Structured Course Requirements

Core (Select one course from each Core area.)

A. SE/EC/ME 501 Dynamic Systems Theory, or SE/EC/ME 710 Dynamic Programming and Stochastic Control Semester/Grade ____________________________
B. SE/EC 524 Optimization Theory and Methods Semester/Grade ____________________________
C. SE/ME 714 Advanced Stochastic Modeling and Simulation, or EC 505 Stochastic Processes, or EK 500 Probability with Statistical Applications Semester/Grade ____________________________

Concentration (Select two courses from one Concentration area.)

Computational and Systems Biology
BE 505 Molecular Bioengineering
BE 561 DNA and Protein Sequence Analysis
BE 563 Cellular and Molecular Systems Analysis
BE 567 Nonlinear Dynamics in Biological Systems
BF 571 Dynamics and Evolution of Biological Networks
BE 760 Structural Bioinformatics
BE 777 Computational Genomics I
Course/Semester/Grade ____________________________
Course/Semester/Grade ____________________________

Control Systems
SE/ME 762 Nonlinear Systems and Control
ME/MS 507 Process Modeling and Control
ME 570 Robot Motion Planning
EC 702 Recursive Estimation and Optimal Filtering
SE/EC/ME 733 Discrete Event and Hybrid Systems
SE/ME/EC 734 Hybrid Systems
SE/ME 740 Vision Robotics and Planning
Course/Semester/Grade ____________________________
Course/Semester/Grade ____________________________

Energy and Environmental Systems
CAS EC 513 Game Theory
SE/EC/ME 543 Sustainable Power Systems
ME/MS 545 Electrochemistry of Fuel Cells and Batteries
CAS EC 571 Energy and Environmental Economics
CAS EC 572 Public Control of Business
EC/MS 573 Solar Energy Systems
GRS GE 712 Regional Energy Modeling
GRS EC 716 Game Theory
OM 845 Clean Technology Business Models
Course/Semester/Grade ____________________________
Course/Semester/Grade ____________________________

Financial Engineering
MA 577 Mathematics of Financial Derivatives
MF 572 Introduction to Mathematical Finance
MF 795 Stochastic Methods of Mathematical Finance

Electives (indicate course number, grade, semester) 1 ______________________ 2. __________________ 3. __________________

MS Thesis or Graduate Project: SE901 Thesis or SE925 Graduate Project (Circle one.) Semester/Grade ____________________________

(Updated 3/2011)