

Academics

[Overview](#)

[Calendar](#)

[Regulations](#)

[Services](#)

[Programs](#)

[Minors](#)

[Courses](#)

[Faculty](#)

Course Index

[A](#)

[B](#)

[C](#)

[D](#)

[E](#)

[F](#)

[G](#)

[H](#)

[I](#)

[J](#)

[K](#)

[L](#)

[M](#)

[N](#)

[O](#)

[P](#)

[R](#)

[S](#)

[T](#)

[U](#)

[V](#)

[W](#)

[School of Engineering](#)

[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 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 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 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 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](#)

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](#)

Graduate School

- [C&H Thesis: UM Croft and Honors Thesis](#)

School of Pharmacy

Pharmacy Practice

- [Card 591: Cardiology Clerkship](#)

University Programs

University Studies

- [CEL 101: Community Engaged Leadership 101](#)
- [CEL 102: From Service to Solutions](#)



- [CEL 201: Beginning Capacity Building](#)
- [CEL 202: Knowing Your Issue](#)
- [CEL 210: Community Engaged Leadership 210](#)
- [CEL 301: Planning and Managing Projects](#)
- [CEL 302: Building Organizational Capacity](#)
- [CEL 310: Community Engaged Leadership Capstone](#)

School of Engineering

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](#)
- [Ch E 449: Process Design](#)
- [Ch E 450: Process Optimization](#)
- [Ch E 451: Plant Design I](#)
- [Ch E 452: Product and Process Development](#)
- [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 535: Experimental Methods in Engineering](#)
- [Ch E 540: Coating Materials Process & Applications](#)
- [Ch E 543: Introduction to Polymer Science](#)
- [Ch E 545: Colloid and Surface Science](#)
- [Ch E 547: Surfactant 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](#)

College of Liberal Arts

Chemistry & Biochemistry

- [Chem 101: Chemical Concepts](#)
- [Chem 103: Survey of Chemistry I](#)
- [Chem 104: Survey of Chemistry II](#)
- [Chem 105: General Chemistry I](#)
- [Chem 106: General Chemistry II](#)



- [Chem 107: General Chemistry Honors Recitation I](#)
- [Chem 108: General Chemistry Honors Recitation II](#)
- [Chem 113: Survey of Chemistry Laboratory I](#)
- [Chem 114: Survey of Chemistry Laboratory II](#)
- [Chem 115: General Chemistry Laboratory I](#)
- [Chem 116: General Chemistry Laboratory II](#)
- [Chem 121: Fundamentals of Organic Chemistry](#)
- [Chem 201: Environmental Chemistry I](#)
- [Chem 202: Environmental Chemistry II](#)
- [Chem 221: Elementary Organic Chemistry I](#)
- [Chem 222: Elementary Organic Chemistry II](#)
- [Chem 225: Elementary Organic Chem. Laboratory I](#)
- [Chem 226: Elementary Organic Chem. Laboratory II](#)
- [Chem 227: Organic Chemistry Honors Recitation I](#)
- [Chem 228: Organic Chemistry Honors Recitation II](#)
- [Chem 251: Introduction to Individual Research](#)
- [Chem 271: Biochemical Concepts](#)
- [Chem 293: Introductory Special Topics in Chemistry](#)
- [Chem 314: Quantitative Analysis](#)
- [Chem 319: Chem & Phys Methods of Forensic Chem](#)
- [Chem 331: Physical Chemistry I](#)
- [Chem 332: Physical Chemistry II](#)
- [Chem 334: Biophysical Chemistry](#)
- [Chem 337: Physical Chemistry Laboratory I](#)
- [Chem 351: Individual Research](#)
- [Chem 373: Intermediate Biochemistry](#)
- [Chem 381: Chemistry for Teachers I](#)
- [Chem 382: Chemistry for Teachers II](#)
- [Chem 383: Chemistry for Teachers III](#)
- [Chem 393: Intermediate Special Topics in Chemistry](#)
- [Chem 401: Inorganic Chemistry](#)
- [Chem 402: Inorganic Chemistry Laboratory](#)
- [Chem 415: Computer Methods in Chemistry](#)
- [Chem 421: Recitation in Organic Chemistry I](#)
- [Chem 422: Recitation in Organic Chemistry II](#)
- [Chem 423: Organic Analysis](#)
- [Chem 441: Forensic Chemistry Senior Research](#)
- [Chem 451: Senior Individual Research](#)
- [Chem 459: Forensic Science Internship](#)
- [Chem 463: Senior Research and Discovery](#)
- [Chem 469: Introduction to Instrumental Analysis](#)
- [Chem 470: Forensic DNA Analysis](#)
- [Chem 471: Biochemistry I](#)
- [Chem 472: Biochemistry Laboratory](#)
- [Chem 473: Biochemistry II](#)
- [Chem 512: Advanced Instrumental Analysis](#)
- [Chem 513: Principles of Analytical Chemistry](#)
- [Chem 514: Fundamentals of Electrochemistry](#)
- [Chem 519: Chemical Separations](#)
- [Chem 524: Principles of Organic Chemistry](#)
- [Chem 525: Organic Spectroscopy and Spectrometry](#)
- [Chem 527: Adv. Organic Chem., Structure Mechanism](#)
- [Chem 528: Adv. Organic Chem., Structure Synthesis](#)
- [Chem 529: Stereochemistry](#)
- [Chem 530: Advanced Organic Synthesis](#)
- [Chem 531: Advanced Physical Chem., Quantum Chem.](#)
- [Chem 532: Chemical Thermodynamics](#)
- [Chem 534: Physical Biochemistry](#)
- [Chem 535: Principles of Physical Chemistry I](#)



- [Chem 536: Advanced Phys. Chem., Reaction Dynamics](#)
- [Chem 538: Principles of Physical Chemistry II](#)
- [Chem 544: Chemical Applications of Group Theory](#)
- [Chem 545: Chemical Literature](#)
- [Chem 546: Chem for High School Science Teacher I](#)
- [Chem 547: Chem. for High School Science Teacher II](#)
- [Chem 548: Workshop-Middle School Science Teachers](#)
- [Chem 550: Safety in the Chemical Laboratory](#)
- [Chem 554: Analytical Environmental Chemistry](#)
- [Chem 563: Applied Spectroscopy](#)
- [Chem 580: Molecular Biochemistry I](#)
- [Chem 581: Molecular Biochemistry II](#)
- [Chem 593: Advanced Special Topics in Chemistry](#)
- [Chem 617: Research Methodology in Chemistry I](#)
- [Chem 651: Research Experience in Chemistry](#)
- [Chem 659: Masters Seminar](#)
- [Chem 697: Thesis](#)
- [Chem 700: Introduction to Graduate Research](#)
- [Chem 701: Advanced Inorganic Chemistry I](#)
- [Chem 702: Advanced Inorganic Chemistry II](#)
- [Chem 703: Inorganic Techniques](#)
- [Chem 705: Seminar in Chemistry](#)
- [Chem 715: Selected Topics in Analytical Chemistry](#)
- [Chem 717: Internship Seminar in College Chemistry](#)
- [Chem 718: Research Methodology in Chemistry II](#)
- [Chem 722: Organic Techniques](#)
- [Chem 725: Selected Topics in Organic Chemistry](#)
- [Chem 733: Selected Topics in Physical Chemistry](#)
- [Chem 741: Selected Topics in Inorganic Chemistry](#)
- [Chem 750: Area Seminars](#)
- [Chem 759: Doctoral Seminar](#)
- [Chem 761: Quantum Chemistry](#)
- [Chem 762: Theory of Molecular Structure](#)
- [Chem 765: Bioinorganic Chemistry](#)
- [Chem 771: Biochemistry I](#)
- [Chem 772: Biochemical Techniques](#)
- [Chem 773: Biochemistry II](#)
- [Chem 774: Selected Topics in Biochemistry](#)
- [Chem 776: Nucleic Acid Chemistry](#)
- [Chem 777: Protein Structure](#)
- [Chem 796: Doctoral Thesis](#)
- [Chem 797: Dissertation](#)

Modern Languages

- [Chin 101: Elementary Chinese I](#)
- [Chin 102: Elementary Chinese II](#)
- [Chin 111: Intensive Chinese I](#)
- [Chin 112: Intensive Chinese II](#)
- [Chin 198: Elementary Chinese Study Abroad](#)
- [Chin 199: Special Topics in Chinese](#)
- [Chin 201: Intermediate Chinese I](#)
- [Chin 202: Intermediate Chinese II](#)
- [Chin 211: Intensive Chinese III](#)
- [Chin 212: Intensive Chinese IV](#)
- [Chin 215: Chinese Practicum I](#)
- [Chin 298: Intermediate Chinese Study Abroad](#)
- [Chin 299: Special Topics in Chinese](#)
- [Chin 300: Envision Taiwan](#)
- [Chin 301: Conversation and Composition I](#)
- [Chin 302: Conversation and Composition II](#)



- [Chin 313: Media Chinese I: Newspapers and Internet](#)
- [Chin 314: Media Chinese II: Broadcast News](#)
- [Chin 315: Chinese Practicum II](#)
- [Chin 321: Chinese Culture and Civilization](#)
- [Chin 325: The Chinese Writing System](#)
- [Chin 330: Introduction to Chinese Linguistics](#)
- [Chin 331: Intro to Chinese Lit & Literary Analysis](#)
- [Chin 361: China through Film and Literature](#)
- [Chin 398: Advanced Chinese Study Abroad](#)
- [Chin 399: Special Topics in Chinese](#)
- [Chin 401: Advanced Chinese I](#)
- [Chin 402: Advanced Chinese II](#)
- [Chin 410: Modern Chinese Literature](#)
- [Chin 414: Selected Topics in Academic Chinese](#)
- [Chin 415: Chinese Practicum III](#)
- [Chin 417: Intro to Modern Chinese Literature](#)
- [Chin 418: Introduction to Classical Chinese](#)
- [Chin 425: Chinese Narratives and Storytelling](#)
- [Chin 430: Contrastive Linguistics](#)
- [Chin 450: Domain Knowledge](#)
- [Chin 500: Exploring 20th-century Chinese Society](#)
- [Chin 510: Interpersonal Relations in Chinese Soc](#)
- [Chin 511: Chinese Philology](#)
- [Chin 512: 21st Century China](#)
- [Chin 513: China and the World](#)
- [Chin 514: Classical Chinese Literature](#)
- [Chin 550: Advanced Domain Knowledge](#)
- [Chin 596: Chinese Capstone Academic Program](#)
- [Chin 598: Chinese Capstone Internship](#)

College of Liberal Arts

- [Cine 301: Special Topics in Cinema Production](#)
- [Cine 302: Special Topics in Cinema Post-Production](#)
- [Cine 396: Festival Programming](#)
- [Cine 397: Internship in Cinema](#)
- [Cine 398: Study Abroad in Cinema](#)
- [Cine 399: Special Topics in Cinema](#)

School of Engineering 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](#)

School of Applied Sciences Criminal Justice & Legal Studies

- [CJ 100: Introduction to Criminal Justice](#)
- [CJ 110: Introduction to Law Enforcement](#)
- [CJ 115: Introduction to Homeland Security](#)
- [CJ 120: Introduction to Corrections](#)
- [CJ 155: Law Enforcement Tactical Operations](#)
- [CJ 160: Law Enforcement Patrol Procedures](#)
- [CJ 202: Statistics in Criminal Justice](#)
- [CJ 210: Criminal Law](#)
- [CJ 230: Principles of Investigation](#)



- [CJ 270: Juvenile Justice](#)
- [CJ 285: Foundations of Terrorism](#)
- [CJ 300: Ethics in Legal Studies](#)
- [CJ 310: Law Enforcement Process and Policy](#)
- [CJ 315: Drug Abuse Enforcement and Criminality](#)
- [CJ 320: Correctional Treatment Strategies](#)
- [CJ 322: Criminal Justice Communications](#)
- [CJ 324: Theories of Criminal Behavior](#)
- [CJ 325: Emergency Management and CJ](#)
- [CJ 330: Hate Crimes and Enforcement](#)
- [CJ 340: Homicide and Death Investigations](#)
- [CJ 345: Cold Case Investigations](#)
- [CJ 360: Independent Study](#)
- [CJ 370: Domestic Crimes and Family Law](#)
- [CJ 376: Elite Forces and Special Operations](#)
- [CJ 390: Special Topics](#)
- [CJ 399: Social Justice and Community Service](#)
- [CJ 400: Homeland Security Operations](#)
- [CJ 410: Criminal Procedure](#)
- [CJ 415: Forensic Science & Crime Scene Analysis](#)
- [CJ 420: Homeland Security Law](#)
- [CJ 421: Selected Topics in Criminal Justice II](#)
- [CJ 422: Probation, Parole & Community Correction](#)
- [CJ 425: Sex Crimes and Investigations](#)
- [CJ 435: Terrorism in the Twenty-First Century](#)
- [CJ 444: Law of Corrections](#)
- [CJ 445: Comparative Criminal Justice Systems](#)
- [CJ 450: Criminal Justice Research](#)
- [CJ 460: The Correctional Experience](#)
- [CJ 465: Criminal Profiling and Serial Offenders](#)
- [CJ 470: Border Security](#)
- [CJ 490: Criminal Justice Internship](#)
- [CJ 499: Colloquium in Criminal Justice](#)
- [CJ 585: Current Topics in Criminal Justice](#)
- [CJ 600: Criminal Justice Administration](#)
- [CJ 601: Criminal Justice Statistical Analysis](#)
- [CJ 602: Criminal Justice Research Methods](#)
- [CJ 606: Ethics and Human Subjects Research](#)
- [CJ 620: Criminal Justice in American Society](#)
- [CJ 621: Seminar in Law Enforcement](#)
- [CJ 622: Seminar in Courts & Sentencing](#)
- [CJ 623: Seminar in Corrections](#)
- [CJ 624: Theories of Criminal Behavior](#)
- [CJ 625: Criminal Justice Theory](#)
- [CJ 630: Seminar in Homeland Security](#)
- [CJ 631: Seminar in Emergency Management](#)
- [CJ 632: Seminar in Extremism and Terrorism](#)
- [CJ 634: Emergency Response Mgmt Policy & Plannin](#)
- [CJ 636: Critical Infrastructure Security](#)
- [CJ 641: Transnational Crime](#)
- [CJ 642: Cybercrime and Cyber Security](#)
- [CJ 643: Legal Issues in Criminal Justice](#)
- [CJ 645: Criminal and Intelligence Analysis](#)
- [CJ 646: Special Topics in Criminal Justice](#)
- [CJ 649: Independent Study](#)
- [CJ 651: Special Topics in HSEM](#)
- [CJ 652: Comparative CJ Systems & Policy](#)
- [CJ 659: Data Management & Data Science](#)
- [CJ 660: Operational and Staff Planning](#)



- [CJ 661: CJ Policy and Program Evaluation](#)
- [CJ 662: Emer Mgmt and Homeland Sec Policy Eval](#)
- [CJ 663: ST in CJ Stats & Research](#)
- [CJ 664: GIS and Crime Mapping Analysis](#)
- [CJ 668: Analytic Writing](#)
- [CJ 669: Big Data Analytics](#)
- [CJ 670: Intelligence and Homeland Security](#)
- [CJ 671: Communications for Criminal Justice Lead](#)
- [CJ 672: Conflict Resolution and Decision Making](#)
- [CJ 673: Criminal Justice Evidence-Based Decision](#)
- [CJ 674: Budgeting & Finance](#)
- [CJ 675: Topics in Judicial Administration](#)
- [CJ 676: Principles of Leadership](#)
- [CJ 678: Diversity and Inclusion](#)
- [CJ 679: Special Topics in CJ Leadership](#)
- [CJ 680: Personnel Management](#)
- [CJ 681: Law & Public Policy](#)
- [CJ 682: Intro to EBPR](#)
- [CJ 683: Innovation & Reform in Policing](#)
- [CJ 684: Police & Community Partnerships](#)
- [CJ 688: Police Technology & Policy](#)
- [CJ 690: Applied Criminal Justice Graduate Projec](#)
- [CJ 692: Criminal Justice Capstone 1](#)
- [CJ 693: Criminal Justice Capstone 2](#)
- [CJ 697: Thesis](#)
- [CJ 701: Proseminar in CJ Policy Studies](#)
- [CJ 702: Advanced Criminal Justice Statistics](#)
- [CJ 703: Advanced Criminological Theory & Policy](#)
- [CJ 704: Advanced Criminal Justice Policy Studies](#)
- [CJ 749: Independent Study](#)
- [CJ 797: Dissertation](#)

College of Liberal Arts

Music

- [Clar 100: Preparatory Clarinet](#)
- [Clar 121: Freshman Clarinet I](#)
- [Clar 122: Freshman Clarinet II](#)
- [Clar 221: Sophomore Clarinet I](#)
- [Clar 222: Sophomore Clarinet II](#)
- [Clar 241: Sophomore Clarinet Performance I](#)
- [Clar 242: Sophomore Clarinet Performance II](#)
- [Clar 321: Junior Clarinet I](#)
- [Clar 322: Junior Clarinet II](#)
- [Clar 341: Junior Clarinet Performance I](#)
- [Clar 342: Junior Clarinet Performance II](#)
- [Clar 421: Senior Clarinet I](#)
- [Clar 422: Senior Clarinet II](#)
- [Clar 441: Senior Clarinet Performance I](#)
- [Clar 442: Senior Clarinet Performance II](#)
- [Clar 521: Advanced Clarinet I](#)
- [Clar 522: Advanced Clarinet II](#)
- [Clar 541: Advanced Clarinet Performance I](#)
- [Clar 542: Advanced Clarinet Performance II](#)
- [Clar 621: Graduate Clarinet I](#)
- [Clar 622: Graduate Clarinet II](#)
- [Clar 641: Graduate Clarinet Performance I](#)
- [Clar 642: Graduate Clarinet Performance II](#)

Classics

- [Clc 100: Honors Introduction to Classics](#)



- [Clc 101: Introduction to Greek Civilization](#)
- [Clc 102: Introduction to Roman Civilization](#)
- [Clc 103: Women in Antiquity](#)
- [Clc 104: Sports in the Ancient World](#)
- [Clc 105: From Myth to Film](#)
- [Clc 106: Classical Mythology](#)
- [Clc 107: Ancient Cities](#)
- [Clc 201: Medical Terminology in Greek and Latin](#)
- [Clc 299: Service Learning in Classics](#)
- [Clc 303: Greek and Roman Tragedy](#)
- [Clc 304: Greek and Roman Comedy](#)
- [Clc 305: Topics in Classical Mythology](#)
- [Clc 307: Survey of Greek Literature](#)
- [Clc 308: Survey of Roman Literature](#)
- [Clc 309: Greek and Roman Epic](#)
- [Clc 310: Socrates and Sophistry](#)
- [Clc 313: The Roman Republic](#)
- [Clc 314: Roman Empire](#)
- [Clc 315: Egyptian Art and Archaeology](#)
- [Clc 316: Bronze Age Aegean Art & Archaeology](#)
- [Clc 317: Etruscan Art and Archaeology](#)
- [Clc 318: Greek Vase Painting](#)
- [Clc 319: Greek Sculpture](#)
- [Clc 320: Greek Architecture](#)
- [Clc 321: Greek Art and Archaeology](#)
- [Clc 322: Roman Art and Archaeology](#)
- [Clc 323: Art & Archaeology of Pompeii](#)
- [Clc 325: Topics in Classical Civilization](#)
- [Clc 326: Topics in Classics Abroad](#)
- [Clc 327: Greek and Roman Religions](#)
- [Clc 328: Ancient Art on Location](#)
- [Clc 329: Slavery in Ancient Greece and Rome](#)
- [Clc 331: Science & Tech. in the Ancient World](#)
- [Clc 332: Ancient Warfare](#)
- [Clc 333: Poetry and Politics at Rome](#)
- [Clc 340: The Golden Age of Athens](#)
- [Clc 341: Alexander the Great](#)
- [Clc 342: Law and Life in Ancient Athens](#)
- [Clc 349: Archaeological Ethics Bowl Practicum](#)
- [Clc 350: Ancient Archaeological Field Session](#)
- [Clc 352: From Republic to Empire](#)
- [Clc 360: Archaeological and Museum Ethics](#)
- [Clc 368: African American Lit and the Classics](#)
- [Clc 375: Digital Archaeology](#)
- [Clc 401: Internship in Classics](#)
- [Clc 415: Studying Ancient Artifacts](#)
- [Clc 490: Classics Capstone Seminar](#)
- [Clc 491: Classics Capstone Experience](#)
- [Clc 499: Classics Assessment Exam](#)
- [Clc 502: Directed Research in Ancient History](#)
- [Clc 503: Directed Research in Ancient Literature](#)
- [Clc 504: Directed Research in Ancient Culture](#)
- [Clc 505: Directed Research in Ancient Art & Arch](#)

[School of Pharmacy](#) [Pharmacy Practice](#)

- [Comm 591: Community Pharmacy Clerkship](#)

[School of Education](#)



Leadership & Counselor Education

- [Coun 301: Multicult. Issues in Helping Professions](#)
- [Coun 307: Educational Psychology](#)
- [Coun 309: Psychology of Adolescence](#)
- [Coun 333: Psychology of Human Growth and Developme](#)
- [Coun 601: Life Span Development](#)
- [Coun 602: Intro to Professional Couns & Ethics](#)
- [Coun 603: Counseling Skills](#)
- [Coun 604: Research in Counseling](#)
- [Coun 606: Counseling Theories](#)
- [Coun 607: Group Procedures](#)
- [Coun 608: Seminar: Issues and Ethics in Counseling](#)
- [Coun 609: Multicultural Counseling](#)
- [Coun 611: Assessment](#)
- [Coun 612: Foun. of Clin. Mental Health Counseling](#)
- [Coun 613: Diagnostic Systems in Counseling](#)
- [Coun 614: Family Counseling](#)
- [Coun 615: Addictions Counseling](#)
- [Coun 616: Org/Adm & Consultation: CMH Counseling](#)
- [Coun 617: Pre-Practicum and Advanced Skills](#)
- [Coun 626: Foundations of College Counseling](#)
- [Coun 627: College Stud. Deve. & College Counseling](#)
- [Coun 628: Issues & Interventions in College Couns.](#)
- [Coun 630: Foundations of School Counseling](#)
- [Coun 631: Org/Adm & Consultation: School Counselin](#)
- [Coun 635: Psychological Consultation](#)
- [Coun 636: Advanced School Counseling](#)
- [Coun 637: Ldrshp, Advocacy, & Acctbility in SC](#)
- [Coun 640: Career Counseling](#)
- [Coun 642: Crisis Intervention](#)
- [Coun 644: Counseling Children and Adolescents](#)
- [Coun 652: Individual Study](#)
- [Coun 653: Topics in Counseling I](#)
- [Coun 654: Topics in Counseling II](#)
- [Coun 655: Topics in Counseling III](#)
- [Coun 656: Thesis](#)
- [Coun 661: School-Based Practicum](#)
- [Coun 662: Practicum in CMH Counseling](#)
- [Coun 663: Internship in School Counseling](#)
- [Coun 664: Internship in CMH Counseling](#)
- [Coun 671: Assessment in Counseling II](#)
- [Coun 676: Individual Assessment I](#)
- [Coun 677: Individual Assessment II](#)
- [Coun 678: Practicum in School Psychometry](#)
- [Coun 701: Introduction to Play Therapy](#)
- [Coun 702: Expressive Arts w/ Children & Adolescent](#)
- [Coun 703: Current Theories in Play Therapy](#)
- [Coun 704: Application of Play Therapy in Schools](#)
- [Coun 705: Application of Play Therapy in MH](#)
- [Coun 706: Psychopharmacology in Play Therapy](#)
- [Coun 707: Play Therapy Supervision](#)
- [Coun 708: Play Therapy in the Courtroom](#)
- [Coun 709: Play Therapy with Older Adults](#)
- [Coun 710: Child-parent Relationship Therapy](#)
- [Coun 711: Play Therapy Practicum](#)
- [Coun 712: Play Diagnosis and Assessment](#)
- [Coun 715: Collaborative Principal-School Coun Prep](#)
- [Coun 716: Trauma Informed Schools](#)
- [Coun 717: Working w/ Individuals w/ Disabilities](#)



- [Coun 718: Advanced School Counseling Internship](#)
- [Coun 720: Adv Professional Identity and Ethics](#)
- [Coun 721: Advanced Counseling Theory](#)
- [Coun 722: Adv. Multicultural Counseling & Advocacy](#)
- [Coun 723: Supervision of Counseling Services](#)
- [Coun 724: Research & Publication in Counselor Ed](#)
- [Coun 725: Advanced Career Theory and Practice](#)
- [Coun 726: Advanced Group Counseling](#)
- [Coun 727: Adv Assessment, Diagnosis and Treatment](#)
- [Coun 728: Advanced Clinical Supervision](#)
- [Coun 729: Leadership, Program Eval & Accreditation](#)
- [Coun 731: Transitioning into the Professionals](#)
- [Coun 732: Advanced Topics in Counselor Education](#)
- [Coun 733: College Teaching in Counselor Education](#)
- [Coun 734: Doctoral Seminar](#)
- [Coun 735: Grant Writing](#)
- [Coun 765: Advanced Practicum](#)
- [Coun 785: Supervision Internship](#)
- [Coun 790: Doctoral Teaching Internship in Coun. Ed](#)
- [Coun 795: Doctoral Internship in Counseling](#)
- [Coun 796: Graded Dissertation](#)
- [Coun 797: Dissertation](#)

School of Engineering

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](#)

School of Applied Sciences

Criminal Justice & Legal Studies

- [CR 412: Judicial Reporting Procedures](#)

School of Pharmacy

Pharmacy Practice

- [Crit 591: Critical Care Clerkship](#)

College of Liberal Arts

Croft Inst for International Studies

- [Croft Thesis: UM Croft Thesis](#)

School of Engineering

Computer & Information Science

- [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 3D 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 658: Software Language Engineering](#)



- [Csci 663: Software Families](#)
- [Csci 665: Wireless and Sensor Networks](#)

School of Applied Sciences

Communication Sciences & Disorders

- [CSD 201: Introduction to Communicative Disorders](#)
- [CSD 202: Statistics for CSD](#)
- [CSD 205: Anatomy and Physiology](#)
- [CSD 211: Introduction to Phonetics](#)
- [CSD 216: Normal Development of Communication](#)
- [CSD 301: Introduction to Speech Sound Disorders](#)
- [CSD 302: Research Methods for CSD](#)
- [CSD 303: Communication Deficits in Older Adults](#)
- [CSD 304: Introduction to Hearing Conservation](#)
- [CSD 316: Language and Learning Disorders](#)
- [CSD 351: Basic Audiology](#)
- [CSD 356: Principles of Auditory \(Re\)Habilitation](#)
- [CSD 359: Manual Communication](#)
- [CSD 360: Study USA ASHA Convention & Site](#)
- [CSD 401: Diagnostic Procedures](#)
- [CSD 405: Fluency and Voice Disorders](#)
- [CSD 430: Practices in Audiology](#)
- [CSD 452: Fundamental Speech & Hearing Science](#)
- [CSD 455: Neuroanat & Neurophys of Speech & Hearin](#)
- [CSD 494: Honors Thesis I](#)
- [CSD 495: Introduction to Clinical Science](#)
- [CSD 496: Honors Thesis II](#)
- [CSD 497: Methods & Associate Licensure in SLP](#)
- [CSD 498: Undergrad Practicum in SLP/Audiology](#)
- [CSD 499: Directed Research Practicum](#)
- [CSD 501: Survey of Communicative Disorders](#)
- [CSD 505: Neurophysiology and Genetics of Communic](#)
- [CSD 506: Anat/Phys/Path Aud Sys](#)
- [CSD 507: Fundamentals of Hearing Science](#)
- [CSD 513: Speech Science](#)
- [CSD 520: Advanced Diagnostic Techniques](#)
- [CSD 521: Disorders of Fluency](#)
- [CSD 523: Speech Sound Disorders](#)
- [CSD 526: Neurogenic Disorders of Language](#)
- [CSD 531: Special Problems in CD](#)
- [CSD 541: Child Lang Development & Assessment](#)
- [CSD 551: Clinical Audiology](#)
- [CSD 557: Audiology for the SLP](#)
- [CSD 560: Manual Communication I](#)
- [CSD 562: Manual Communication II](#)
- [CSD 575: Audio Instru & Meas](#)
- [CSD 591: Clinical Practicum in Audiology](#)
- [CSD 592: CI Sem/Speech-Lang Path](#)
- [CSD 593: Clinical Seminar in Audiology](#)
- [CSD 601: Directed Study](#)
- [CSD 605: Counseling Thry/Prac](#)
- [CSD 606: Ethics and Human Subjects Research](#)
- [CSD 612: Advanced Clinical Audiology](#)
- [CSD 613: Rsch Design & Anal](#)
- [CSD 615: Electrophysiologic Evaluation](#)
- [CSD 620: Assessment and Treatment of Dysphagia](#)
- [CSD 622: Voice and Resonance Disorders](#)
- [CSD 624: Craniofacial Anomalies](#)
- [CSD 625: Autism and Developmental Disabilities](#)
- [CSD 626: Aphasia](#)



- [CSD 627: Neurogenic Disorders of Speech & AAC](#)
- [CSD 630: Cerebral Palsy](#)
- [CSD 631: Communication Changes in Aging](#)
- [CSD 632: Workshop in Comm Sciences & Disorders](#)
- [CSD 642: Child Lang Diagnostics & Intervention](#)
- [CSD 649: Pediatric Audiology](#)
- [CSD 651: Aural Rehabilitation](#)
- [CSD 653: Hearing Aids](#)
- [CSD 654: Adv Amp Theory & Tech](#)
- [CSD 657: Industrial Audiology](#)
- [CSD 659: Seminar in Audiology](#)
- [CSD 670: Cen Aud Proc](#)
- [CSD 673: Perception of Speech](#)
- [CSD 690: Prof. Ethics, Licensure, and Curr Trends](#)
- [CSD 691: Graduate Practicum](#)
- [CSD 692: Graduate Practicum](#)
- [CSD 693: Graduate Practicum](#)
- [CSD 694: Graduate Practicum](#)
- [CSD 695: Graduate Practicum](#)
- [CSD 697: Thesis](#)

