Education

University of California, Riverside
B.S. in Mechanical Engineering
Sep 2013 - Dec 2018

Provided is a list of courses taken and their applications. Core skills are bolded and underlined for ease of view.

for Applications in Finance & Analytics

- ME 175A Professional Topics in Engineering (upper-division)
  Topics include technical communication, teamwork, project management, **<u>engineering economics</u>**, professional ethics, and computer-aided design.

- ME 118 Mechanical Engineering Modeling and Analysis (upper-division)
  Introduces data analysis and modeling used in engineering through the software package MATLAB. Numerical methods include **<u>descriptive and inferential statistics, sampling and bootstrapping, fitting linear and nonlinear models to observed data</u>**, interpolation, numerical differentiation and integration, and solution of systems of ordinary differential equations. The final project involves the development and evaluation of a model for an engineering system.

- STAT 100A Introduction to Statistics (upper-division)
  A general introduction to descriptive and inferential statistics. Topics include **<u>histograms; descriptive statistics; probability; normal, binomial, and Poisson distributions; sampling distributions; hypothesis testing; and confidence intervals</u>**.

- ME 175D Technological Entrepreneurship (upper-division)
  Introduces concepts of business and management required to convert a technology into a viable business. Topics include **<u>technological assessment, market analysis, strategy, decision making, legal and intellectual property issues in business, financial analysis,</u>** business ethics and communication.

for Applications in Operations & Management

- BUS 105 Production and Operations Management (upper-division)
  Deals with the issues of **<u>design and control of production systems in manufacturing and service organizations</u>**. Covers product and process selection, capacity planning,

location and layout design, project and job scheduling, inventory control, material planning, and quality control.

- ME 175A Professional Topics in Engineering (upper-division)
  Topics include **technical communication**, teamwork, **project management**, engineering economics, professional ethics, and computer-aided design.

- BUS 144 Negotiation Fundamentals (upper-division)
  Develops an understanding of the theory and processes underlying a broad spectrum of negotiation problems**. Attains competency in negotiations by applying analytic and interpersonal skills** covered in readings and lecture to regular exercises and debriefings

- BUS 143 Judgment and Decision Making (upper-division)
  Covers decision making, including thinking and judgments; **information selection and evaluation;** learning and memory; the social side of judgment and decision making; fairness, moral obligations, and social dilemmas; and decision making in organizations.

for Applications in Communications and Presentations

- ENGR 180W Technical Communications (upper-division)
  Develops oral, written, and graphical communication skills. Includes preparing and critiquing reports, proposals, instructions, and business correspondence. Emphasizes professional and ethical responsibilities and the need to stay current on technology and its global impact on economics, society, and the environment

- TFDP 050 Public Speaking
  Covers the principles and practice of **effective speech composition and delivery**. Provides the communicative skills essential in professional careers and community life.

- TFDP 111A Advanced Acting: Shakespeare and the Power of Language (upper-division)
  Advanced scene study in classic theatre to develop the actor's **skills with heightened language.** Emphasizes works by Shakespeare. Topics include **performance styles and working on text, voice**, and the power of images.

for Applications in Engineering Design

- ME 009 Engineering Graphics and Design

Covers graphical concepts and projective geometry relating to spatial visualization and communication in design. Includes technical sketching, computer-aided design with solid modeling, geometric dimensioning and tolerancing, and an introduction to the engineering design process

- ME 174 Machine Design (upper-division)
  An introduction to the fundamentals of strength-based design. Topics include deflection and stiffness, static failure, and fatigue failure.

- ME 133 Introduction to Mechatronics (upper-division)
  Introduces hardware, software, sensors, actuators, physical systems models, and control theory in the context of control system implementation. Covers data acquisition (Labview), sensors, actuators, electric circuits and components, semiconductor electronics, logic circuits, signal processing using analog operational amplifiers, programmable logic controllers, and microcontroller programming and interfacing. Uses MATLAB and Simulink.

- ME 144 Introduction to Robotics (upper-division)
  Covers basic robot components from encoders to microprocessors. Kinematic and dynamic analysis of manipulators. Addresses open- and closed-loop control strategies, task planning, contact and non-contact sensors, robotic image understanding, and robotic programming languages. Experiments and projects include robot arm programming, robot vision, and mobile robots.

- ME 175BC Mechanical Engineering Design (upper-division)
  Outlines the defining of a design problem and the conception and detail of the design solution. Explores design theory, design for safety, reliability, manufacture, and assembly.

  Students create, test, and evaluate a prototype based on the project design generated in ME 175B. Lecture topics include prototyping techniques, design verification, and special topics in design.

for Applications in Entrepreneurship

- ME 175D Technological Entrepreneurship (upper-division)
  Introduces concepts of business and management required to convert a technology into a viable business. Topics include technological assessment, market analysis, strategy,

decision making, legal and intellectual property issues in business, financial analysis, business ethics and communication.