CSE314-Software Engineering Practices

Unit-I

Topic: Introduction: Software Engineering

Presented By Dr. R. Kavitha,
CSE,SoC, SASTRA University.

Text Book: "Software Engineering – A practitioner approach"
By Roger Pressman, 8th edition, 2015.

Unit-I

Introduction

Prescribed Authors

- Roger S Pressman, “Software Engineering - A Practitioner‟s approach”, McGraw Hill, 8th Edition, 2015. Bruce R Maxim – Established Game Lab , Michigan.
- Rajib Mall, “Fundamentals of Software Engineering”, PHI, 3rd Edition, 2009.
- Pankaj Jalote, “An Integrated Approach to Software Engineering”, Narosa Publishing House, 3rd Edition, 2011.

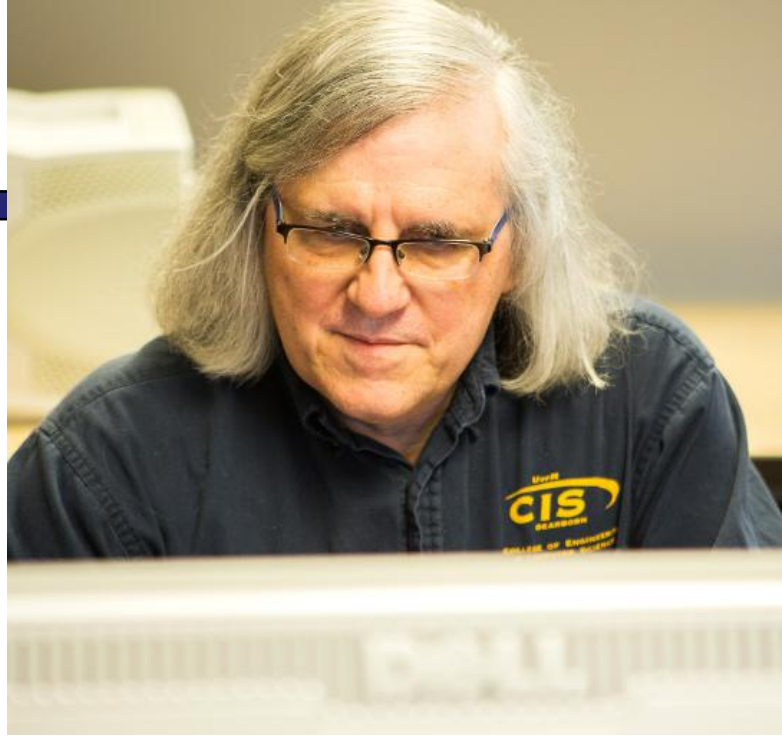
Roger S Pressman

For almost four decades, he has worked as software engineer, a manager, a professor, an author, and a consultant, focusing on software engineering issues.

Dr. Pressman is currently president of R.S.Pressman & Associates, Inc., a consulting firm specializing in software engineering methods and training.

As an industry practitioner and manager, Principal consultant and Process Advisor he has worked in collaboration with Edista Learning in India to develop comprehensive Internet-based training in software engineering

Dr. Brute Maxim



Dr. Brute Maxim is a Professor, Software Engineer, Project Manager, Author and consultant for more than 30 years. HCI, SW engg, Game design, AI, CS education.

He established Game Lab at the University of Michigan. He has published a number of papers on computer algorithm animation, game development and supervised hundreds of industry based software as a part of his work at UM-Dearborn.

Dr. Maxim was the recipient of several teaching awards and community awards and He is a member of Sigma Xi, Upsilon Pi Epsilon, ACM, IEEE computer society, American Society for Engineering Education, Society of Women Engineers and Game developers Association.

- Dr. Rajib Mall, is Professor, Dept of CSE, IIT, Kharagpur.
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Pankaj Jalote

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- www.springer-ny.com/supplements/jalote/
- Tools
  - dmetric - to evaluate the complexity of a design
  - complexity - to evaluate the complexity of a C program
  - style - to evaluate the style of a C program
  - ccov - a test coverage analyzer for C program

Syllabus - Unit 1

Unit I (15 Periods)

Software Engineering: The Nature of Software - Software Engineering - Software process - Generic process model. Case study: Pass on the secret session. **Case study: Waterfall model session.** Process Assessment and Improvement - Prescriptive process models-Specialized process models - Unified process - Personal and Team process models - CMMI - Agility and the cost of change - Agile process - Extreme programming - Other Agile process models. **Case study: Agile manifesto.**

Engineering

is the application of scientific, economic, social, and practical knowledge in order to invent, design, build, maintain, and improve structures, machines, devices, systems, materials and processes.

Software Engineering – Definition1

"Software engineering is defined as the systematic approach to the development, operation, maintenance, and retirement of software" - Pankaj

Software Engineering – Definition 2

"The framework encompasses a process, a set of methods, and an array of tools that we call **software engineering**" - Roger

THANK YOU