

SCHOOL OF ENGINEERING

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Courses

SCHOOL OF ENGINEERING

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- [Engr 102: Principles of Engineering](#)
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- [Engr 330: Engineering Systems Analysis and Design](#)
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- [Engr 415: Engineering Acoustics I](#)
- [Engr 431: Fundamentals of Systems Engineering](#)
- [Engr 450: Product Design and Development](#)
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- [Engr 582: Interdisciplinary Field Projects](#)
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- [Engr 590: Finite Element Analysis I](#)
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- [Engr 603: Fluid Mechanics I](#)
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- [Engr 609: Time Series Analysis](#)
- [Engr 610: Data Communications Protocols](#)
- [Engr 611: Aeroacoustics](#)
- [Engr 612: Aeroelasticity](#)



- [Engr 613: Exp Method in Aerodynamics/Aeroacoustics](#)
- [Engr 614: Geometrics](#)
- [Engr 615: Analytical Petroleum Geology](#)
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- [Engr 626: Numerical Methods in Electromagnetics](#)
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- [Engr 641: Clay Petrology](#)
- [Engr 642: X-Ray Diffraction Analysis](#)
- [Engr 643: Advanced Geomorphology](#)
- [Engr 644: Carbonate Petrology](#)
- [Engr 645: Contaminant Transport](#)
- [Engr 646: Advanced Stratigraphy](#)
- [Engr 647: Pavement Management Systems](#)
- [Engr 648: Numerical Modeling in Geoscience & Engr](#)
- [Engr 649: Advanced Foundation Engineering](#)
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- [Engr 653: Computer Structures](#)
- [Engr 654: Information Systems Principles](#)
- [Engr 654: Information Systems Principles](#)
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- [Engr 661: Computer Networks II](#)
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- [Engr 662: Advanced Artificial Intelligence](#)
- [Engr 663: Advanced Rate and Equilibrium Processes](#)
- [Engr 664: Theory of Concurrent Programming](#)
- [Engr 665: Thermodynamics of Chemical Systems](#)
- [Engr 666: Fault Tolerant Computing](#)
- [Engr 667: Mass Transfer I](#)
- [Engr 669: Chemical Reaction and Reactor Analysis I](#)
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- [Engr 671: Elasticity](#)
- [Engr 672: Viscoelasticity](#)
- [Engr 673: Plasticity](#)
- [Engr 674: Fracture Mechanics](#)
- [Engr 677: Plates and Shells](#)
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- [Engr 679: Wave Propagation](#)
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- [Engr 683: Advanced Physical Metallurgy](#)
- [Engr 684: Advanced Mechanical Metallurgy](#)
- [Engr 685: Mechanics of Composite Materials II](#)
- [Engr 686: Multimedia Technologies II](#)
- [Engr 687: Special Functions for Applications](#)
- [Engr 688: Current Issues in Telecommunications](#)
- [Engr 689: Control of Robotics Manipulators](#)
- [Engr 690: Finite Element Analysis II](#)
- [Engr 691: Special Topics in Engineering Science I](#)
- [Engr 692: Special Topics in Engineering Science II](#)
- [Engr 693: Research Topics in Engineering Science I](#)
- [Engr 694: Research Topics in Eng. Science II](#)
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- [Engr 697: Thesis](#)
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- [Engr 702: Finite Element Analysis of Fluid Flows](#)
- [Engr 706: Adv Waste Treat Proc in Sanitary Eng](#)
- [Engr 711: Turbulence](#)
- [Engr 712: Statistical Theory Turbulent Diffusion](#)
- [Engr 713: Hydrodynamic Stability](#)
- [Engr 714: Coastal Hydrodynamics](#)
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- [Engr 717: Special Topics in Thermal Science](#)
- [Engr 720: Advanced Turbulence](#)
- [Engr 729: Special Topics in Electromagnetic Theory](#)
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- [Engs 603: Analysis of Algorithms](#)
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- [Engs 627: Applied Probability Modeling](#)
- [Engs 633: Microwave Filters](#)
- [Engs 685: Business Geographics](#)
- [Manf 152: Intro to Engineering & Manufacturing II](#)
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- [Manf 355: Lean II: Continuous Flow/Layout](#)
- [Manf 396: Special Topics in Manufacturing](#)
- [Manf 397: Special Topics in Manufacturing](#)
- [Manf 452: Manf Design-Product Realization, II](#)
- [Manf 455: Lean III: Practical Problem Solving](#)
- [Manf 460: Introduction to Project Management](#)
- [Manf 465: Applications in Ops & Supply Chain Mgmt](#)
- [Manf 470: Principles of Lean Six Sigma](#)
- [Manf 496: Special Topics in Manufacturing](#)
- [Manf 497: Special Topics in Manufacturing](#)

CHEMICAL ENGINEERING

- [Ch E 101: Introduction to Chemical Engineering](#)



- [Ch E 103: Introduction to Chemical Engineering I](#)
- [Ch E 104: Introduction to Chemical Engineering II](#)
- [Ch E 251: Programming for Chemical Engineering](#)
- [Ch E 307: Chemical Process Principles I](#)
- [Ch E 308: Chemical Process Principles II](#)
- [Ch E 309: Intro to Chemical Engineering Design](#)
- [Ch E 313: Modeling and Simulation I](#)
- [Ch E 314: Modeling and Simulation II](#)
- [Ch E 316: Chemical Engineering Fluid Mechanics](#)
- [Ch E 317: Process Fluid Dynamics and Heat Transfer](#)
- [Ch E 318: Chem Engineering Heat and Mass Transfer](#)
- [Ch E 345: Engineering Economy](#)
- [Ch E 407: Chemical Engineering Projects I](#)
- [Ch E 408: Chemical Engineering Projects II](#)
- [Ch E 411: Chemical Engineering Seminar](#)
- [Ch E 412: Process Control and Safety](#)
- [Ch E 413: Chemical Process Safety](#)
- [Ch E 417: Separation Processes](#)
- [Ch E 421: Chemical Engineering Thermodynamics](#)
- [Ch E 423: Chemical Reactor Analysis and Design](#)
- [Ch E 431: ChE Mass and Energy Balance Lab](#)
- [Ch E 432: ChE Unit Operations Lab](#)
- [Ch E 433: ChE Design Lab](#)
- [Ch E 445: Chemical Engineering Lab I](#)
- [Ch E 446: Chemical Engineering Lab II](#)
- [Ch E 449: Process Design](#)
- [Ch E 450: Process Optimization](#)
- [Ch E 451: Plant Design I](#)
- [Ch E 452: Plant Design II](#)
- [Ch E 470: Principles of Lean Six Sigma](#)
- [Ch E 511: Process Dynamics and Control](#)
- [Ch E 513: Special Topics in Chemical Engineering](#)
- [Ch E 515: Research Seminar](#)
- [Ch E 520: Biochemical Engineering](#)
- [Ch E 521: Drug and Gene Delivery](#)
- [Ch E 522: Immunoengineering](#)
- [Ch E 523: Molecular and Cellular Biophysics](#)
- [Ch E 524: Microscopy for Engineers](#)
- [Ch E 528: Polymer Processing](#)
- [Ch E 530: Coal Utilization and Pollutants Control](#)
- [Ch E 535: Experimental Methods in Engineering](#)
- [Ch E 540: Coating Materials Process & Applications](#)
- [Ch E 541: Appl of Chemical Instrumentation I](#)
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- [Ch E 547: Sufactant Science and Applications](#)
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- [Ch E 560: Advanced Transport Phenomena I](#)
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- [Engr 540: Environmental Organic Transport Phenomen](#)
- [Engr 542: Molecular Modeling of Nano Materials](#)
- [Engr 544: Synth and Fab of Nano Materials](#)
- [Engr 545: Polymer Nanocomposites](#)

CIVIL ENGINEERING

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- [C E 307: Civil Engineering Laboratory I](#)
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- [C E 315: Civil Engineering Materials](#)
- [C E 325: Intermediate Mechanics](#)
- [C E 371: Intro to Environmental Engineering](#)
- [C E 407: Civil Engineering Laboratory II](#)
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- [C E 536: Designing with Geosynthetics](#)
- [C E 541: Flow in Open Channels](#)
- [C E 542: Flow in Porous Media](#)
- [C E 543: Sediment Transport](#)
- [C E 561: Civil Engineering Systems](#)
- [C E 570: Infrastructure Management](#)
- [C E 572: Stormwater Engineering and Management](#)
- [C E 574: Wastewater Engineering](#)
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- [C E 578: Agricultural Conservation for Eng & Sci](#)
- [C E 581: Transportation Engineering II](#)
- [C E 585: Highway Pavements](#)
- [C E 590: Airport Planning and Design](#)
- [Engr 541: Foundations of Nano Engineering and Sci](#)
- [Engr 547: Characterization Methods for Nanomaterials](#)

COMPUTER & INFORMATION SCIENCE

- [CIS 111: Computer Science I](#)
- [CIS 112: Computer Science II](#)
- [CIS 113: Honors Computer Science I](#)
- [CIS 211: Computer Science III](#)
- [CIS 251: Programming for Engineering and Sciences](#)
- [CIS 333: Digital Design and 3D Printing](#)
- [CIS 427: Network Security](#)
- [CIS 447: Immersive Media](#)
- [Csci 103: Survey of Computing](#)
- [Csci 111: Computer Science I](#)
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- [Csci 113: Honors Computer Science I](#)
- [Csci 191: Office Applications](#)



- [Csci 192: Computing Applications](#)
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- [Csci 256: Programming in Python](#)
- [Csci 259: Programming in C++](#)
- [Csci 300: Social Responsibility in Comp. Science](#)
- [Csci 305: Software for Global Use](#)
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- [Csci 325: Foundations of Computer Security](#)
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- [Csci 458: Mobile Application Development](#)
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- [Csci 492: Special Topics in Data Science](#)
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- [Csci 543: Data Mining](#)
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- [Csci 551: Computer System Performance Analysis](#)
- [Csci 555: Functional Programming](#)



- [Csci 557: GPU Computing](#)
- [Csci 561: Computer Networks](#)
- [Csci 562: Software Engineering I](#)
- [Csci 575: Database Systems](#)
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- [Csci 582: Special Topics in Computer Science II](#)
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ELECTRICAL ENGINEERING

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- [BME 320: Bioseparations](#)
- [BME 322: Biomaterials](#)
- [BME 333: Biological Transport](#)
- [BME 350: Immunotherapy](#)
- [BME 444: Biomedical Controls](#)
- [BME 461: Biomedical Engineering Senior Design I](#)
- [BME 462: Biomedical Engineering Senior Design II](#)
- [Cp E 421: Embedded Systems Design](#)
- [Cp E 431: Computer Architecture](#)
- [Cp E 432: Testing of Computing Systems](#)
- [Cp E 461: Senior Design in Computer Engineering I](#)
- [Cp E 462: Senior Design in Computer Engineering II](#)
- [ECE 361: Design and Design Tools in ECE](#)
- [EI E 100: Introduction to Electrical Engineering](#)
- [EI E 101: Survey of the Electrotechnology](#)
- [EI E 237: Electrical Engineering Tools and Toys](#)
- [EI E 301: Applied Electronics](#)
- [EI E 302: Applied Communication Systems](#)
- [EI E 322: Electric Circuit II](#)
- [EI E 331: Linear Systems](#)
- [EI E 333: Systems Laboratory](#)
- [EI E 335: Principles of Digital Systems](#)
- [EI E 336: Digital Systems Laboratory I](#)
- [EI E 337: Digital Systems Laboratory II](#)
- [EI E 340: Electrical Engineering Analysis I](#)
- [EI E 341: Theory of Fields](#)
- [EI E 351: Models and Circuits I](#)
- [EI E 352: Models and Circuits II](#)
- [EI E 353: Electronics Laboratory](#)
- [EI E 354: PC-Based Instrumentation Laboratory](#)
- [EI E 357: Electrical Engineering Problems I](#)
- [EI E 358: Electrical Engineering Problems II](#)
- [EI E 367: Computer-Aided Design in Electrical Engr](#)
- [EI E 385: Advanced Digital Systems](#)
- [EI E 386: Advanced Digital Systems Laboratory](#)
- [EI E 391: Random Signals](#)
- [EI E 431: Theory of Control Systems](#)
- [EI E 432: Robotics Laboratory](#)
- [EI E 433: High Frequency and Microwave Laboratory](#)
- [EI E 434: Fiber Optics Laboratory](#)
- [EI E 441: Electromagnetic Theory I](#)
- [EI E 442: Electromagnetic Theory II](#)
- [EI E 443: Network Analysis and Synthesis](#)
- [EI E 447: Modulation, Noise, and Communications](#)
- [EI E 449: Analog Communications Laboratory](#)
- [EI E 450: Digital Communications Laboratory](#)
- [EI E 451: Electrical Energy Conversion](#)



- [EI E 452: Electric Power Transformer Laboratory](#)
- [EI E 453: Solid State Devices](#)
- [EI E 461: Sr. Design in Electrical Engineering I](#)
- [EI E 462: Sr. Design in Electrical Engineering II](#)
- [EI E 481: Fund. Low Power Dig. VLSI Design](#)
- [EI E 482: Digital CMOS VLSI Design](#)
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- [EI E 486: Microprocessor Systems Engr Lab](#)
- [EI E 487: Digital Signal Processing Laboratory](#)
- [EI E 521: Electrical Engineering Projects I](#)
- [EI E 522: Electrical Engineering Projects II](#)
- [EI E 523: Microwave Engineering](#)
- [EI E 525: Introduction to Antennas](#)
- [EI E 533: Electronic Properties of Materials](#)
- [EI E 536: Introduction to Quantum Computing](#)
- [EI E 561: Microwave Circuit Design](#)

GEOLOGY & GEOLOGICAL ENGINEERING

- [G E 234: Intro. to Geol. Engr. Field Methods](#)
- [G E 301: Geological Eng. Design Field Camp 1](#)
- [G E 305: Geomechanics](#)
- [G E 401: Geological Eng. Design Field Camp 2](#)
- [G E 402: Professionalism in Geological Engr.](#)
- [G E 405: Engineering Geophysics](#)
- [G E 413: Prob. & Stat. Analyses in Eng. Design](#)
- [G E 415: Petroleum Geology](#)
- [G E 420: Subsurface Site Characterization](#)
- [G E 421: Geological Engineering Design](#)
- [G E 430: Geological Field Studies I](#)
- [G E 431: Geological Field Studies II](#)
- [G E 436: Field Camp G E Design](#)
- [G E 437: Geological Engineering Design Field Camp](#)
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- [G E 450: Hydrogeology](#)
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- [G E 470: Intro. to Geographic Information System](#)
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- [G E 530: Advanced Geomechanics](#)
- [G E 535: Advanced Rock Mechanics](#)
- [G E 555: Introduction to Mining Engineering](#)
- [G E 560: Waste Disposal I](#)
- [G E 561: Design of Waste Repositories](#)
- [G E 577: Geophysics I](#)
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- [Geol 101: Physical Geology](#)
- [Geol 102: Historical Geology](#)
- [Geol 103: Earth Dynamics](#)
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- [Geol 111: Physical Geology Laboratory](#)
- [Geol 112: Historical Geology Laboratory](#)
- [Geol 114: Environmental Geology Laboratory I](#)
- [Geol 115: Environmental Geology - Resources Lab](#)
- [Geol 120: Dinosaurs](#)
- [Geol 221: Mineralogy](#)
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- [Geol 225: Mineralogy & Elementary Petrology](#)
- [Geol 303: Structural and Tectonic Geology](#)
- [Geol 305: Geomorphology](#)
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- [Geol 406: Petrology](#)
- [Geol 410: Coastal and Reef Dynamics](#)
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