

# 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 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](#)
- [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 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](#)
- [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](#)
- [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: Elastic stability](#)
- [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](#)



- [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](#)
- [G E 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](#)

### **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 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 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 460: Product Design I: Development, Evaluation](#)
- [Ch E 461: Product Design II: Product Realization](#)
- [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](#)
- [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](#)
- [Ch E 550: Membrane Science and Engineering](#)
- [Ch E 560: Advanced Transport Phenomena I](#)
- [Ch E 561: Advanced Transport Phenomena II](#)
- [Ch E 593: Graduate Projects in Chemical Engr](#)
- [Ch E 660: Advanced Transport Phenomena I](#)
- [Ch E 661: Advanced Transport Phenomena II](#)
- [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](#)
- [C E 102: Introduction to Civil Engineering II](#)
- [C E 205: Civil Engineering Laboratory I](#)
- [C E 207: Surveying](#)
- [C E 208: Civil Engineering Graphics I](#)
- [C E 301: Environmental and Water Resources Lab](#)
- [C E 302: Mechanics Laboratory](#)
- [C E 303: Materials Laboratory](#)
- [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](#)
- [C E 325: Intermediate Dynamics](#)
- [C E 371: Intro to Environmental Engineering](#)
- [C E 401: Civil Engineering Fundamentals](#)
- [C E 402: Soil Mechanics Laboratory](#)
- [C E 405: Civil Engineering Laboratory III](#)
- [C E 412: Design of Concrete Structures](#)
- [C E 413: Steel Design](#)



- [C E 414: Advanced Concrete Design](#)
- [C E 416: Bridge Engineering](#)
- [C E 417: Construction Engineering and Management](#)
- [C E 421: Matrix Analysis of Structures](#)
- [C E 431: Soil Mechanics I](#)
- [C E 433: Foundation Engineering](#)
- [C E 435: Advanced Geotechnical Engineering](#)
- [C E 452: Civil Engineering Analysis](#)
- [C E 454: Engineering Design I](#)
- [C E 455: Civil Engineering Design I](#)
- [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](#)
- [C E 511: Structural Dynamics](#)
- [C E 513: Advanced Steel Design](#)
- [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 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](#)
- [C E 575: Drinking Water Engineering](#)
- [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 MethodsforNanomaterials](#)

### **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](#)
- [Csci 112: Computer Science II](#)
- [Csci 113: Honors Computer Science I](#)
- [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: Fundamentals of Computer 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 658: Software Language Engineering](#)
- [Csci 663: Software Families](#)
- [Csci 665: Wireless and Sensor Networks](#)

### **Electrical Engineering**

- [BME 200: Introduction to Biomedical Engineering](#)
- [BME 301: Bioinstrumentation](#)
- [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 235: Principles of Digital Systems](#)
- [EI E 236: Digital Systems Laboratory I](#)
- [EI E 237: Electrical Engineering Tools and Toys](#)
- [EI E 301: Applied Electronics](#)
- [EI E 302: Applied Communication Systems](#)
- [EI E 313: Physiology for Biomedical Engineering](#)
- [EI E 314: Biomedical Measurement](#)
- [EI E 322: Electric Circuit II](#)
- [EI E 331: Linear Systems](#)
- [EI E 337: Digital Systems Laboratory II](#)
- [EI E 340: Electrical Engineering Analysis I](#)
- [EI E 341: Theory of Fields](#)
- [EI E 351: Electronics Circuits I](#)
- [EI E 352: Electronics 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 413: Biomedical Signal Processing](#)
- [EI E 414: Biomedical Electronics](#)
- [EI E 415: Telecommunications Laboratory](#)
- [EI E 425: Local Area Networks](#)
- [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 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](#)



- [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](#)
- [EI E 485: Microprocessor Systems Engineering](#)
- [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 534: Wireless Mobile Communications](#)
- [EI E 535: Digital Communications](#)
- [EI E 536: Introduction to Quantum Computing](#)
- [EI E 561: Microwave Circuit Design](#)
- [EI 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 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](#)
- [G E 450: Hydrogeology](#)
- [G E 460: Fundamentals of Waste Management](#)
- [G E 470: Intro. to Geographic Information System](#)
- [G E 490: Directed Studies and Projects](#)
- [G E 500: Introduction to Geochemistry I](#)
- [G E 502: Construction Geological Engineering](#)
- [G E 503: Environmental Geochemistry](#)
- [G E 504: Envi. Geochemistry Lab & Field Methods](#)
- [G E 506: Geomechanics for Geologists](#)
- [G E 507: Regional Geological Engineering](#)
- [G E 510: Remote Sensing](#)
- [G E 511: Spatial Analysis](#)
- [G E 513: Economic Geology](#)
- [G E 520: Geol. & G.E. Computer Applications](#)
- [G E 525: Engineering Seismology](#)
- [G E 530: Advanced Geomechanics](#)
- [G E 540: 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](#)
- [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 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 Petrology](#)
- [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](#)
- [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 Seminar](#)
- [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](#)
- [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 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](#)

### **Telecommunications**

- [TC 201: Introduction to Telecommunications](#)
- [TC 210: Voice Telecommunications](#)
- [TC 220: Wireless Communications](#)
- [TC 330: Internship in Telecommunications](#)
- [TC 403: Telecommunications Networks](#)
- [TC 405: Telecommunications Management](#)
- [TC 409: Current Issues in Telecommunications](#)
- [TC 431: Satellite Telecommunications](#)
- [TC 433: Optical Fiber Telecommunications](#)
- [TC 491: Special Topics in Telecommunications](#)
- [TC 501: Foundations of Communications](#)
- [TC 529: Televisions Systems I](#)
- [TC 531: Advanced Satellite Communications](#)
- [TC 533: Advanced Optical Communications Systems](#)
- [TC 585: Multimedia Technologies I](#)

