Course Information — EE 531
Semiconductor Devices and Device Simulation
Physics and Modeling of Nanoscale VLSI Devices
Winter 2005

Web Page: http://dunham.ee.washington.edu/ee531

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Office hours: M 2:00pm-3:00pm
F 2:30pm-3:30pm

Grader: Hsiu-Wu (Jason) Wu

Text: “Fundamentals of Carrier Transport” by Lundstrom
“Fundamentals of Modern VLSI Devices” by Taur and Ning

Reference Texts: “Advanced Semiconductor Fundamentals (Modular Series Vol. VI)” by Pierret
“Devices for Integrated Circuits,” by Casey
“Semiconductor Physics and Devices” by Neamen
“Device Electronics for Integrated Circuits” by Muller and Kamins
“Semiconductor Devices, a Simulation Approach” by Kramer and Hitchon
“Modern Semiconductor Device Physics,” edited by Sze
“Physics of Semiconductor Devices” by Sze
“Advanced Theory of Semiconductor Devices” by Hess
“Si Processing for the VLSI Era: Vol. 3—The Submicron MOSFET” by Wolf
“Advanced MOS Devices” by Schroder
“Operation and Modeling of the MOS Transistor” by Tsividis
“Numerical Simulation of Submicron Semiconductor Devices” by Tomizawa

Simulation Software: TSuprem4 (Synopsys)
Available on N/MTML Intel Computing Cluster (need EE account first)

Grading Policy: Homework: 20%
Exam 1: 25%
Exam 2: 35%
Project: 20%

Prerequisite: Semiconductor Devices (EE 482) or equivalent