raw score of your Final Project teammates multiplied times 0.4 and adding your raw score multiplied times 0.6 (i.e. your teammates will make up 40% of your final exam score). The final will draw heavily from what you learn in doing your Final Project.

**Late Assignments**: NO assignments will be accepted late. Exceptions may be made for severe illness or a death in the family. If you anticipate other conflicts, make sure you start your assignments on the day they’re assigned.

Student assignments are graded based on the following guidelines:

**Class Grades:**

A: exceeds standards (goes beyond stated measures)

B: meets stated standards with high quality work

C: marginally meets stated standards

D: does not meet stated standards

F: unacceptable

Student task-level performance evaluations will be measured on the following standards:

**Task-level performance:**

A: Can do assigned task with high degree of independence and high quality

B: Can do assigned task with structured approach and high quality

C: Can do assigned task with structured approach, but requires outside critique to improve quality

D: Can not do assigned tasks, and/or deliverable does not meet stated standards

F: unacceptable

Meaning of "grades" to external community (potential employers, parents, ...)

**Suggestion for future professional development, if a particular student**

**earns a \_\_\_ the recommended type of employment is \_\_\_\_\_\_\_:**

A: recommended for positions that require innovation, unstructured approaches, & synthesis

B: recommended for positions that require normal amounts of training & supervision

C: recommended for positions with a great deal of supervision and structure

**COMPUTER AND PROBLEM-SOLVING SKILLS:** Students should plan to spend a great deal of time (this means several hours) working on the exercises and programs. Allow time for multiple iterations to produce the desired results.

**LAB ASSIGNMENTS:** A series of individual problem-solving exercises involving application software will be assigned. These exercises will provide students with hands-on experiences. The lab assignment exercises are mandatory and will be divided into grading categories:

1) *Basic assignments*, All basic assignments must receive a passing grade. Students who miss 1 assignment will have their final grade dropped one-half grade. Any student missing more than 1 assignment will not pass the course.

2) *Projects*, which will be graded on a traditional 0-100 basis. Note, it is possible that some of the assignments will be given in class and due that same class (that is quizzes are possible). A student must receive a passing grade on the final project to receive a passing grade in the course.

3) For assignments marked as "Redo," you have one week from the time to assignments are returned to the class to turn them back in. If this is not done, the assignment will be marked as a fail.

**Peer Mentoring by MIS students will be available. Mentors will expect you to have prepared before you meet with them. They are to help structure your thoughts and help you when you may be confused about a concept. The time of the meeting will be determined by student availability.**

**Other Grading tips:**

* **Handwritten assignments are NOT acceptable.**
* **Multi-paged assignments must be stapled**

**ACADEMIC MISCONDUCT: Plagiarism is unacceptable and will receive a failing grade for the course.** Academic misconduct is a serious offense and will not be tolerated. Any student found plagiarizing or otherwise cheating on assignments or exams will receive a grade of "F" and will be subject to disciplinary action under the University of Alabama regulations. Please review the University of Alabama Student Handbook.

Assignments designed to be done individually that are done in groups will also be subject to failing grades. Likewise group assignments done by multiple groups will be subject to failing grades.

**EXAMINATIONS:** Two examinations will constitute 40% of your grade. Exams will include definitional, conceptual, syntactical and logical components. Examinations must be taken on the scheduled dates and times.

**MAKE-UPS:** Make-up exams are allowed only in extreme cases. Students are responsible for any changes made to examination dates or assignments announced in class. Computer lab assignments and independent lab exercises are mandatory and are to be submitted at the beginning of the class in which they are due. A late penalty will be assessed as discussed previously. **Failure to complete any exercise, assignment, or test satisfactorily will result in failing the course.**

**E-MAIL:** Expect updates to class information throughout the semester. Material will be sent to your crimson mail accounts. Each student is responsible for the maintenance and security of their personal account.

**SEVERE WEATHER** and **SECURITY ALERTS** are a possibility. In the event of an emergency, we will adhere to the following actions in accordance with University policies.

**TORNADO WARNING:** Move to the Lower Level, inside classrooms, offices or corridors. Remain until the warning has expired. Classes are cancelled until the warning expires.

**FIRE/FIRE ALARM:** Evacuate the building and stay out of the building at a safe distance until authorized to return.

**DISABLED STUDENTS:** To request disability accommodations, please contact the Office of Disability Services at 348-4285.  After consultation with that office, contact your professor.  However, it is the student’s responsibility to make arrangements for the accommodations on a timely basis.  Special arrangements for exams must be made at least one week prior to the exam date or your instructor is not required to provide requested accommodations.  Any request for special arrangements made less than one week prior to an exam date may not be able to be honored.