

General MSE Engineering Project Management Area

Suggested Courses

ME 597/ECE 595- Engineering Project Management

ME 597/ECE595- Advanced Engineering Economics

ME 597/ECE595- Statistical Concepts in Engineering

IE 530*- Quality Control (Prerequisite: basic statistics)

IE 545*-Engineering Economic Analysis

IE 546*- Economic Decisions in Engineering (Prerequisite: basic probability)

IE 533*- Industrial Application of Statistics

IE 590R*- Manufacturing Economics

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Masoud Mojtahed** , Dr. Yeow Siow

ECE Specialization Automatic Control Graduate Area

Suggested Courses

ECE 569- Introduction to Robotics

ECE 595- Estimation, Identification, and Control

ECE 595- MATLAB

ECE 595- Neural Networks

ECE 580*-Optimization Methods for Systems and Control (Prerequisite: MA 511* or equivalent)

ECE 600*- Random Variables and Signals

ECE 602*-Lumped System Theory (W. Lafayette Campus Core)

ECE 675*-Introduction to Analysis of Non-Linear Systems (Prerequisite: ECE 602* or equivalent)

ECE 680*- Modern Automatic Control (Prerequisite: ECE 602 or equivalent)

Math Courses

MA 511* or MA 554-Linear Algebra with Applications

ME 597- Numerical Methods

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Nasser Houshangi**, Dr. Don Gray, Dr. David Kozel

ECE Specialization Biomedical Imaging and Sensors Graduate Area

Suggested Courses

ECE 595- Digital Imaging Processing

ECE 595- Magnetic resonance Imaging

ECE 595-Biomedical Imaging

ECE 595- Biomedical Instrumentation

ECE 600*- Random Variables and Signals (W. Lafayette Campus Core)

ECE 637*-Digital Image Processing I

Math Courses

MA 527*-Advance Mathematics for Engineers and Physicists I

MA 528*-Advance Mathematics for Engineers and Physicists II (Prerequisite: MA 527)

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Bin Chen**, Dr. Lucy Yang

ECE Specialization Communications, and Networking Graduate Area

Suggested Courses

ECE 547- Introduction to Computer Communication Networks

ECE 595-Client Server Programming

ECE 595-Fiber Optic Communication

ECE 595-Wireless Communication

ECE 595- Estimation, Identification, and Control

ECE 600*- Random Variables and Signals (W. Lafayette Campus Core)

ECE 544*-Digital Communications

Math Courses

STAT 511*-Statistical Methods

STAT 512*-Applied Regression Analysis

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Howard Gerber, Mohammad Anan**

ECE Specialization Signal and Image Processing Graduate Area

Suggested Courses

ECE 595-Speech Processing

ECE 595- Digital Image Processing

ECE 595-Digital Signal Processing

ECE 595-Medical Imaging

ECE 595- Estimation, Identification, and Control

ECE 600*- Random Variables and Signals (W. Lafayette Campus Core)

ECE 538*-Digital Signal Processing I

ECE 637*-Digital Image Processing I

ECE648*-Wavelet, Time-Frequency, and Multi-rate Signal Processing
(Prerequisite: ECE 538* or equivalent)

Math Courses

STAT 511*-Statistical Methods

STAT 512*-Applied Regression Analysis

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Kaliappan Gopalan, Dr. David Koze1**, Dr. Bin Chenn

Computer Engineering Artificial Intelligence Graduate Area

Suggested Courses

ECE 595-Neural Networks

ECE 569-Introduction to Robotics

ECE 595-Computer Architecture

ECE 595-Computer Graphics

ECE 600*- Random Variables and Signals

ECE608*-Computational Models & Methods (W. Lafayette Campus Core)

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Don Gray**, Dr. Chandramouli Viswanathan, Dr. Lucy yang, Dr. Nasser Houshangi

Computer Engineering Computer Architecture Graduate Area

Suggested Courses

ECE 595-Computer Architecture

ECE 595-Advance Digital System

ECE 547- Introduction to Computer Communication Networks

ECE 595-VLSI Design and Fabrication

ECE 456*-Digital Integrated Circuit Analysis & Design

ECE 600*- Random Variables and Signals

ECE608*-Computational Models & Methods (W. Lafayette Campus Core)

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Kaliappan Gopalan**, Dr. Muhammad Anan, Dr. Nasser Houshangi,

Computer Engineering Software System Graduate Area

Suggested Courses

ECE 574-Software Engineering Methodology

ECE 595-Introduction to Applications with Java

ECE 595-MATLAB

ECE 595-Computer Graphics

ECE608*-Computational Models & Methods (W. Lafayette Campus Core)

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Lucy Yang**, Dr. Muhammad Anan, Dr. Don Gray

ECE Specialization Energy Sources and Systems Graduate Area

Suggested Courses

ECE 595-Power Systems

ECE 595- Advanced Electric Drives

ECE 595- Power Electronics

ECE 595-Renewable Energy

ECE 580*-Optimization Methods for Systems and Control (Prerequisite: MA 511* or equivalent)

ECE 610*- Energy Conversions (W. Lafayette Campus Core)

ECE 633*-Modeling and Simulation of Power System Components (Prerequisite: ECE 610* or equivalent)

ECE 695S*-Power Electronic Converters and Systems (Prerequisite: ECE 610* or equivalent)

Math Courses

MA 511* or MA 554-Linear Algebra with Applications

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Edward Pierson**, Dr. David Kozel, Dr. Robert Kramer, Dr. Constantin Apostoiaia

ECE Specialization Fields and Optics Graduate Area

Suggested Courses

ECE 595-Fiber Optic Communication

ECE 595-Wireless Communication

ECE 595- Numerical Methods

ECE 604*- Electromagnetic Field Theory (W. Lafayette Campus Core)

ECE 595*-Electromagnetic and Electromechanical component Design

ECE 617*-Antennas: Design and Application (prerequisite: ECE 604* or equivalent)

Math Courses

MA 525- Introduction to Complex analysis

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Howard Gerber*, Dr. Mohammad Anan

ECE Specialization VLSI and Circuit Design Graduate Area

Suggested Courses

ECE 595-Advanced Digital System

ECE 595-Digital Signal Processing

ECE 595- Computer Architecture

ECE 595-VLSI Design & Fabrication

ECE 606*-Solid State Devices (W. Lafayette Campus Core)

ECE 608*-Computational Models & Methods

ECE 546*-Digital Computational techniques for Electronic Circuits

ECE 654*- Solid State Devices II (Prerequisite: ECE 606*)

ECE 612*-Nanoscale Transistors

ECE 670*-Modeling and Optimization of High-Performance Interconnects

Math Courses

MA 511* or MA 554-Linear Algebra with Applications

*denotes distance courses by Purdue University- Engineering Professional Education

Faculty: Dr. Kaliappan Gopalan, Dr. Muhammad Anan **