

# Testing

## **Unit I - Introduction**

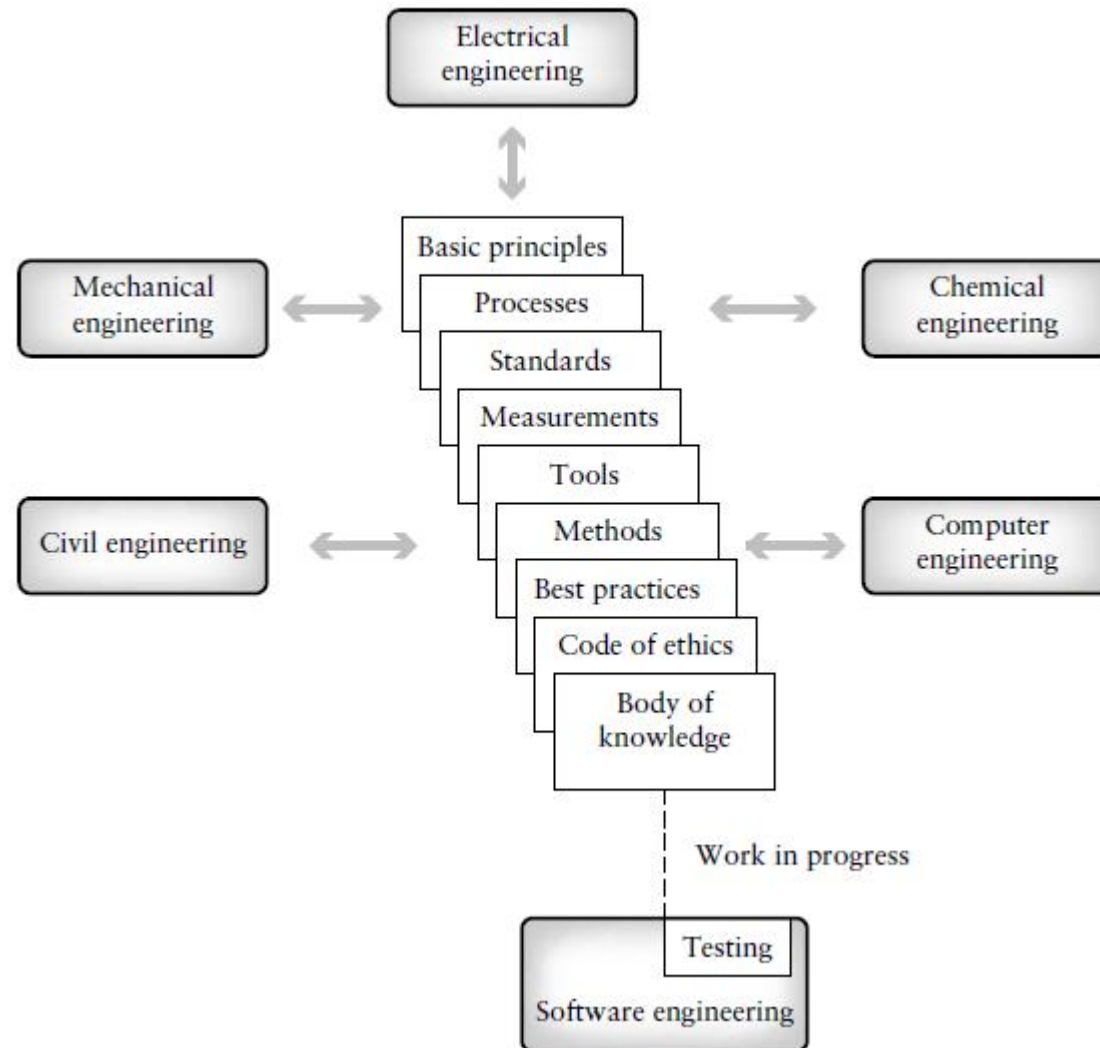
Testing as a Process – Testing Axioms – Software Testing Principles – Origins and Cost of Defects – Defect Classes and Examples – Developer/Tester Support of Developing a Defect Repository – Defect Prevention Strategies.



# Engineering approach to software development

- Well understood development process
- projects are planned
- life cycle models are defined and adhered to
- standards are in place for product and process
- measurements are employed to evaluate product and process quality
- components are reused
- validation and verification processes play a key role in quality determination
- **Engineers have proper education, training, and certification**

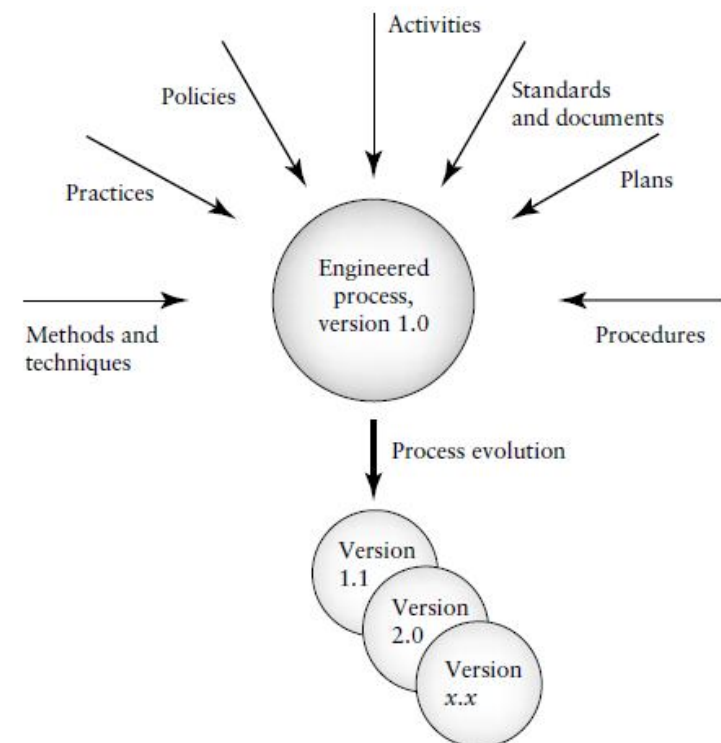






# Process

- Process, in the software engineering domain, is the
  - set of methods,
  - practices,
  - standards,
  - documents,
  - activities,
  - policies, and
  - procedures
- that software engineers use to develop and maintain a software system and its associated artifacts, such as project and test plans, design documents, code, and manuals.





# Verification and Validation

- Validation is the process of evaluating a software system or component during, or **at the end of**, the development cycle in order to determine **whether it satisfies specified requirements**.
- Verification is the process of evaluating a software system or component to determine **whether the products of a given development phase satisfy the conditions imposed at the start of that phase**





# Testing - Introduction



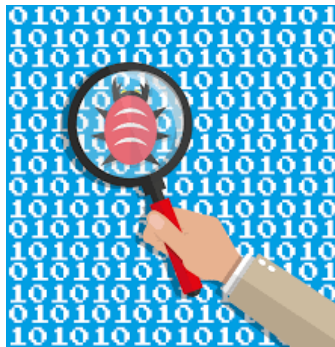
- Testing is generally described as a group of procedures carried out to evaluate some aspect of a piece of software.
- Testing can be described as a process used for revealing defects in software, and for establishing that the software has attained a specified degree of quality with respect to selected attributes



# Debugging



- Debugging, or fault localization is the process of
  - (1) locating the fault or defect,
  - (2) repairing the code, and
  - (3) retesting the code.





# Tools in Use

- WinRunner
- SilkTest
- LoadRunner
- Jmeter
- Junit
- Etc.,





Thank You