



# **Lecture Qt000**

## **Course Syllabus**

Instructor: David J. Coe

CPE 353 – Software Design and Engineering

Department of Electrical and Computer Engineering

# Outline

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- Course Overview
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  - Policies
  - Grading
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# Instructor

- **Background**

- Software Developer, Requirements Analyst, Software Engineering Consultant
- Model-Based Engineering of Safety-Critical Systems
- MEMS Sensor and Actuator Design and Fabrication

- **Research**

- Software Safety and Security Lab
  - Android Malware Detection
  - Airworthiness Certification
  - Positive Train Control
  - Heavy-Lift, Long Duration UAHexcopter
  - MEMS-Assisted Cryptography

- **Contact Information**

- Use Angel Course Mail to reach me
- Office: Engineering Building EB-217F
- Office Hours: Mondays and Wednesdays, 2:00pm – 4:00pm or  
by prior appointment

# Warning

- The material in this course is best learned in a hands-on fashion in a computer laboratory setting
- *To accommodate the unusual demand for CPE 353 this semester, significant changes have been made to the course format*
  - Prerecorded lectures will be available for some segments of this course
  - *You are required to watch the corresponding lecture prior to your assigned laboratory slot*
  - *Be sure to check Angel regularly for announcements regarding the schedule of laboratories and lectures!!*
  - Sample problems will be provided but **NOT** collected for a grade
  - When constructing exams, I will assume that every student has attended/ viewed every assigned lecture, participated in all required hands-on laboratory sessions, and successfully completed all practice problems provided

# Course Overview - 1

- **CPE 353 – Software Design and Engineering**

Course catalog description (2014-2015)

*Hands-on experience developing a substantial software project using software design tools such as the SQL database system and the Qt graphical interface development environment. Introduction to a software process including requirements elicitation and testing techniques.*

Prerequisites: CPE 212

Prerequisite with concurrency: CS 317

# Course Overview - 2

- **Three major topics**
  - Qt graphical user interface (GUI) programming
  - SQL database programming
  - Software design and engineering concepts

# Course Overview - 3

- **Required textbook**

*SQL: Visual Quickstart Guide, 3rd ed.*

Chris Fehily, 2008

# Course Overview - 4

- ***Noise Policy***
  - Be on time for class.
  - Cell Phones/Pagers/PDA's must be muted as a courtesy to others in class.



# Course Overview - 5

- **Academic Honesty Policy**

- Collaboration on any graded work will not be permitted and will be considered cheating.
- Students who cheat will receive **no credit (0)** for that exam, assignment, or quiz and be reported to the University Judicial Officer.

**Warning:**

***Plagiarism detection software tools will be used to examine all programming assignment submissions. Students agree that by taking this course all programming assignment submissions are subject to similarity review by other electronic plagiarism detection tools.***

# Course Overview - 6

- ***Official UAH Statement on Plagiarism***

“UAH is committed to the fundamental values of preserving academic honesty as defined in the Student Handbook (7.III.A). The instructor reserves the right to utilize electronic means to help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review to Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The terms that apply to the University's use of the Turnitin.com service, as well as additional information about the company, are described at [lib.uah.edu/turnitin](http://lib.uah.edu/turnitin).”

# Course Overview - 7

- ***Safety and Emergency Information***

During the semester there may be weather, fire, or other health and safety related issues that require action. Any emergency situation that impacts class will be announced through UAlert, UAH's emergency notification system. Please be sure you have UAlert configured to use your preferred method of contact. Visit [ualert.uah.edu](http://ualert.uah.edu) for more information on UAlert and to learn how to edit your UAH emergency notification contact information.

If an event such as a tornado warning or fire alarm occurs during class, your instructor will provide guidance on appropriate evacuation measures. Please follow directions provided in class.

Full details on UAH Emergency Procedures can be found at [www.uah.edu/emergency](http://www.uah.edu/emergency)

# Course Overview - 8

- ***Americans with Disabilities Act***

The University of Alabama in Huntsville is committed to providing equal educational opportunities for all qualified students with documented disabilities. Students with disabilities must notify their course instructor during the first week of class, and contact the DSS office (256-824-6203) with requests for accommodations no less than two weeks prior to the start of term.

Refer to the following website for further details:  
(<http://www.uah.edu/health-and-wellness/disability-support/welcome>).

# Course Overview - 9

- ***Exam Policies***

- There will be no makeup exams given without a written excuse from your doctor, your employer, or the UAH Office of Student Affairs.
  - ➔ No exceptions will be made ➔
- If you qualify for a makeup exam, you must schedule and complete the makeup exam within one week of the original in-class exam; otherwise, you will receive no credit (0).
- The format of all makeup exams will be decided by the instructor.

# Course Overview - 10

- ***Attendance Policies***

- You are responsible for all material presented during the lectures, videos, and laboratories including any announcements, schedule changes, changes to exam scope, etc.

# Course Overview - 11

- **Grading**

***(No collaborative assignments!!)***

Hour Exams                      70%    (tentative – see disclaimer)

Final Exam                      30%

- No sample problems or homework problems will be graded
- All graded work completed during class periods

# Course Overview - 12

- ***CPE 353 Final Exam***
  - Tuesday, December 9, 2014
  - 3:00pm – 5:30pm
  - Additional details to follow



# Sample Problems

- *Provided so that you may practice using new concepts while in the laboratory setting*
- *Videos discussing solutions will be available*
- *Source code files will not be provided*
  - Given that all graded work in this course is performed in an exam setting in the laboratory, it is critical that you learn how to use the provided software tools to design, implement, and test your solution.
  - There is tremendous value in practicing this process of creating a project, entering code, and debugging your work.

# Disclaimer

- *The instructor reserves the right to amend this syllabus as needed.*
- *Be sure to check on Angel for any modifications to the course syllabus*

# Key Points

- ***To complete this course successfully, you must***
  - ***Be proficient in CPE 112/CPE 212 concepts***
  - ***Review the provided slides and videos prior to lab***
  - ***Practice using Qt and SQL tools in the lab environment***
  - ***Work the provided sample problems on your own to prepare for the exams***
  - ***All work submitted for a grade must be your own work (no collaboration allowed).***