**Formal Methods**

**(SE-320)**

**Instructor:** Dr. Sarmad Sadik

**Credit Hours:** 3+0 (Spring 2013)

**Course Objectives:**

To introduce formal methods and multiple logic based approaches for modeling and reasoning of software structure and behavior.

**Course Outline:**

* Introduction to Formal Methods
* Propositional Logic
* First Order Predicate Logic
* Pi-Calculus
* Pi ADL
* Z-Notation
* Advanced Topics

**Text Book:**

* + Logic in Computer Science by Michael Huth and Mark Ryan, Second Edition
  + A Calculus of Mobile Processes by Robin Milner

**Reference Book:**

* + Using Z: Specification, Refinement, and Proof, Oxford university Press by Woodcock, J.C.P. and Davies, J.
  + Discrete Mathematics with Examples by Simpson

**Grading:**

* Assignments/Project – 10%
* Quizzes – 10%
* OHTs– 15% + 15%
* Final Exam – 50%