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 308: 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
- 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

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.

https://catalog.olemiss.edu/2023/fall/undergraduate/engineering/courses
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.

https://catalog.olemiss.edu/2023/fall/undergraduate/engineering/courses
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 646: Advanced Stratigraphy
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
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 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 777: 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
• 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: Immunoenengineering
• 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: Immunoeengineering
• 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 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 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
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.

https://catalog.olemiss.edu/2023/fall/undergraduate/engineering/courses
• 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
• 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
• C E 575: Drinking Water 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

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.
- 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: Multi-paradigm 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 658: 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
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 Petrology
- Geol 530: Geology Field Studies
- Geol 535: Geochemistry
- Geol 514: 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
- Engr 546: Micro/Nanoscale Fabrication
- 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 416: Structures and Dynamics Laboratory
- M E 417: Projects
- M E 418: Projects
- M E 419: Energy and Fluids Laboratory
- 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