

Stony Brook University
Department of Electrical and Computer Engineering
ESE 356/501 System Specification and Modeling

COURSE INFORMATION

Instructor: Professor Sangjin Hong

Sangjin.Hong@stonybrook.edu

Office: 201 Light Engineering Building Tuesday and Thursday 1:30 pm – 3:30 pm, or by appointment

Time and Place: Lecture – Thursday 4:00 pm – 7:00 pm, 128 Chemistry Building

Description

A comprehensive introduction to the field of System-on-Chip design. Introduces basic concepts of digital system modeling and simulation methodologies. Various types of hardware description language (HDL) will be studied, including Verilog, VHDL, and SystemC. Topics include top-down and bottom-up design methodology, specification language syntax and semantics, RTL, behavioral and system-level modeling, and IP core development. Included are three projects on hardware 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.

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

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 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.