ISAT 340—Software Development

Fall 2013 Syllabus

# Catalog Description

This course is an introduction to the processes, methods and techniques of efficient and effective software application development. Students will create or enhance software systems in a sophisticated development environment. Prerequisite: ISAT 252

# Potential Course Outcomes

As a ***result of working hard*** in this course, you will have the opportunity to ***produce artifacts*** that will allow you and others to come to see you as:

* A skilled relational database analyst
* Competent to implement a database using a popular RDBMS such as MySQL, PostgreSQL, SQLite, or SQL Server
* Proficient at writing database queries with SQL
* Comfortable with one or more programming languages that are popular for web and/or mobile application development, such as PHP, Python, Ruby, Java, or Javascript
* Skilled with HTML5, CSS and current tools for developing web front-ends such as Bootstrap and LESS
* Comfortable implementing web applications with database back-ends using a popular MVC framework, such as Code Igniter, Symfony, Rails, Django, or Sproutcore
* Familiar with agile software development methodologies such as TDD or Scrum
* An excellent proposal writer who is able to get to the heart of a problem and articulate a software solution that will convince others to hire you to build it
* Stellar at writing well-documented code
* A conscientious user of revision management systems such as GitHub or SVN
* Reliable and effective at teamwork and a rock-solid community member
* A conscientious worker who can make a commitment to a project and see it through to successful completion

For each one of these outcomes the goal is to have **tangible products that you can list on your resume**. Unless you can concretely demonstrate to yourself and to the world that you have these skills, it really makes no difference what your grade in the class is.

# Course Grade

You will choose your own grade in this course.

# Assessment

The quantity and quality of your effort in the course will be assessed in the following ways:

* **Weekly self-assessment via online surveys**  
  You are expected to respond promptly to the weekly self-assessments, to take them seriously, and to use them to reflect upon whether or not you are living up to the standard you have set for yourself. By the end of the semester you should have a journal and a trajectory of goal-setting and goal-accomplishment.
* **Weekly peer-assessment via group interaction**  
  You will be working in small teams. One of your jobs is to hold each other’s feet to the fire. You are accountable to your team, and they are accountable to you. One of the best ways to support each other is to get into the regular habit of giving each other feedback on why and how you’ve been helpful to one another.
* **Periodic assessment from your instructor**I will meet with you individually or in small groups at regular intervals throughout the semester to give you specific feedback on your work and/or progress. You are strongly encouraged to seek me out frequently to ask questions and help get unstuck.