Introduction to Software Testing

1.0 Actions to Be Taken Immediately

• Read this syllabus. You are responsible for understanding the information in it.
• The attached calendar contains due dates for assignments. You are responsible for submitting work on time.
• Obtain the software testing textbook from the NCSU bookstore:

Patton, R. (2001)
“Software Testing”

2.0 Prerequisites
The prerequisite for this class is CSC116 or CSC114 or CSC112.

3.0 Instructor
Dr. Aldo Dagnino
Email: adagnin@ncsu.edu

4.0 TA
No teaching assistant will be available for this course

5.0 Course Topics
This course will provide you with an understanding of the software testing activity and its key role in determining the quality of software for customers. The course covers the Software Test Life Cycle and it’s different phases: Test Planning, Test Analysis, how the Software Test Life Cycle aligns with the Software Development Life Cycle, and the different levels and types of Software Testing. Within each phase of the Software Test Life Cycle, you will become familiar with test-ware deliverables, their purpose and methods used to create them. The course will also teach you basic principles and techniques used to test software products.
6.0 Course Objectives

- Provide an understanding of software testing and the value it provides to the customer and in general to the software development organization.
- Provide an understanding of the roles and responsibilities of a software tester within a Test organization.
- Provide an understanding of the objectives, components and deliverables of the Test Planning, Test Analysis, Test Execution phases and their roles within the software testing life cycle.
- Provide an understanding of how to develop test plans based on project deliverables.
- Provide a working knowledge of how to develop test cases based on project deliverables.
- Provide a working knowledge of how to execute test cases and document test logs based on execution results.
- Provide an understanding of the different levels and types of software testing and when they are utilized

7.0 Text And Other References

Software Testing, Ron Patton (required)
Lecture Notes
Supplemental materials given out via e-mail
8.0 Grading Policies

If you have extenuating circumstances then contact the instructor as early as possible to make alternative arrangements. Do not wait until the end of the term to bring up special situations.

- Due dates for all assignments are given in the CSC 252 Calendar which you can find in the Class Website.
- The mid-term and final exams are closed book unless stated by the instructor. In the Engineering On-line program, you have to arrange an exam proctor the day of the exam(s), and communicate with the Engineering On-line Office to make the appropriate arrangements for both the mid-term and final exams. Please check the Engineering On-line office policies.

The course grade components are explained below:

- 20 % One mid-term exam and one
- 25% One comprehensive final exam
- 30 % Two Assignments (15% each to be submitted via e-mail on the due date)
- 25 % Final Research Project (individual reports only)

If you do not have a special topic you wish to develop, several research topics are available to choose from as Final Project: (1) “Testing for Performance”; (2) “Gray Box Testing Techniques”; (3) “Model Based Testing”; and (4) “How do you Know when to Stop Testing?”. The Final Research Project will have minimum 10 pages double-spaced (not including title page, table of contents, and references page) 10 font and 10 or more references (conference articles, journal articles, books) in addition to any web site references. Your selection of topic for your final project needs to be sent to the instructor via e-mail by June 18th of 2010. Final projects will be sent to the instructor via e-mail on August 6th of 2010.

Important Dates:

Refer to separate class schedule document at the class website

The numeric grade is the weighted average of grades in each category. The alphabetic grade is calculated as:

- A+ = 97.0 - 100
- A  = 93.0 - 96.9
- A- = 90.0 - 92.9
- B+ = 87.0 - 89.9
- B  = 83.0 - 86.9
- B- = 80.0 - 82.9
C+ = 77.0 - 79.9  C = 73.0 - 76.9  C- = 70.0 - 72.9  C- is required for S
D+ = 67.0 - 69.9  D = 63.0 - 63.9  D- = 60.0 - 62.9
9.0 Late Work Policy
No assignments or Final Research Project will be accepted late, so please plan ahead of time to hand out assignments and Final Research Project at the requested dates.

10.0 Attendance
N/A

11.0 Auditing Students
To receive an AU grade for the course students must complete the assignments and the final project.

12.0 Rules Relating To Academic Integrity
Do not plagiarize another student's work. Do not give your work to another student. The minimum penalty for any cheating incident is a zero on the assignment and a deduction of 10 points (1 full letter grade) from the course grade. The same penalty applies for the person that provided the plagiarized work. All incidents are reported to the Office of Student Conduct.

Individual assignments
You must work completely alone on these assignments, except for help from the instructor.

13.0 Assignments
Assignments are due by the end of the day on the due date specified in the CSC 252 calendar. Method of handing assignments and final project will be by e-mail.

14.0 Help from the Instructor
Please send all questions to: adagnin@ncsu.edu and I will be happy to help you the best way and fastest possible.