GUC
German University in Cairo
الجامعة الألمانية بالقاهرة

CSEN 1055
Selected Topics in SE

Dr. Amr Desouky

Course Structure

- Lecturer: Dr. Amr Desouky
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  - C7.309

- Course Assessment
  - 45% Presentations (3)
  - 40% Report
  - 15% Participation

Presentation #1

- Introduction
  - Goals
    - Understand the overall theme of the topic
    - Gain exposure to the different concepts and sub-domains
    - Presentation skills

Presentation #2

- Literature Survey and Review
  - Goals
    - Outline the latest research and concepts as per literature findings
    - Submit 4-5 literature papers as the basis of final presentation

Presentation #3

- Final Presentation
  - Goals
    - An academic presentation outlining your analysis of the research papers previously submitted.

Topics

- Agile software development
- Autonomic and (self-)adaptive systems
- Cloud and service-oriented computing
- Component-based software engineering
- Configuration management and deployment
- Cooperative, distributed, and collaborative software engineering
- Debugging, fault localization, and repair
- Dependability, safety, and reliability
- Embedded and cyber physical systems
- End-user software engineering

Topics

- Formal methods, verification, and synthesis
- Green and sustainable technologies
- Human factors and social aspects of software engineering
- Human-computer interaction
- Methodologies and measures for empirical software engineering
- Middleware, frameworks, and APIs
- Mining software engineering repositories
- Mobile applications
- Model-driven engineering
- Parallel, distributed, and concurrent systems
- Performance
- Program analysis
- Program comprehension and visualization
- Programming, specification, and modeling languages
- Recommendation systems
- Requirements engineering
- Reverse engineering

Topics

- Search-based software engineering
- Security, privacy and trust
- Software architecture
- Software economics, management, and metrics
- Software evolution and maintenance
- Software modeling and design
- Software processes and process improvement
- Software product lines
- Software reuse
- Software testing
- Tools and environments
- Traceability
- Ubiquitous/web/pervasive software systems

What's Next

- Presentations will begin as early as next week
  - Topic preference will be assigned based on student's willingness to present early.
  - FCFS
- Proposal should include
  - Name
  - Top 5 topics
  - Earliest availability to present:
    - Week 2, Week 3, or Week 4.

- **Submit proposal by tomorrow 4/4/15 3:30 PM**