School of Engineering

Overview
Academics & Admissions
Departments
Programs
Minors
Courses
Faculty
Awards

Courses
School of Engineering

- C OP 201: CO-OP Work Experience
- C OP 202: CO-OP Work Experience
- C OP 300: Cooperative Education
- C OP 301: CO-OP Work Experience
- C OP 302: CO-OP Work Experience
- C OP 401: CO-OP Work Experience
- C OP 402: CO-OP Work Experience
- C OP 501: CO-OP Work Experience
- C OP 502: CO-OP Work Experience
- C OP 503: CO-OP Work Experience
- Engr 100: Introduction to Engineering
- Engr 102: Principles of Engineering
- Engr 196: Special Topics in Engineering Science
- Engr 197: Special Topics in Engineering Science
- Engr 207: Graphics I
- Engr 296: Special Topics in Engineering Science
- Engr 297: Special Topics in Engineering Science
- Engr 307: Technical Communications
- Engr 309: Statics
- Engr 310: Engineering Analysis I
- Engr 310: Engineering Analysis I
- Engr 311: Intermediate Mechanics
- Engr 312: Mechanics of Materials
- Engr 313: Introduction to Materials Science
- Engr 313: Introduction to Materials Science
- Engr 314: Materials Science Laboratory
- Engr 314: Materials Science Laboratory
- Engr 321: Thermodynamics
- Engr 321: Thermodynamics
- Engr 322: Transport Phenomena
- Engr 322: Transport Phenomena
- Engr 323: Fluid Mechanics
- Engr 323: Fluid Mechanics
- Engr 330: Engineering Systems Analysis and Design
- Engr 330: Engineering Systems Analysis and Design
- Engr 340: Engineering Geology
- Engr 340: Engineering Geology
- Engr 351: Socio-Technology I
- Engr 352: Socio-Technology II
- Engr 360: Electric Circuit Theory
- Engr 360: Electric Circuit Theory
- Engr 361: Electric Circuit Laboratory
- Engr 361: Electric Circuit Laboratory
- Engr 363: Introductory Electric Circuit Laboratory
- Engr 363: Introductory Electric Circuit Laboratory
- Engr 390: Professional Communication for Engineers
- Engr 396: Special Topics in Engineering Science
- Engr 397: Special Topics in Engineering Science
- Engr 400: Leadership & Professionalism in Engineer
- Engr 402: Engineering Fundamentals
- Engr 407: Legal and Moral Aspects of Engineering
- Engr 410: Engineering Analysis II
- Engr 410: Engineering Analysis II
- Engr 415: Engineering Acoustics I
- Engr 420: Engineering Analysis III
- Engr 420: Engineering Analysis III
- Engr 450: Product Design and Development
- Engr 450: Product Design and Development
- Engr 453: Prob and Stat Analyses in Engr Design
- Engr 496: Special Topics in Engineering Science
- Engr 497: Special Topics in Engineering Science
- Engr 501: Fundamentals of Computer Science

- Engr 502: Software Systems
- Engr 515: Acoustics
- Engr 551: Engineering Thermodynamics
- Engr 553: Heat Transfer
- Engr 553: Heat Transfer
- Engr 555: Field Testing & Insr. in Geotech. Engr.
- Engr 558: Vibration Analysis
- Engr 559: Elements of Robotics
- Engr 559: Elements of Robotics
- Engr 571: Service Learning in Water Treatment
- Engr 573: Environmental Remediation
- Engr 577: Geophysics I
- Engr 579: Geophysics II
- Engr 582: Interdisciplinary Field Projects
- Engr 585: Mechanics of Composite Materials I
- Engr 590: Finite Element Analysis I
- Engr 591: Engineering Analysis I
- Engr 592: Engineering Analysis II
- Engr 593: Approximate Methods of Engr Analysis I
- Engr 594: Approximate Methods of Engr Analysis II
- Engr 596: Special Projects in Engineering Science
- Engr 597: Special Projects in Engineering Science
- Engr 598: Special Projects in Engineering Science
- Engr 600: Advanced Geochemistry
- Engr 601: Compressible Flow
- Engr 602: Lithostratigraphy
- Engr 603: Fluid Mechanics I
- Engr 604: Fluid Dynamics II
- Engr 605: Convective Heat and Mass Transfer
- Engr 606: Numerical Heat Transfer and Fluid Flow
- Engr 607: Statistical Thermodynamics
- Engr 608: Physical Gas Dynamics
- Engr 609: Time Series Analysis
- Engr 610: Data Communications Protocols
- Engr 611: Aeroacoustics
- Engr 612: Aerodynamics
- Engr 613: Exp Method in Aerodynamics/Aeroacoustics
- Engr 614: Geometrics
- Engr 615: Analytical Petroleum Geology
- Engr 616: Isotope Hydrogeology
- Engr 617: Continuum Mechanics

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Sunday, July 10, 2022 at 5:53:34 am CDT
- Engr 618: Vadose Zone Hydrology
- Engr 620: Advanced Remote Sensing
- Engr 622: Advanced Electromagnetic Theory
- Engr 624: Active Microwave Circuits
- Engr 625: Adv. Topics in Computational Mechanics
- Engr 626: Numerical Methods in Electromagnetics
- Engr 627: Ray Methods in Electromagnetics
- Engr 629: Televisions Systems II
- Engr 633: Process Dynamics and Control I
- Engr 635: Optimization
- Engr 636: Groundwater Mechanics
- Engr 637: Groundwater Modeling
- Engr 641: Clay Petrology
- Engr 642: X-Ray Diffraction Analysis
- Engr 643: Advanced Geomorphology
- Engr 644: Carbonate Petrology
- Engr 645: Contaminant Transport
- Engr 648: Advanced Stratigraphy
- Engr 649: Numerical Modeling in Geoscience & Engr
- Engr 649: Advanced Foundation Engineering
- Engr 650: Radar Remote Sensing
- Engr 652: Advanced Compiler Design
- Engr 653: Computer Structures
- Engr 654: Information Systems Principles
- Engr 654: Information Systems Principles
- Engr 656: Operating Systems Design Concepts
- Engr 657: Timesharing Computer Systems
- Engr 659: Advanced Information Retrieval
- Engr 660: Software Engineering II
- Engr 660: Software Engineering II
- Engr 661: Computer Networks II
- Engr 661: Computer Networks II
- 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
- Engr 670: Chemical Reaction & Reactor Analysis II
- Engr 671: Elasticity
- Engr 672: Viscoelasticity
- Engr 673: Plasticity
- Engr 674: Fracture Mechanics
- Engr 677: Plates and Shells
- Engr 678: Elasticity
- Engr 679: Wave Propagation
- Engr 680: Advanced Acoustics
- 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
- Engr 695: Seminar
- Engr 696: Seminar in Environmental Engineering
- Engr 697: Thesis
- Engr 698: Special Topics in Engineering Science
- Engr 702: Finite Element Analysis of Fluid Flows
- Engr 711: Turbulence
- Engr 712: Statistical Theory Turbulent Diffusion
- Engr 713: Hydrodynamic Stability
- Engr 714: Coastal Hydrodynamics
- Engr 715: Applied Hydro- and Aeromechanics I
- Engr 716: Applied Hydro- and Aeromechanics II
- Engr 717: Special Topics in Thermal Science
- Engr 718: Coding for Error Code
- Engr 719: Advanced Microwave Measurements
- Engr 720: Advanced Turbulence
- Engr 721: Advanced Electrodynamics
- Engr 723: Passive Microwave Circuits
- Engr 725: Antennas
- Engr 729: Special Topics in Electromagnetic Theory
- Engr 748: Special Topics in Soil Science
- Engr 779: Special Topics in Solid Mechanics
- Engr 797: Dissertation
- Engs 501: Geospatial Primer
- Engs 504: Remote Sensing Fundamentals
- Engs 523: Sensors and Platforms
- Engs 603: Analysis of Algorithms
- Engs 606: Computer Networks
- Engs 610: Telecommunication Network Engineering
- Engs 611: Geospatial Science Primer
- Engs 612: Remote Sensing Fundamentals
- Engs 613: Introduction to Remote Sensing Systems
- Engs 614: Remote Sensing and Digital Images
- Engs 620: Geospatial Information Technology
- Engs 621: Orbital Mechanics
- Engs 624: Introduction to Digital Image Processing
- Engs 626: Community Growth
- Engs 627: Applied Probability Modeling
- Engs 633: Microwave Filters
- Engs 671: Digital Topographic Mapping
- Engs 672: Remote Sensing and the Environment
- Engs 673: Advanced Digital Image Processing
- Engs 674: Geospatial Data Synthesis and Modeling
- Engs 675: Microwave Data
- Engs 681: Advanced Sensor Systems Data Collection
- Engs 682: Remote Sensing to Ecological Modeling
- Engs 683: Land Use and Land Cover Applications
- Engs 684: Agricultural Applications Remote Sensing
- Engs 685: Business Geographics
- GE 681: Applications in Geophysics
- Manf 150: Intro to Engineering / Manufacturing
- Manf 152: Intro to Engineering & Manufacturing II
- Manf 250: Graphics/Solid Modeling
- Manf 251: Manufacturing Processes
- Manf 252: Product Realization Laboratory
- Manf 253: Strategic Planning
- Manf 254: Continuous Flow/Layout

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Sunday, July 10, 2022 at 5:53:34 am CDT
• Manf 255: Lean I: Standardized Work & Takt Time
• Manf 350: Standardized Work/Takt Time
• Manf 351: Manufacturing Product/Process Design
• Manf 353: Accounting & Financial Mgmt for Manf
• Manf 355: Lean II: Continuous Flow/Layout
• Manf 396: Special Topics in Manufacturing
• Manf 397: Special Topics in Manufacturing
• Manf 450: Practical Problem Solving in Manf
• Manf 451: Manf Design-Product Realization
• 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

Biomedical Engineering
• BME 200: Introduction to Biomedical Engineering
• BME 222: Biomaterials
• BME 301: Bioinstrumentation
• BME 311: Biomechanics
• BME 313: Physiology for Biomedical Engineering
• BME 314: Biomedical Measurement
• BME 320: Bioseparations
• BME 333: Biological Transport
• BME 350: Immoengineering
• BME 370: Intro to Bioinformatics & Biostatistics
• BME 413: Biomedical Signal Processing
• BME 444: Biomedical Controls
• BME 461: Biomedical Engineering Senior Design I
• BME 462: Biomedical Engineering Senior Design II
• BME 501: Computational and Systems Biomedicine
• BME 510: Drug and Gene Delivery
• BME 520: Biochemical Process Engineering
• BME 522: Immunoengineering
• BME 523: Molecular and Cellular Biophysics
• BME 524: Microscopy for Engineers

Chemical Engineering
• Ch E 101: Introduction to Chemical Engineering
• Ch E 251: Programming for Chemical Engineering
• Ch E 307: Chemical Process Principles I
• Ch E 308: Chemical Process Principles II
• Ch E 317: Process Fluid Dynamics and Heat Transfer
• Ch E 318: Chem Engineering Heat and Mass Transfer
• Ch E 330: Chemical Eng. R & D Experience
• 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 449: Process Design
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• 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
• C E 581: Transportation Engineering II
• C E 585: Highway Pavements
• C E 590: Airport Planning and Design

Computer & Information Science
• Csci 103: Survey of Computing
• Csci 111: Computer Science I
• Csci 112: Computer Science II
• Csci 191: Office Applications
• Csci 192: Computing Applications
• Csci 193: Personal Computer Systems
• Csci 203: Introduction to Computational Media
• Csci 211: Computer Science III
• Csci 223: Computer Org. & Assembly Language
• Csci 251: Programming for Engineering and Sciences
• Csci 256: Programming in Python
• Csci 259: Programming in C++
• Csci 300: Social Responsibility in Comp. Science
• Csci 305: Software for Global Use
• Csci 311: Models of Computation
• Csci 323: Systems of Programming
• Csci 325: Foundations of Computer Security
• Csci 333: Digital Design and 3-D Printing
• Csci 343: Fundamentals of Data Science
• Csci 345: Information Storage and Retrieval
• Csci 353: Introduction to Numerical Methods
• Csci 354: Web Programming
• Csci 356: Data Structures in Python
• Csci 361: Introduction to Computer Networks
• Csci 387: Software Design and Development
• Csci 390: Special Topics in Programming
• Csci 391: Computer Graphics
• Csci 405: Computer Simulation
• Csci 423: Introduction to Operating Systems
• Csci 425: Code Generation and Optimization
• Csci 426: System Security
• Csci 427: Network Security
• Csci 431: Robotics Programming
• Csci 433: Algorithm and Data Structure Analysis
• Csci 443: Advanced Data Science
• Csci 444: Information Visualization
• Csci 447: Immersive Media
• Csci 450: Organization of Programming Languages
• Csci 458: Mobile Application Development
• Csci 475: Introduction to Database Systems
• Csci 487: Senior Project
• Csci 490: Special Topics
• Csci 491: Special Topics in Computer Security
• Csci 492: Special Topics in Data Science
• Csci 500: Fundamental Concepts in Computing
• Csci 501: Fundamental Concepts in Systems
• Csci 502: Fundamental Concepts in Algorithms
• Csci 503: Fundamental Concepts in Languages
• Csci 517: Natural Language Processing
• Csci 520: Formal Theory of Computer Languages
• Csci 521: Computer Systems Engineering
• Csci 523: Operating Systems
• Csci 524: Distributed Operating System Design
• Csci 525: Compiler Construction
• Csci 526: Parallel Computing
• Csci 530: Computer Architecture and Design
• Csci 531: Artificial Intelligence
• Csci 533: Analysis of Algorithms
• Csci 541: Expert Systems and Logic Programming
• Csci 543: Data Mining
• Csci 547: Digital Image Processing
• Csci 550: Program Semantics and Derivation
• Csci 551: Computer System Performance Analysis
• Csci 554: Web Architecture and Programming
• Csci 555: Functional Programming
• Csci 556: Multiparadigm Programming
• Csci 557: GPU Computing
• Csci 561: Computer Networks
• Csci 562: Software Engineering I
• Csci 575: Database Systems
• Csci 581: Special Topics in Computer Science I
• Csci 582: Special Topics in Computer Science II
• Csci 632: Machine Learning
• Csci 638: Software Language Engineering
• Csci 663: Software Families
• Csci 665: Wireless and Sensor Networks

**Electrical and Computer Engineering**

• 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
• El E 100: Introduction to Electrical Engineering
• El E 235: Principles of Digital Systems
• El E 236: Digital Systems Laboratory I
• El E 237: Electrical Engineering Tools and Toys
• El E 322: Electric Circuit II
• El E 331: Signals and Systems
• El E 337: Digital Systems Laboratory II
• El E 340: Electrical Engineering Analysis I
• El E 341: Theory of Fields
• El E 351: Electronics Circuits I
• El E 352: Electronics Circuits II
• El E 353: Electronics Laboratory
• El E 357: Electrical Engineering Problems I
• El E 367: Computer-Aided Design in Electrical Engr
• El E 385: Advanced Digital Systems
• El E 386: Advanced Digital Systems Laboratory
• El E 391: Probability and Random Signals
• El E 415: Telecommunications Laboratory
• El E 425: Local Area Networks
• El E 431: Theory of Control Systems
• El E 432: Robotics Laboratory
• El E 433: High Frequency and Microwave Laboratory
• El E 441: Electromagnetic Theory I
• El E 442: Electromagnetic Theory II
• El E 443: Network Analysis and Synthesis

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El E 447: Modulation, Noise, and Communications
El E 451: Electrical Energy Conversion
El E 453: Solid State Devices
El E 461: Sr. Design in Electrical Engineering I
El E 462: Sr. Design in Electrical Engineering II
El E 481: Fund. Low Power Dig. VLSI Design
El E 482: Digital CMOS VLSI Design
El E 485: Microprocessor Systems Engineering
El E 486: Microprocessor Systems Engr Lab
El E 487: Digital Signal Processing Laboratory
El E 521: Electrical Engineering Projects I
El E 522: Electrical Engineering Projects II
El E 523: Microwave Engineering
El E 525: Introduction to Antennas
El E 533: Electronic Properties of Materials
El E 534: Wireless Mobile Communications
El E 535: Digital Communications
El E 536: Introduction to Quantum Computing
El E 561: Microwave Circuit Design
El E 586: Digital Signal Processing

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 405: Engineering Geophysics
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 436: Field Camp G E Design
G E 437: Geological Engineering Design Field Camp
G E 450: Hydrogeology
G E 470: Intro. to Geographic Information System
G E 490: Directed Studies and Projects
G E 503: Environmental Geochemistry
G E 507: Regional Geological Engineering
G E 510: Remote Sensing
G E 511: Spatial Analysis
G E 513: Economic Geology
G E 525: Engineering Seismology
G E 530: Advanced Geomechanics
G E 540: Rock Mechanics
G E 577: Geophysics I
G E 591: Special Topics
G E 635: Advanced Rock Mechanics
Geol 101: Physical Geology
Geol 102: Historical Geology
Geol 103: Earth Dynamics
Geol 104: Environmental Geology - Hazards
Geol 105: Environmental Geology - Resources
Geol 106: Earth History
Geol 107: Introduction to Oceanography
Geol 111: Physical Geology Laboratory
Geol 112: Historical Geology Laboratory
Geol 114: Environmental Geology-Hazards Laboratory
Geol 115: Environmental Geology - Resources Lab
Geol 120: Dinosaurs
• Geol 203: Earth Dynamics Laboratory Content
• Geol 221: Mineralogy
• Geol 222: Elementary Petrology
• Geol 225: Mineralogy & Elementary Petrology
• Geol 303: Structural and Tectonic Geology
• Geol 305: Geomorphology
• Geol 309: Invertebrate Paleontology
• Geol 314: Sedimentology and Stratigraphy
• Geol 410: Coastal and Reef Dynamics
• Geol 420: Optical Mineralogy
• Geol 500: Intro. to Geographic Information Systems
• Geol 505: Hydrogeology
• Geol 517: Global Tectonics
• Geol 518: Quantitative Methods in Geo. & Geo Eng
• Geol 520: Advanced Igneous and Metamorphic Petrolo
• Geol 530: Geology Field Studies
• Geol 535: Geochemistry
• Geol 544: Advanced Geographic Information Systems
• Geol 615: Geostatistics
• Geol 630: Coastal Plain Geology
• Geol 643: Advanced Geomorphology
• Geol 645: Advanced Sedimentation
• Geol 646: Advanced Stratigraphy
• Geol 647: Sedimentary Petrology
• Geol 648: Metamorphic Petrology
• Geol 649: Pedology
• Geol 690: Scientific Writing
• Geol 697: Thesis

Mechanical Engineering
• M E 101: Introduction to Mechanical Engineering
• M E 201: Engineering Graphics Fundamentals
• M E 324: Introduction to Mechanical Design
• M E 325: Intermediate Dynamics
• M E 401: Thermo-fluid Dynamics
• M E 402: Elements of Propulsion
• M E 406: Alternative Energy Systems
• M E 416: Structures and Dynamics Laboratory
• M E 417: Projects
• M E 418: Projects
• M E 419: Energy and Fluids Laboratory
• M E 421: Structural Analysis
• M E 426: Kinematics: Analysis and Synthesis
• M E 428: Dynamics of Machinery
• M E 438: Mechanical Engineering Design
• M E 521: Projects
• M E 522: Projects
• M E 523: Special Topics in Mechanical Engineering
• M E 524: Special Topics in Mechanical Engineering
• M E 525: Advanced Dynamics
• M E 527: Materials Processing
• M E 529: Aerodynamics
• M E 530: Physical Metallurgy
• M E 531: Mechanical Behavior of Engr Materials
• M E 533: Electronic Properties of Materials
• M E 534: Properties and Selection of Materials
• M E 535: Experimental Stress Analysis
• M E 537: Mechatronic Systems Engineering
• M E 541: Theory and Use of CAD and Solid Modeling
• M E 543: Linear Systems and Controls

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