

# School of Engineering

**Overview** 

Academics & Admissions

**Departments** 

Programs

**Minors** 

<u>Courses</u>

Faculty

Awards

# Courses School of Engineering

- <u>C OP 201: CO-OP Work Experience</u>
- <u>C OP 202: CO-OP Work Experience</u>
- <u>C OP 300: Cooperative Education</u>
- <u>C OP 301: CO-OP Work Experience</u>
- <u>C OP 302: CO-OP Work Experience</u>
- <u>C OP 401: CO-OP Work Experience</u>
- C OP 402: CO-OP Work Experience
- <u>C OP 501: CO-OP Work Experience</u>
- <u>C OP 502: CO-OP Work Experience</u>
- <u>C OP 503: CO-OP Work Experience</u>
- Engr 100: Introduction to Engineering
- Engr 101: Engineering Fundamentals
- Engr 102: Principles of Engineering
- Engr 111: Engineering Fundamentals Lab
- Engr 196: Special Topics in Engineering Science
- Engr 197: Special Topics in Engineering Science
- Engr 201: Computer Aided Design for Engineering
- Engr 207: Graphics I

Engr 208: Graphics II

- Engr 296: Special Topics in Engineering Science
- Engr 297: Special Topics in Engineering Science
- Engr 301: Environmental Engineering Lab I
- Engr 302: Fluid Mechanics Laboratory
- 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 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
- <u>Engr 221</u>. 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

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- 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 401: Environmental Engineering Lab II
- 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 431: Fundamentals of Systems Engineering
- Engr 450: Product Design and Development
- Engr 450: Product Design and Development
- Engr 451: General Engineering Senior Design I
- Engr 452: General Engineering Senior Design II
- 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 537: Environmental Engineering II
- 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 572: Advanced Sanitary Analysis
- 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
- <u>Engr 592. Engineering Analysis in</u>
- 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: Aeroelasticity
- Engr 613: Exp Method in Aerodynamics/Aeroacoustics
- Engr 614: Geometrics
- Engr 615: Analytical Petroleum Geology
- Engr 616: Isotope Hydrogeology
- Engr 617: Continuum Mechanics
- 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 630: Unit Process & Oper in Env Eng I
- Engr 631: Unit Process & Oper in Env Eng II
- Engr 632: Sludge Treatment and Disposal
- Engr 633: Process Dynamics and Control I
- Engr 634: Treatment & Disposal of Industrial Waste
- Engr 635: Optimization
- Engr 636: Groundwater Mechanics
- Engr 637: Groundwater Modeling
- Engr 638: Hazardous Waste Management
- Engr 639: Environmental Systems Engineering
- Engr 640: Stream and Estuarine Analysis
- 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
- 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
- Eligi 003. Advanced Rate and Equilibrium Proces
- 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: Elasticstability
- 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 699: Special Topics in Engineering Science
- 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
- 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 728: Adv Numerical Methods in Electromagnetic
- Engr 729: Special Topics in Electromagnetic Theory
- Engr 749: 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

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- 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
- <u>G E 681: Applications in Geophysics</u>
- 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
- 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 305: Bioengineering Thermodynamics & Kinetics
- BME 311: Biomechanics
- BME 313: Physiology for Biomedical Engineering
- BME 314: Biomedical Measurement
- BME 315: Physiology for Biomedical Engineering II
- BME 320: Bioseparations
- BME 333: Biological Transport
- BME 350: Immunoengineering
- BME 353: Biodevices Design & Development
- BME 370: Intro to Bioinformatics & Biostatistics
- BME 411: Tissue Mechanics
- 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 511: Computational Biomechanics
- BME 520: Biochemical Process Engineering





- BME 522: Immunoengineering
- BME 523: Molecular and Cellular Biophysics
- BME 524: Microscopy for Engineers
- BME 600: Graduate Professional Development
- BME 601: Biomedical Engineering Seminar

#### **Chemical Engineering**

- <u>Ch E 101: Introduction to Chemical Engineering</u>
- <u>Ch E 103: Introduction to Chemical Engineering I</u>
- <u>Ch E 104: Introduction to Chemical Engineering II</u>
- <u>Ch E 251: Programming for Chemical Engineering</u>
- <u>Ch E 307: Chemical Process Principles I</u>
- <u>Ch E 308: Chemical Process Principles II</u>
- <u>Ch E 309: Intro to Chemical Engineering Design</u>
- <u>Ch E 313: Modeling and Simulation I</u>
- <u>Ch E 314: Modeling and Simulation II</u>
- <u>Ch E 316: Chemical Engineering Fluid Mechanics</u>
- Ch E 317: Process Fluid Dynamics and Heat Transfer
- <u>Ch E 318: Chem Engineering Heat and Mass Transfer</u>
- Ch E 330: Chemical Eng. R & D Experience
- <u>Ch E 345: Engineering Economy</u>
- 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
- <u>Ch E 432: ChE Unit Operations Lab</u>
- Ch E 433: ChE Design Lab
- Ch E 445: Chemical Engineering Lab I
- Ch E 446: Chemical Engineering Lab II
- <u>Ch E 449: Process Design</u>
- <u>Ch E 450: Process Optimization</u>
- <u>Ch E 451: Plant Design I</u>
- <u>Ch E 452: Product and Process Development</u>
- <u>Ch E 460: Product Design I:Development, Evaluation</u>
- <u>Ch E 461: Product Design II: Product Realization</u>
- 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
- <u>Ch E 522: Immunoengineering</u>
- Ch E 523: Molecular and Cellular Biophysics
- <u>Ch E 524: Microscopy for Engineers</u>
- <u>Ch E 528: Polymer Processing</u>
- <u>Ch E 530: Coal Utilization and Pollutants Control</u>
- <u>Ch E 535: Experimental Methods in Engineering</u>
- Ch E 540: Coating Materials Process & Applications
- Ch E 541: Appl of Chemical Instrumentation I
- Ch E 542: Appl of Chemical Instrumentation II
- Ch E 543: Introduction to Polymer Science
- Ch E 545: Colloid and Surface Science
- Ch E 547: Sufactant Science and Applications
- <u>Ch E 550: Membrane Science and Engineering</u>
- Ch E 560: Advanced Transport Phenomena I





- <u>Ch E 561: Advanced Transport Phenomena II</u>
- <u>Ch E 593: Graduate Projects in Chemical Engr</u>
- <u>Ch E 660: Advanced Transport Phenomena I</u>
- <u>Ch E 661: Advanced Transport Phenomena II</u>
- 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**

- C E 101: Introduction to Civil Engineering I
- <u>C E 102: Introduction to Civil Engineering II</u>
- <u>C E 205: Civil Engineering Laboratory I</u>
- <u>C E 207: Surveying</u>
- C E 208: Civil Engineering Graphics I
- <u>C E 301: Environmental and Water Resources Lab</u>
- <u>C E 302: Mechanics Laboratory</u>
- <u>C E 303: Materials Laboratory</u>
- C E 305: Civil Engineering Laboratory II
- C E 310: Introduction to Structural Mechanics
- C E 311: Structural Analysis
- C E 315: Civil Engineering Materials
- <u>C E 325: Intermediate Dynamics</u>
- C E 371: Intro to Environmental Engineering
- C E 401: Civil Engineering Fundamentals
- <u>C E 402: Soil Mechanics Laboratory</u>
- C E 405: Civil Engineering Laboratory III
- <u>C E 412: Design of Concrete Structures</u>
- <u>C E 413: Steel Design</u>
- <u>C E 414: Advanced Concrete Design</u>
- <u>C E 416: Bridge Engineering</u>
- <u>C E 417: Construction Engineering and Management</u>
- C E 421: Matrix Analysis of Structures
- <u>C E 431: Soil Mechanics I</u>
- <u>C E 433: Foundation Engineering</u>
- C E 435: Advanced Geotechnical Engineering
- C E 452: Civil Engineering Analysis
- <u>C E 454: Engineering Design I</u>
- <u>C E 455: Civil Engineering Design I</u>
- C E 456: Civil Engineering Design II
- C E 471: Environmental Engineering I
- C E 472: Water Resources Engineering
- C E 481: Transportation Engineering I
- C E 495: Geospatial Analysis for Engr & Vis Apps
- C E 497: Civil Engineering Projects
- C E 500: Geographic Information Systems Engr Sci
- <u>C E 511: Structural Dynamics</u>
- <u>C E 513: Advanced Steel Design</u>
- C E 514: Pre-Stressed Concrete Design
- C E 516: Bridge Engineering
- C E 521: Advanced Mechanics of Materials
- C E 531: Soil Mechanics II
- <u>C E 536: Designing with Geosynthetics</u>
- C E 541: Flow in Open Channels
- C E 542: Flow in Porous Media
- C E 543: Sediment Transport
- <u>C E 561: Civil Engineering Systems</u>
- C E 570: Infrastructure Management
- C E 572: Stormwater Engineering and Management
- <u>C E 574</u>: Wastewater Engineering





- <u>C E 575: Drinking Water Engineering</u>
- C E 578: Agricultural Conservation for Eng & Sci
- <u>C E 581: Transportation Engineering II</u>
- <u>C E 585: Highway Pavements</u>
- C E 590: Airport Planning and Design
- Engr 541: Foundations of Nano Engineering and Sci
- Engr 547: Characterization MethodsforNanomaterials

# **Computer & Information Science**

- <u>CIS 111: Computer Science I</u>
- <u>CIS 112: Computer Science II</u>
- <u>CIS 113: Honors Computer Science I</u>
- <u>CIS 211: Computer Science III</u>
- CIS 251: Programming for Engineering and Sciences
- <u>CIS 333: Digital Design and 3D Printing</u>
- <u>CIS 427: Network Security</u>
- CIS 447: Immersive Media
- <u>Csci 103: Survey of Computing</u>
- <u>Csci 111: Computer Science I</u>
- <u>Csci 112: Computer Science II</u>
- <u>Csci 113: Honors Computer Science I</u>
- <u>Csci 191: Office Applications</u>
- <u>Csci 192: Computing Applications</u>
- Csci 193: Personal Computer Systems
- <u>Csci 203: Introduction to Computational Media</u>
- <u>Csci 211: Computer Science III</u>
- <u>Csci 223: Computer Org. & Assembly Language</u>
- Csci 251: Programming for Engineering and Sciences
- <u>Csci 256: Programming in Python</u>
- <u>Csci 259: Programming in C++</u>
- <u>Csci 300: Social Responsibility in Comp. Science</u>
- <u>Csci 305: Software for Global Use</u>
- <u>Csci 311: Models of Computation</u>
- <u>Csci 323: Systems of Programming</u>
- <u>Csci 325: Foundations of Computer Security</u>
- Csci 333: Digital Design and 3-D Printing
- <u>Csci 343: Fundamentals of Data Science</u>
- <u>Csci 345: Information Storage and Retrieval</u>
- <u>Csci 353: Introduction to Numerical Methods</u>
- <u>Csci 354: Web Programming</u>
- <u>Csci 356: Data Structures in Python</u>
- Csci 361: Introduction to Computer Networks
- <u>Csci 387: Software Design and Development</u>
- 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
- <u>Csci 426: System Security</u>
- <u>Csci 427: Network Security</u>
- <u>Csci 431: Robotics Programming</u>
- <u>Csci 433: Algorithm and Data Structure Analysis</u>
- <u>Csci 443: Advanced Data Science</u>
- <u>Csci 444: Information Visualization</u>
- <u>Csci 447: Immersive Media</u>
- Csci 450: Organization of Programming Languages
- <u>Csci 458: Mobile Application Development</u>
- Csci 475: Introduction to Database Systems
- <u>Csci 487: Senior Project</u>
- <u>Csci 490: Special Topics</u>

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- <u>Csci 491: Special Topics in Computer Security</u>
- <u>Csci 492: Special Topics in Data Science</u>
- <u>Csci 500: Fundamental Concepts in Computing</u>
- <u>Csci 501: Fundamental Concepts in Systems</u>
- <u>Csci 502: Fundamental Concepts in Algorithms</u>
- <u>Csci 503: Fundamental Concepts in Languages</u>
- <u>Csci 517: Natural Language Processing</u>
- <u>Csci 520: Formal Theory of Computer Languages</u>
- <u>Csci 521: Computer Systems Engineering</u>
- <u>Csci 523: Operating Systems</u>
- <u>Csci 524: Distributed Operating System Design</u>
- <u>Csci 525: Compiler Construction</u>
- <u>Csci 526: Parallel Computing</u>
- <u>Csci 530: Computer Architecture and Design</u>
- <u>Csci 531: Artificial Intelligence</u>
- <u>Csci 533: Analysis of Algorithms</u>
- <u>Csci 541: Expert Systems and Logic Programming</u>
- <u>Csci 543: Data Mining</u>
- <u>Csci 547: Digital Image Processing</u>
- <u>Csci 550: Program Semantics and Derivation</u>
- <u>Csci 551: Computer System Performance Analysis</u>
- <u>Csci 554: Web Architecture and Programming</u>
- <u>Csci 555: Functional Programming</u>
- <u>Csci 556: Multiparadigm Programming</u>
- <u>Csci 557: GPU Computing</u>
- <u>Csci 561: Computer Networks</u>
- <u>Csci 562: Software Engineering I</u>
- <u>Csci 575: Database Systems</u>
- <u>Csci 581: Special Topics in Computer Science I</u>
- <u>Csci 582: Special Topics in Computer Science II</u>
- <u>Csci 632: Machine Learning</u>
- <u>Csci 658: Software Language Engineering</u>
- <u>Csci 663: Software Families</u>
- <u>Csci 665: Wireless and Sensor Networks</u>

# **Electrical and Computer Engineering**

- <u>Cp E 421: Embedded Systems Design</u>
- <u>Cp E 431: Computer Architecture</u>
- <u>Cp E 432: Testing of Computing Systems</u>
- 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 101: Survey of the Electrotechnology
- El E 235: Principles of Digital Systems
- El E 236: Digital Systems Laboratory I
- EI E 237: Electrical Engineering Tools and Toys
- El E 301: Applied Electronics
- El E 302: Applied Communication Systems
- El E 322: Electric Circuit II
- EI E 331: Signals and Systems
- EI E 337: Digital Systems Laboratory II
- El E 340: Electrical Engineering Analysis I
- EI E 341: Theory of Fields
- El E 351: Electronics Circuits I
- El E 352: Electronics Circuits II
- El E 353: Electronics Laboratory
- EI E 354: PC-Based Instrumentation Laboratory
- El E 357: Electrical Engineering Problems I
- El E 358: Electrical Engineering Problems II





- 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
- EI E 415: Telecommunications Laboratory
- El E 425: Local Area Networks
- EI E 431: Theory of Control Systems
- El E 432: Robotics Laboratory
- EI E 433: High Frequency and Microwave Laboratory
- EI E 434: Fiber Optics Laboratory
- EI E 436: Systems 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
- El E 449: Analog Communications Laboratory
- El E 450: Digital Communications Laboratory
- El E 451: Electrical Energy Conversion
- EI E 452: Electric Power Transformer Laboratory
- 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
- EI 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
- EI E 523: Microwave Engineering
- EI E 525: Introduction to Antennas
- El E 533: Electronic Properties of Materials
- El E 534: Wireless Mobile Communications
- El E 535: Digital Communications
- EI E 536: Introduction to Quantum Computing
- El E 561: Microwave Circuit Design
- EI E 586: Digital Signal Processing

## **Geology & Geological Engineering**

- G E 234: Intro. to Geol. Engr. Field Methods
- <u>G E 301: Geological Eng. Design Field Camp 1</u>
- 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
- <u>G E 415: Petroleum Geology</u>
- G E 420: Subsurface Site Characterization
- <u>G E 421: Geological Engineering Design</u>
- <u>G E 430: Geological Field Studies I</u>
- G E 431: Geological Field Studies II
- G E 436: Field Camp G E Design
- G E 437: Geological Engineering Design Field Camp
- <u>G E 450: Hydrogeology</u>
- <u>G E 460: Fundamentals of Waste Management</u>
- <u>G E 470: Intro. to Geographic Information System</u>
- <u>G E 490: Directed Studies and Projects</u>
- <u>G E 500: Introduction to Geochemistry I</u>
- <u>G E 502: Construction Geological Engineering</u>
- <u>G E 503: Environmental Geochemistry</u>





- <u>G E 504: Envi. Geochemistry Lab & Field Methods</u>
- <u>G E 506: Geomechanics for Geologists</u>
- <u>G E 507: Regional Geological Engineering</u>
- <u>G E 510: Remote Sensing</u>
- <u>G E 511: Spatial Analysis</u>
- <u>G E 513: Economic Geology</u>
- G E 520: Geol. & G.E. Computer Applications
- <u>G E 525: Engineering Seismology</u>
- <u>G E 530: Advanced Geomechanics</u>
- <u>G E 540: Rock Mechanics</u>
- <u>G E 555: Introduction to Mining Engineering</u>
- <u>G E 560: Waste Disposal I</u>
- <u>G E 561: Design of Waste Repositories</u>
- <u>G E 577: Geophysics I</u>
- <u>G E 591: Special Topics</u>
- <u>G E 635: Advanced Rock Mechanics</u>
- 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 406: Petrology
- Geol 410: Coastal and Reef Dynamics
- Geol 420: Optical Mineralogy
- Geol 500: Intro. to Geographic Information Systems
- Geol 505: Hydrogeology
- Geol 506: Advanced Petrology
- Geol 515: Directed Studies
- 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 550: Oceanography and Marine Geology
- Geol 555: Geology and Geol. Engineering Seminar
- Geol 603: Earth Sciences I
- Geol 604: Earth Sciences II
- Geol 609: Earth Science Projects
- Geol 610: Earth Science Projects
- Geol 611: Advanced Studies in Geology
- Geol 613: Instrumental and Analytical Procedure
- Geol 614: Advanced Geographic Information Systems
- Geol 615: Geostatistics
- Geol 630: Coastal Plain Geology

The University of Mississippi is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates and baccalaureate, master's, specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or visit online at www.sacscoc.org for questions about the accreditation.



ogy Petrology



- Geol 641: Clay Petrology
- Geol 642: X-Ray Diff Analysis Inorg Crys Materials
- Geol 643: Advanced Geomorphology
- Geol 644: Advanced Paleontology
- 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**

- Engr 523: Engineering Thermal Management
- Engr 546: Micro/Nanoscale Fabrication
- Engr 554: Computational Heat Transfer
- 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 399: Thermodynamics II
- M E 401: Thermo-fluid Dynamics
- M E 402: Elements of Propulsion
- M E 404: Applied Fluid Mechanics
- 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 420: Experimental Mechanical Engineering II
- M E 421: Structural Analysis
- M E 422: Structural Design I
- M E 426: Kinematics: Analysis and Synthesis
- M E 427: Kinematic Analysis and Synthesis
- M E 428: Dynamics of Machinery
- M E 438: Mechanical Engineering Design
- <u>M E 521: Projects</u>
- M E 522: Projects
- M E 523: Special Topics in Mechanical Engineering
- M E 524: Special Topics in Mechanical Engineering
- <u>M E 525: Advanced Dynamics</u>
- M E 526: Experimental Methods
- M E 527: Materials Processing
- M E 528: Polymer Processing
- M E 529: Aerodynamics
- M E 530: Physical Metallurgy
- M E 531: Mechanical Behavior of Engr Materials
- M E 532: Glass and Ceramics
- 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 538: Exprl Character of Polymer Composites
- M E 540: Failure Analysis
- M E 541: Theory and Use of CAD and Solid Modeling
- M E 543: Linear Systems and Controls
- M E 555: Heating Ventilation and Air-Conditioning

