Fall 2008 COEN 345: Software Testing and Validation Credits: 4

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Course Timings:

Course	Days	Timings	Location (SGW)
Lecture U	T-J	14:45-16:00	H- 623
Tutorial UA	J	16:15-17:05	H- 623
Lab UI	M	14:15-16:05	H- 811
Lab UJ	Т	17:45-19:35	H- 811

Office Hours: Mondays 11:00 am-1:00 pm

Prerequisite: SOEN 341 (Software Process)

Course Contents: The contents covered in the course include:

Week	Dates	Topic	Due Dates
1	02/09/2008 04/09/2008	SQA Overview Software Testing Fundamentals	
2	09/09/2008 11/09/2008	Verification and Validation Test assessment and coverage	
3	16/09/2008 18/09/2008	Blackbox Testing	
4	23/09/2008 25/09/2008	Whitebox Testing	Assignment 1 25/09/2008
5	30/09/2008 02/10/2008	Control Flow Testing	
6	07/10/2008 09/10/2008	Data Flow Testing	
7	14/10/2008 16/10/2008	Static Analyses Mutation Testing	Assignment 2 16/10/2008

8	21/10/2008 23/10/2008	FSM based Testing	
9	28/10/2008 30/10/2008	Mid Term Quiz Integration Testing	Mid Term Quiz 28/10/2008
10	04/11/2008 06/11/2008	Reachability Analysis	
11	11/11/2008 13/11/2008	Test Results Analysis	Assignment 3 13/11/2008
12	18/11/2008 20/11/2008	Model checking	
13	25/11/2008 27/11/2008	Best practices in software testing Final Quiz	Final Quiz 27/11/2008

<u>References (None is mandatory)</u>:

- 1. Mauro Pezze, Michael Young, Software Testing and Analysis: Process, Principles and Techniques, Wiley Publications, NJ 2007.
- 2. Aditya P. Mathur, Foundations of software testing, Pearson publications, 2008.
- 3. Ilene Burnstein, Practical Software Testing: A Process-Oriented Approach, Springer Professional Computing, Springer-Verlag New York Inc., 2003.
- 4. Paul C. Jorgensen, Software Testing: A Craftsman's approach, 3rd edition, CRC Press, 2008.
- 5. Edward Kit, Software testing in the real world: Improving the process, Addison Wesley, 1996.

Grade Composition	
Assignment 1	5%
Assignment 2	10%
Assignment 3	10%
Mid-term Quiz	25%
Final Quiz	50%

Some important remarks on submission and grading:

- 1. All the assignments should be done individually and submitted in both electronic and hard-copies before the due dates.
- 2. The mid-term quiz will be closed book. No consulting or reference of materials allowed.
- 3. The final quiz will be closed book. No consulting or reference of materials allowed.
- 4. There is no direct mapping between numerical percentage grades and final letter grades for the course.

<u>Expectations</u>: The students are expected to maintain professionalism in the class. Class participation is strongly encouraged. In case of any unexpected problem, the instructor should be informed before the start of the class.