SOFTWARE QUALITY ASSURANCE

Lecture 1

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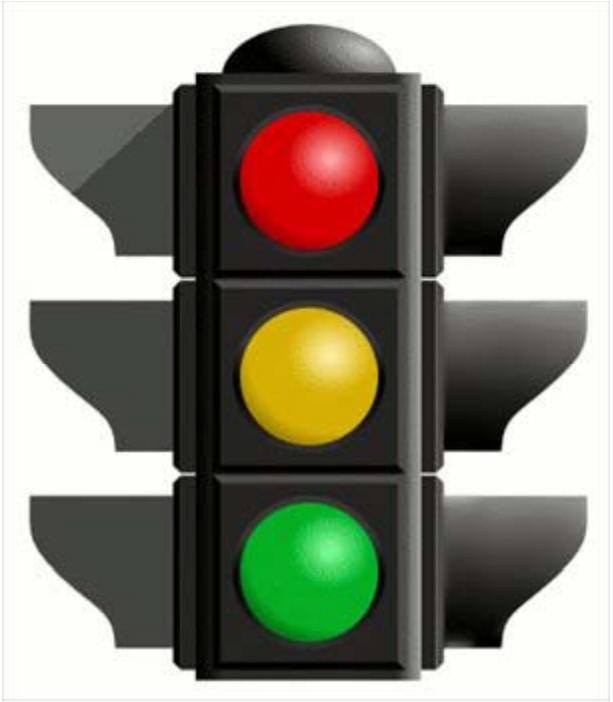
Switch off mobile phones during lectures, or put them into silent mode

CONTENTS

- Announcement
- Class Introduction
- Instructor's Introduction
- Introduction to Course
- Student Guidelines
- Term Paper
- Quiz!!!



Please Obey Traffic Signals

Introduce Yourself

- Name
- Profession
- Why SQA?
- Are you planning for a thesis?
- Have you studied Research methods?
- Course should be theoretical or research oriented
- Expectation from this Course
- Any suggestions or comments regarding the course

Pre Requisite

Software engineering

OBJECTIVE

- To equip students with the sound understanding of key concepts in software quality and how they are used in the industry.
- To give knowledge about the roles and responsibilities of software quality managers in the industry
- To teach students testing strategies and tools that can be employed to measure and improve the quality of the entire software development process from design to user acceptance.

OUTCOMES

- 1. Students will be able to learn about basics of Software Quality Assurance, Quality Control
- 2. Students will be able to implement the processes of process quality assurance
- 3. Students will be able to relate Software quality with different phases of life cycle and apply quality principles to these phases
- 4. Apply Software Quality process to a real life project
- 5. Learn about defining the software quality process

CONTENTS(1)

- What is quality
- Software defects and related issues
- Quality attributes
- Project Management and Software Quality
- SQA Plan
- Requirement Engineering and Software Quality
- Software design and Software Quality
- Design process and software quality assurance
- Design model and software quality assurance
- Quality Design Concepts
- Programming and SQA

CONTENTS (2)

- SQA Reviews
- Software Inspections
- Software Testing
- Software Configuration Management
- SCM – Change Control Process
- SCM Plan and SQA Plan
- SCM Plan and SQA Plan
- Process Assurance
- Process Management and Improvement – CMMI
- Introduction to Quality Metrics
- A Process Model for Software Quality Assurance
- Term Presentations

Course Material

- Software Quality Engineering: Testing, Quality Assurance, and Quantifiable Improvement by Jeff Tian
- Software Quality: Analysis and Guidelines for Success by Capers Jones
- Customer-Oriented Software Quality Assurance by Frank Ginac
- A Practitioner's Approach to Software Engineering by Roger Pressman
- Software Engineering 6th Edition, by I. Sommerville, 2000
- Requirements Analysis and Specification by Alan M. Davis
- Software Inspections by Ronald A. Radice Tata-McGraw Hill 2003

Handouts and Study Material will be provided throughout the course

GRADING POLICY

Assignments :	10 %
Quizzes :	10 %
Mid Term :	20 %
Final Term :	40 %
Presentation :	5 %
Term Paper:	15%

Attendance:

All students are supposed to attend 100% classes. However 75% attendance is mandatory to make you eligible for the final examination. NO EXCUSES

GUIDELINES FOR STUDENTS (1)

- All Quizzes will be un-announced
- No quiz will be dropped.
- Quizzes may be of different weights based upon actual marks for each quiz
- Use of Mobile Phones is not allowed in the class, If mobile phone rings (due to: call, sms, alarm, reminder or any other), you will be requested to leave the class and you will be marked ABSENT.

GUIDELINES FOR STUDENTS (2)

- Students are encouraged to discuss assignments but it is extremely important that everyone works on his/her own assignment
- The cases of plagiarism will be dealt ruthlessly & will be marked Zero, remember this is a Research training course
- Late comers should consult their class fellows for the missing topics, they will not be revised in the class
- No Extensions in deadlines will be given
- Be punctual

GUIDELINES FOR STUDENTS (3)

- You should keep a track of your attendance yourself, no flexibility in attendance will be given.
- You have to attend 100% classes, Remember minimum attendance required to appear in final exam is 75%
- Its your responsibility to keep a check on your attendance. Don't come to me at the end of semester for any favor
- If you feel that your attendance is not marked and you were present in the class, report this in the same week. No query will be entertained afterwards.

GUIDELINES FOR STUDENTS (4)

- Don't request any flexibility or you have to face embarrassment
- Student must present/research paper a topic in the last session of this course, otherwise you will be awarded "F" grade
- All assignments will be handwritten except term paper
- Further guidelines will be given time to time

Term Paper

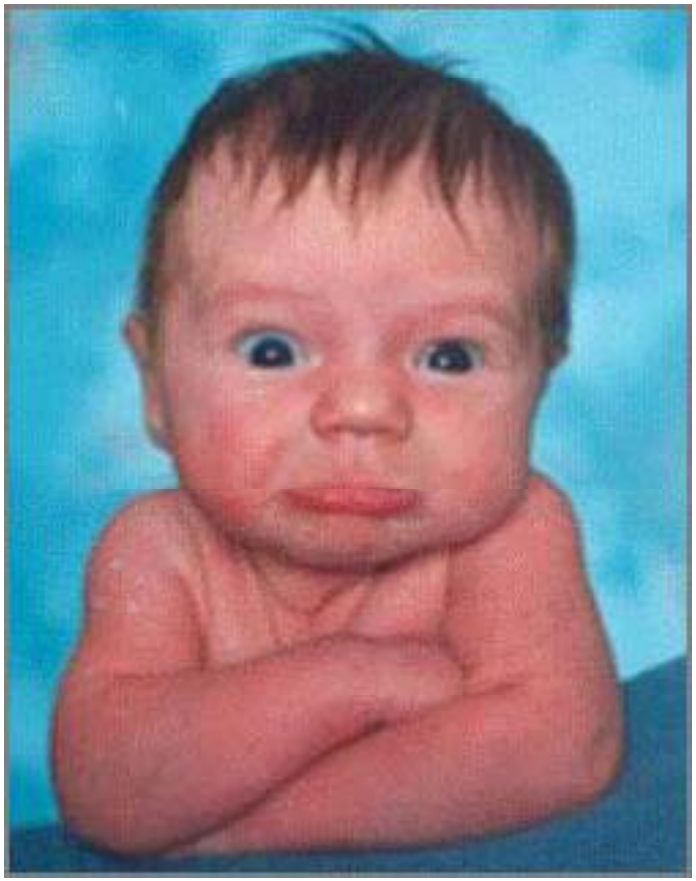
Finalize Group Members and Topic	**TBD**
Search Papers and Sort Selected (At least 15)	**TBD**
Go Through the Abstract and Introduction of Selected Papers	**TBD**
Submit a Summary and Comments on related papers	**TBD**
Submit Initial Draft	**TBD**
Final Paper Submission	**TBD**
Final Presentation	**TBD**

Please note that Every Phase has Marks

TERM PAPER STARTS TODAY ☺

- Finalize your groups (Max 2 persons/ group) by end of next week (2ndWeek of Semester)
- **Submission and Presentation :**
  - Last Week of Semester
  - Exact dates will be informed later
- We will have weekly meetings/ evaluations
- Periodic reporting is important and will carry marks

What About Having a Quiz???



QUIZ/ DIAGNOSTIC TEST (20 MINUTES)

(TUESDAY 20TH FEBRUARY 2013)

- Define Software Engineering?
- Define Software Quality?
- What is your area of Interest?
- Do you have any experience of research? If Yes, Explain?
- How we can get maximum benefit out of this course?
- What do you think should be the teaching methodology?
- Are you interested in writing a research/term paper?
- Are you planning for a thesis in MS?
- What are your expectations from this course?
- What are your expectations from the Instructor?
- Any Suggestions?

Answer all the questions to the best of your ability, I don't want the exact answers, I just want your understanding


Thanks!