Systems Testing Excellence Program
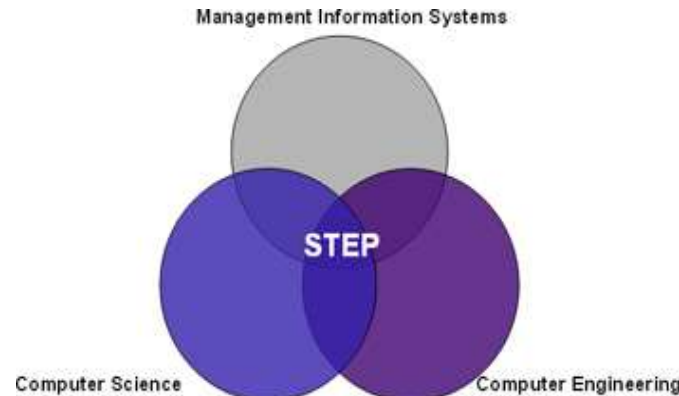
Research and Training Capabilities

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A Partnership for Advancing the Science of Testing

System Testing Excellence Program

Research in Testing

- How do we get our outsourced testing vendor to innovate so that we remain on the cutting edge?

- How do we test the quality of program designs?

- The CIO wants a ROI computation for investments in testing?

- What exactly does a tester do in agile scrums?

- How do we use test instrumentation and pattern matching for automatic failure identification?

- What is the best fitness function to find feasible sequences of method calls for evolutionary testing of object-oriented programs?

- What is the quality of automatically generated test cases based on OCL expressions?

- What statistical sampling based approach can be used to alleviate log replay testing?

STEP Research-Based Certifications

- Foundational Certification in Systems Testing
  - Five Days (10 half-day modules and exam)
- Advanced Certification in Systems Testing
  - Ten Days (20 half-day modules and group project)
- Agile Development and Testing Boot Camp
  - Three Days

Certification – Modules

- The Science of Testing
- Test Planning and Management
- Systems Testing in the SDLC; Requirements Testing
- Test Process Improvement Through Standards and Models
- Test Coverage and Test Techniques
- Testers and Users, and Testers and Developers
- Risk-Based Testing
- Security Testing
- Defect Management
- Problem Solving and Quality Assurance in Systems Testing

Certification – Modules

- Agile Testing
- Distributed Global Test Effort
- Testability and Exploratory Testing
- Automated Testing/Integration of Test Tools
- Database Testing
- Graph and Logic Coverage
- Statistics and OR for Testing
- High Performance Test Teams
- Quality Gates and Business Rules Testing
- And more….

8th Int'l Research Workshop Advances & Innovations Software Testing

- November 3 and 4, 2014
  - ITEA Tech Workshop Nov 5-6, 2014
- Showcase latest research
  - Collaborative requirements and test case development with a focus on automated test case generation
  - Future of software quality management & impacts on global user acceptance, define and influence evolutionary path of quality management and user acceptance based on the impacts of technologies and SDLC methodologies
- Sponsors: FedEx, Lockheed Martin, and Applause
- step.memphis.edu
  - STEP Workshop 2014