

**Stony Brook University**  
**Department of Electrical and Computer Engineering**  
**ESE 501 System Specification and Modeling**

**COURSE INFORMATION**

**Instructor:** Professor Sangjin Hong

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**Office:** 201 Light Engineering Building, Tuesday and Thursday 10:00 am – 12:00 pm, or by appointment

**Time and Place:** <sup>[L]</sup><sub>[SEP]</sub>Lecture – Thursday 4:00 pm – 7:00 pm, N3063 Melville Library

**Description**

A comprehensive introduction to the field of system level design. This course introduces basic concepts of complex hybrid (software/hardware) system modeling and simulation methodologies. Topics include top-down and bottom-up design methodology, system complexity refinement, SystemC specification language syntax and semantics, behavioral and system-level modeling, channel and interface modeling and implementation, and IP core development. Included are three projects on modeling and simulation.

**Objective**

The goal of this course is to span entire design hierarchy from algorithm design to application level using SystemC as the specification language.

**Textbook**

1. System Design with SystemC by Grotket et al, Kluwer Academic Publishers, 2002. <sup>[L]</sup><sub>[SEP]</sub>

**Homework, Exams and Grading**

Two midterm exams; three mini projects. Grading will be as follows:

Midterms: 40%; Project: 50% ; Homework 10%

Undergrad and graduate will be evaluated with different standards on midterm exam, lab assignment, and final project.

**Learning Objectives**

At the end of this course, students will:

1. Understand the top down design methodology
2. Understand the importance of specification of the system
3. Understand the design process using the SystemC language

### **Blackboard**

You can access class information on-line at: <http://blackboard.stonybrook.edu>

For help see: <http://it.stonybrook.edu/services/blackboard>

For problems logging in, go to the helpdesk in the Main Library SINC Site or the Union SINC Site; you can also call: 631-632-9602 or e-mail: [helpme@stonybrook.edu](mailto:helpme@stonybrook.edu)

### **ADA Statement (Americans with Disabilities Act)**

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, 128 ECC Building (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: [www.ehs.sunysb.edu](http://www.ehs.sunysb.edu) and search Fire Safety and Evacuation and Disabilities.

### **Academic Honesty and Integrity**

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at [www.stonybrook.edu/uaa/academicjudiciary](http://www.stonybrook.edu/uaa/academicjudiciary).