Software Testing Lab’s Short Course

*Introduction to Software Testing* (custom designed for Hughes Network Systems)

Conducted by Prof. Atif M Memon

Schedule for June 20, 2003

8:30-9:00: Breakfast and Registration

9:00-9:30: Lecture: Testing Introduction

9:30-10:10: Lecture: Testing Overview

10:10-10:30: Lecture: Test Case Generation
- Category-partition method

10:30-10:45: COFFEE BREAK

10:45-11:15: Lecture: Test Oracles

11:15-12:00: Lecture: Test Coverage & Code Instrumentation

12:00-1:00: LUNCH BREAK

1:00-1:30: Open Discussion

1:30-2:00: Demo: JUnit and Code Instrumenter (by Adithya Nagarajan)

2:00-2:45: Lecture: Test Automation
- Pair-wise testing
- AI Planning
- Preview of Iterative relaxation
- Flow graphs

2:45-3:15: Demo: GUITAR and the entire Testing Process (by Ishan Banerjee)

3:15-3:30: COFFEE BREAK

3:30-4:15: Lecture: Regression Testing

4:15-4:45: Other topics overview
- Software Engineering: Requirements (UML), Design, Sequence Diagrams, Use Cases
- COTS
- Predicate & Heuristic based testing
- "daily/nightly" builds and smoke tests
- network protocol and web testing
- performance

4:45-5:00: Open Discussion