International Credit Program at Elmira College
Spring 2026 Course Listing as of 1/8/2026

| | Course Code | Course Title | Credits | Course Description |
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| 1 | ACCT 1060 | Principles of Financial Accounting | 3 | This course introduces fundamental principles and concepts of financial accounting, providing students with a comprehensive understanding of the financial reporting process. Topics covered include the accounting cycle, preparation of financial statements, and analysis of financial information. Students will develop the skills necessary to analyze, interpret, and communicate financial information to support decision-making. |
| 2 | ACCT 2034 | Financial Accounting Analysis Conspectus | 3 | This course introduces the basic understanding of accounting requirements, concepts and principles of financial accounting. Students will learn how to prepare financial reports, evaluate managing financial information records, interpret financial information for economic decisions, accrual accounting principles, financial statement preparation and analysis, assets and liabilities measurement. Students will gain the knowledge and skills necessary to prepare, present, and analyze financial information. In analyzing case studies and practices, students fully appreciate the pervasive impact of accounting as both a technical and a social practice in the real world. |
| 3 | ANTH 1105 | Foundations of Biological Anthropology | 3 | This course is a comprehensive exploration of the fascinating field that examines the biological and evolutionary aspects of human beings, providing a solid foundation in the scientific study of human origins, evolution, genetics, and the relationship between biology and culture. Students will gain a deeper understanding of the biological factors that have shaped human diversity, behavior, and adaptation. |
| 4 | ARTH 2143 | Eighteenth-Century European Art | 3 | Eighteenth-century European art embodies a period of profound cultural, social, and political transformation. Through the close examination of painting, sculpture, architecture, and decorative arts, this course explores the aesthetic developments of the century, from the splendor of Rococo to the intellectual rigor of Neoclassicism. Students will analyze how art was created, the conditions of artistic production, and the shifting roles of artists within religious, political, and aristocratic patronage systems. Topics include artistic techniques and materials, the circulation of objects and ideas, and the intersection of art with Enlightenment thought, colonialism, and emerging modernity. |
| 5 | ARTH 3360 | Digital Printing | 4 | The advancements in digital technology have revolutionized the printing industry, leading to multi-technology integration. This course aims to enhance students' knowledge and skills in various digital printing technologies, enabling them to select the most appropriate technology based on the nature of the work. Through theoretical study and practical application, including computer labs, students will gain the knowledge and skills needed to excel in the modern digital printing landscape. |
| 6 | ARTH 4300 | Contemporary Chinese Popular Culture | 3 | This course explores contemporary Chinese literature and popular culture from the end of the Mao era to the present. Students will study fiction, poetry, and essays that reflect China's social transformations in the context of reform, opening, and globalization. Special emphasis will be placed on how literature interacts with popular culture, including film, visual media, music, and the rise of urban youth culture. |
| 7 | BIOL 1014 | Introduction to Insect Biology | 4 | This course aims to introduce students to basic insect biology, evolution, and comparative taxonomy. Insects impact society through their role as pests in agricultural, medical, and urban sectors, as well as their beneficial roles and biological control in ecosystems. We will also cover how certain insects, such as fruit flies, serve as excellent models for scientific research. Additionally, students will explore the incredible biodiversity represented by insects and their application in fundamental biological principles and scientific processes. Through this course, students will gain a deeper understanding of the insect world and establish a solid foundation for future learning and research. |
| 8 | BIOL 1128 | Human Biology | 3 | This course provides an in-depth exploration of the fundamental mechanisms that govern human life. Emphasizing the relationship between structure and function, it examines how molecular and cellular processes underlie the organization and operation of human systems. Students will investigate genetic expression, biochemical pathways, and physiological regulation to understand how the human body maintains homeostasis and responds to environmental and internal changes. The course also applies biological principles to contemporary health issues, disease mechanisms, biotechnology, and bioethical debates. Through lecture, discussion, and laboratory exercises, students develop an integrated understanding of the human organism and its biological foundations. |
| 9 | BIOL 2010 | Introduction to Genetics | 4 | This course provides an introduction to the fundamental principles of genetics, exploring both classical and molecular genetics. Topics covered include Mendelian genetics, chromosome mapping, the genetic code, DNA repair and mutations, the genetics of cancer, DNA technology, and epigenetics. The course will include both lecture and laboratory components, allowing students to apply theoretical knowledge through hands-on experiments and data analysis. |
| 10 | BIOL 3250 | Developmental Biology and Physiology | 4 | This course comprehensively explores the principles of development and comparative physiology. It enables students to deeply study the intricate processes of organism growth, development, and the physiological mechanisms maintaining life, fostering a holistic understanding. |

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| 11 | BIOL 3302 | Molecular Genetics and Evolution | 4 | This course is designed to provide students with an exploration of the chromosomal and molecular basis of gene transmission and function. It covers strategies for constructing genetic and physical maps of genes and genomes, as well as methods for isolating specific genes. The course also examines regulatory mechanisms for gene expression in both prokaryotic and eukaryotic organisms through various examples. Additionally, it introduces key concepts in genetic analysis, including principles of heredity, mutation, and recombination. Students will gain hands-on experience through laboratory exercises, reinforcing their understanding of theoretical concepts. By integrating lectures, discussions, and practical applications, the course aims to equip students with a comprehensive understanding of molecular genetics. Students are expected to have a foundational background in biology to fully engage with and apply the concepts discussed in the course. |
| 12 | BIOL 3900 | Immunology | 4 | This course explores how immune cells and their functions coordinate defense mechanisms against pathogens, while also examining the immune system's role in autoimmune disorders, allergic reactions, and cancer. Students will develop a foundational understanding of immunological processes, including their cellular and molecular mechanisms. |
| 13 | BUSI 2212 | Professional Business Writing | 3 | This comprehensive course is designed to equip students with the essential skills needed to communicate effectively within the dynamic and diverse environments of organizations, spanning corporations, government agencies, and non-profit organizations. The course focuses on developing students' proficiency in written communication, a critical aspect of professional success in various career paths that demand substantial interaction within and outside organizations. |
| 14 | BUSI 3037 | International Business | 3 | This course examines the global forces that shape international business activity and influence how nations, institutions, and markets interact. Students explore the social and economic effects of globalization, considering how geography, culture, governance, and resource distribution affect participation in the world economy. Emphasis is placed on understanding disparities in development and the varying impacts of global integration, including issues such as human rights, labor conditions, access to education, and trade policy. The course provides a broad analytical foundation for evaluating opportunities and challenges in the global business environment. |
| 15 | BUSI 3220 | Business, Government and Society | 3 | It focuses on how economic, political, and social factors shape the business environment and international trade policies. The course emphasizes the grand scale of management and responsibility, where decisions have far-reaching effects on both business and society. This course also focus on policies that affect millions of people and often have implications for every firm doing business globally. |
| 16 | COMM 1080 | Introduction to Public Speaking | 3 | This course is designed to develop students' skills in public speaking and to provide a comprehensive overview of the theories and practices that underlie effective communication. The content will be covered include: theory, practice, analysis, and ethics of public speaking. Students will learn how to analyze their audience and tailor their messages accordingly, how to organize their thoughts effectively, and how to do rhetorical choice and use various delivery techniques to engage and persuade their listeners. |
| 17 | COMM 2019 | Youth Media Practices and Social Life | 3 | Youth Media Practices and Social Life examines how young people engage with media as part of their everyday social worlds. From blogging, radio-making, and social media participation to television viewing and platform-based cultural production, youth media practices function as key sites of communication, social interaction, activism, identity formation, and entertainment. These practices—whether private and routine or public and purposeful—offer critical insights into the ways media shape contemporary social life.Drawing on interdisciplinary youth studies and digital media scholarship, the course introduces key concepts, theoretical frameworks, and research methodologies for understanding youth, media, and society. Students explore how media practices intersect with power, inequality, celebrity culture, media literacy, and social justice, and how young people navigate media as audiences, users, producers, and cultural workers. Through international case studies and empirical research, the course situates youth media practices within everyday contexts as well as broader media industries and social structures. |
| 18 | COMM 3360 | Audio Storytelling & Podcasting | 3 | This course introduces students to the craft of creating compelling audio stories, drawing inspiration from public radio programs and narrative podcasts. Students will learn to conceive, research, write, and produce engaging stories for audio platforms. Emphasis is placed on conversational writing, in-depth journalistic reporting, and long-form storytelling. Students will acquire skills in interviewing, story mapping, remote and field recording, multi-track editing, mixing, and final production for broadcast or podcast distribution. The course balances theory and practice, guiding students through each stage of production-from pitch to polished piece. |
| 19 | COMM 3430 | Digital Games and Society | 3 | Digital games have become a powerful and influential medium that extends far beyond entertainment. This course examines the complex relationship between games and society, exploring how games shape — and are shaped by — culture, psychology, identity, and technology. Students will critically engage with research and debates surrounding both the positive and negative impacts of gaming on individuals and communities. |

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| 20 | COMP 1305 | Computer Programming in Python | 3 | This course will use Python as our primary programming language and compare it to the structures in other high-level programs. It surveys fundamental concepts in computer programming and data science, including data types, functions, modules, classes, and methods. Additionally, it goes deeper into the testing and debugging of a program. Students are required to write and run basic programs. |
| 21 | COMP 1500 | Discrete Mathematics for Computer Science | 3 | This course introduces fundamental concepts in discrete mathematics with a focus on applications in computer science. It provides a theoretical foundation for various aspects of computer science, including algorithms, data structures, and formal methods. Topics covered include logic, set theory, relations, functions, combinatorics, graph theory, and mathematical induction. Emphasis is placed on developing problem-solving skills and applying mathematical reasoning to solve real-world problems in computer science. |
| 22 | COMP 1700 | Digital Design | 3 | This course will delve into a wide range of topics that will equip students with the skills and knowledge necessary to excel in the field of digital design. In this course, advanced concepts such as interactive design, motion graphics, responsive web design will be introduced. And this course contains several innovative techniques such as design thinking, storytelling, gamification,VR/AR as well. In this course, students will gain a comprehensive understanding and practical skills in digital design, preparing them for the evolving design landscape. |
| 23 | COMP 2073 | Digital System | 3 | This course covers the principles of digital design, including Boolean algebra, logic gates, sequential and combinational circuits, and memory systems. Students will learn to design and analyze digital systems using Verilog, and explore advanced topics like FPGAs, ASICs, and programmable logic devices. Hands-on practice and real-world applications will help students gain a comprehensive understanding of digital circuit design. |
| 24 | COMP 3125 | Software Engineering | 3 | This course provides an in-depth exploration of both object-oriented and traditional software engineering methodologies, building upon the foundational analysis and design concepts previously introduced. It encompasses a comprehensive study of the entire software development lifecycle, from requirements gathering and system design to implementation, testing, and maintenance. The curriculum places significant emphasis on object-oriented principles and the application of the Unified Modeling Language (UML) to model and document software systems. Key topics include the fundamentals of software engineering, such as requirements engineering, software design patterns, system architecture, and quality assurance. The course also covers essential aspects of project management, including planning, scheduling, and risk assessment, to equip students with practical skills for real-world software development projects. Through a combination of lectures, hands-on projects, and case studies, students will gain a thorough understanding of modern software engineering practices and the ability to apply them in diverse development environments. |
| 25 | COMP 3410 | Computer Organization | 3 | This course introduces the principles of computer organization and the hardware and software interface. Students will learn the fundamental abstractions of computer systems, instruction set architectures, data path and control design, memory hierarchy, and parallel processing. Emphasis is placed on both theory and practice, with assignments in performance analysis, assembly programming, simulation, and processor design. |
| 26 | COMP 3960 | Systems Programming | 4 | This course provides a comprehensive introduction to systems-level programming in the C language, emphasizing both fundamental and advanced programming concepts in a Unix environment. Students begin by mastering C syntax, data types, control structures, and formatted input/output. Through hands-on computer labs, they progressively learn about arrays, functions, pointers, strings, and preprocessor directives. The course transitions into the design and organization of larger programs using structures, unions, and enumerations, and explores advanced pointer techniques, low-level memory manipulation, and program modularization. Students will also gain familiarity with the Unix system interface, standard C libraries, and best practices for program design and debugging. Throughout the course, emphasis is placed on understanding how C programs are built and executed, writing efficient and maintainable code, and using system-level featu es for performance and reliability. Regular lab sessions reinforce learning and provide practical experience in building, testing, and troubleshooting C programs in a professional development environment. |
| 27 | COMP 4012 | Computer Networking | 3 | This course provides a comprehensive introduction to computer networking concepts, architectures, protocols, and technologies. Students will explore both theoretical foundations and practica implementations spanning from physical transmission to security and application-layer services. The course follows a layered approach aligned with major reference models such as OSI and TCP/IP. |

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| 28 | COMP 4255 | Pattern Recognition and Machine Learning | 4 | This course delves into the fundamental principles of pattern recognition and machine learning, offering a comprehensive exploration of both theoretical concepts and practical applications. Students will delve into supervised and unsupervised learning techniques, gaining insights into regression, classification, and clustering algorithms. Through rigorous mathematical analysis and hands-on implementation, students will develop a solid understanding of algorithmic mechanisms and their implications in real-world scenarios. Additionally, the course covers advanced topics including ensemble methods, deep learning architectures, and Bayesian inference, empowering students to tackle complex data analysis tasks with confidence. Combining theoretical knowledge with practical skills through projects and assignments, students will be adept at using machine learning techniques to extract meaningful patterns and insights from diverse data sets, with a focus on application in R. |
| 29 | COMP 4452 | Parallel Programming | 3 | This course provides a comprehensive introduction to the principles, models, and practice of parallel programming. Students study parallel machine architectures, programming models, and algorithmic strategies for exploiting concurrency in modern computing systems. Emphasis is placed on performance analysis, scalability, and efficiency of parallel algorithms, as well as practical programming using widely adopted paradigms for shared-memory and distributed-memory systems. Core parallel algorithms — including matrix operations, sorting, and scientific computations — are examined both theoretically and through hands-on programming assignments. The course prepares students to design, implement, and evaluate parallel programs on multicore processors, clusters, and networks of workstations. |
| 30 | COMP 4760 | Distributed Systems | 4 | This course introduces the fundamental concepts, design principles, and technologies underlying distributed systems. It will explore the abstractions and implementation techniques behind the construction of distributed systems. Key topics include distributed systems principles, communication, naming, synchronization, fault tolerance, security, consistency and replication, distributed file systems, Internet and web protocols, and scalability. |
| 31 | COMP 4802 | Database Management Systems | 4 | This course provides a comprehensive exploration of database management systems (DBMS), emphasizing the principles, design, implementation, and administration of modern database systems. Students will gain an understanding of the core components of a DBMS, including data models, query languages, transaction management, and storage structures. The course also covers advanced topics such as distributed and parallel databases, object-oriented and XML-based databases, as well as emerging applications in data analytics and data warehousing. By the end of the course, students will be equipped with both theoretical knowledge and practical skills to design, implement, and manage robust database solutions for real-world applications. |
| 32 | ECON 1060 | Introduction to Microeconomics | 3 | This course offers students a fundamental understanding of microeconomic principles. It covers supply - demand, consumer behavior, production, and more. Through lectures, readings, discussions, and exercises, students gain analytical tools to grasp microeconomic concepts and real - world economic issues. |
| 33 | ECON 1080 | Introduction to Macroeconomics | 3 | This course comprehensively imparts principles, concepts, and analytical tools of the broader economic system. Covering aggregate demand, national income, and business cycles, it combines theory, real - world cases, and critical thinking to introduce key macroeconomic factors influencing national and global economies. |
| 34 | ECON 2044 | Microeconomic Theory I | 3 | A concentration on microeconomic theory. Modules contain theory of consumer choice; elements of production and cost. Price and output determination in competitive markets will be discussed in the topics. This course serves as a crucial foundation for further studies in economics and related fields. Students will gain insights into the microeconomic forces that shape the behavior of consumers, firms, and markets. |
| 35 | ECON 2048 | Money and Banking | 3 | The course is designed to provide students with an overview of the field of money and banking and its significance in the economy. It explores the intricate relationship between money, financial markets, and the macroeconomy. Main topics include money, interest rates, the stock market, banking industry, financial markets, financial Regulation and monetary policy in the economy, etc. At the end of the course, students will understand better the role of money and the financial market in our economy. |
| 36 | ECON 2104 | Intermediate Microeconomics I | 3 | This course offers an in-depth analysis of key concepts and models used to understand the behavior of consumers, firms, and markets. This course will explore core areas of microeconomic theory, including economic methodology, consumer theory, the theory of the firm, competitive markets, and efficiency. Emphasis will be placed on understanding how these theories apply to real-world economic policies and decision-making processes. Students will gain insight into how microeconomic principles influence public policy decisions, focusing on how market structures and behavior shape economic outcomes and the role of government intervention. |

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| 37 | ECON 2119 | Economics of Innovation | 3 | Innovation drives long-run economic growth by transforming ideas into productive technologies, products, and processes. This course applies microeconomic theory to understand how incentives, institutions, and market structures shape the creation and diffusion of innovation. Using tools from industrial organization, public economics, and contract theory, students will examine how firms identify and close productivity gaps, how governments design policies that stimulate inventive activity, and how intellectual property rights and research incentives influence the innovation ecosystem. Emphasis is placed on models of cumulative innovation, the economics of intellectual property, optimal prize and subsidy design, and the strategic behavior of firms in innovative industries. |
| 38 | ECON 2563 | Introduction to Statistics and Economics | 3 | This course introduces students to the statistical approaches required for data analysis in business and economics settings. Students will learn descriptive statistics, probability theory, hypothesis testing, and regression analysis. Students will learn data gathering, organization, analysis, and presentation skills via a combination of lectures and hands-on exercises. The emphasis will be on providing students with the skills required to make informed decisions, solve real-world issues, and critically assess data-driven arguments in business and economic contexts. |
| 39 | ECON 3040 | Intermediate Macroeconomics I | 3 | Intermediate Macroeconomics I delves into the core concepts and models essential for understanding the functioning of modern economies. The course covers the short-run, medium-run, and long-run behavior of aggregate economies, focusing on output, unemployment, inflation, and growth. It introduces students to analytical tools and macroeconomic frameworks to evaluate economic performance, policy decisions, and global economic interconnections. Real-world applications are emphasized to foster a comprehensive understanding of macroeconomic theories and their implications. |
| 40 | ECON 3120 | Industrial Organization | 3 | This course provides an introductory exploration of strategic behaviors exhibited by firms operating within imperfectly competitive markets. Topics covered encompass various aspects such as market concentration, mergers, entry deterrence, product differentiation, advertising, and regulation. Additionally, the course delves into the theory of industrial organization, emphasizing the analysis of strategic interactions among market participants in scenarios with limited competition. Drawing upon principles from Microeconomics and Game Theory, students will examine the behavior of profit-maximizing firms, exploring market structures and competitive strategies. The curriculum includes a comprehensive review of firm theory, analysis of monopolistic conduct, and game theoretic methods to study oligopolistic behavior across different competitive environments. Real-world applications are integrated throughout the course, providing insights into industry performance and regulatory considerations. |
| 41 | ECON 3340 | Behavioral Psychology and Economics | 3 | Combining insights from psychology on human behavior, this course is intended to allow students to become familiar with the behavioral approach to economics and to political decision making. Students will gain in-depth understanding of the major aspects of economic behavior under certainty and uncertainty. Topics include heuristics and biases, prospect theory, bounded rationality, intertemporal choice, deviations from the standard classical models, and social preferences. |
| 42 | ECON 3621 | International Trade | 3 | This course introduces the theories, policies, and institutions that shape international trade. It examines why nations trade, what they trade, and the consequences of trade for economic growth, income distribution, and welfare. The course also explores trade policy instruments, the role of international trade organizations, current global trade issues, and debates surrounding globalization, inequality, and sustainable development. |
| 43 | ECON 4115 | International Finance | 3 | ECON 4115 provides students with engaging, balanced coverage of the key concepts andpractical applications of International Finance. Topics covered include balance of payments, exchange rates, economic policies, International Monetary System, financial globalization andInternational financial institutions. Core theoretical principles will be complemented by a seriesof application chapters that confront policy questions using the latest empirical work, data, andpolicy debates. |
| 44 | ECON 4600 | Advanced Labour Economics | 4 | This course offers a broad examination of labour economics concerns, delving deeper into fundamental labour supply and demand models. This course delves deeper into the study of labour markets, human capital, wage determination, labour market policies, and labour market dynamics. It is designed to provide students with a comprehensive understanding of the economic factors influencing labour markets, employment patterns, and wage disparities. |
| 45 | ENGL 1020 | ESL Reading and Writing | 3 | This course is designed for intermediate to advanced non-native English speakers who wish to strengthen their academic writing and reading skills. Emphasis is placed on developing strategies for reading academic texts critically and producing clear, organized, and well-supported written work. Students will engage in a variety of reading and writing tasks that will enable them to analyze, summarize, synthesize, and respond to texts. By the end of the course, students will be prepared to participate successfully in academic reading and writing tasks across university disciplines. |
| 46 | ENGL 1130 | Introduction to Native American Literature | 3 | This course analyzes Native American history, written works and oral traditions. Students will read chronicles and commentaries on published texts, narratives, oratorical and prophetic tribal epics. Students will become deeply familiar with the rich tradition and wide variety of literature by Native American peoples – learning a bit about indigenous cultures, histories, identities, thought, issues, concerns,and strategies over time, and in an ever-changing world. |

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| 47 | ENGL 1150 | Writing as Critical Inquiry | 3 | This course is designed to elevate your proficiency in writing, reading, and research. Through critical examination of texts, you will refine your reading skills, pose thought-provoking questions, and establish meaningful connections that will be incorporated into your writing. Employing rhetorical strategies, you will craft well-supported claims within discussions centered on diverse literacy perspectives. The course aims to not only enhance your writing abilities but also deepen your understanding of the nuanced interplay between reading, questioning, and research in the construction of compelling and informed written expressions. |
| 48 | ENGL 2010 | Contemporary Literature and Culture | 3 | Contemporary Literature and Culture is an interdisciplinary course that critically examines modern literary works in the context of contemporary cultural, social, and political landscapes. Through the exploration of various themes such as gender, race, environment, capitalism, politics, ethnic literature, cross-cultural literary relations, and emerging literary trends, students will gain insights into the complexities of contemporary society as reflected in literature. The course emphasizes close reading, analysis, and interpretation of texts, as well as discussions on the intersections between literature and culture. |
| 49 | ENGL 2120 | Introduction to Literature | 3 | This course is focused on building your reading, writing, and research skills through the study of fiction, poetry, and drama. Students will learn to interpret and discuss literary texts, develop arguments, and practice clear, effective composition across analytical and creative forms. |
| 50 | FILM 2100 | Introduction to Film Studies | 3 | This course provides an introduction to the study of film, focusing on the fundamental techniques, vocabulary, and methods of film analysis. Students will explore the aesthetics, forms, styles, and techniques of cinema, learning how to critically engage with film as both an art form and a cultural text. Key areas of study include narrative structure, mise-en-scène, cinematography, editing, sound, and genre theory, along with an examination of influential filmmakers and film movements. Through screenings, discussions, and written assignments, students will develop analytical skills and a deeper understanding of how films convey meaning. |
| 51 | FILM 3015 | Cinema and National Identity | 3 | This course explores the intricate relationship between cinema and national identity, examining how films both reflect and shape the ideologies, values, and culture of a nation. Using theoretical frameworks of identity, nationhood, and globalization, students will critically assess how national cinemas represent the collective memory, struggles, and aspirations of specific countries or cultural groups. The course will engage with key topics such as colonialism, diaspora, and transnationalism, as well as the impact of global media flows on national film industries. By studying the thematic and stylistic trends in films from various countries, students will gain a deeper understanding of the ways in which cinema participates in the formation of national consciousness. |
| 52 | FINC 3702 | Advanced Corporate Finance | 3 | This course provides an in-depth examination of the theoretical and practical aspects of corporate finance. Building on fundamental financial concepts, it explores advanced topics in capital structure, financing decisions, and corporate governance, focusing on real-world applications. Students will analyze financial strategies through case studies, financial modeling, and current research to understand how corporations manage risk, value assets, and maximize shareholder wealth in an ever-changing market environment. |
| 53 | GEOG 3521 | Physical Climatology | 3 | This course explores the dynamics of the climate system, focusing on the interactions between the atmosphere, oceans, cryosphere, and land surfaces. It covers key concepts like the carbon cycle, the greenhouse effect, natural climate variability, and climate sensitivity to external factors. Students will investigate both historical climate phenomena and human-induced climate change. Emphasis is placed on understanding physical principles and applying climate models to assess past, present, and future climate trends. |
| 54 | GNDS 2500 | Intersections of Race, Class, Gender and Sexuality | 3 | This course provides an introduction to how race, gender, sexuality, and class have been intertwined and coexisted over time to produce and reproduce social inequalities. It explores the key concepts, theories, and historical experiences that form the basis of scholarly work in comparative race, gender, sexuality, and class studies. The creation, transmittal, interpretation and institutionalization of racial, gender, sexual, and class identities are examined through a human rights framework. |
| 55 | JAPN 3011 | Intermediate Japanese I | 3 | This course is designed to build upon the foundational knowledge of the Japanese languageacquired in the beginner level. In this intermediate-level course, students will delve deeper into the complexities of Japanese grammar, vocabulary, and culture to develop a more comprehensive understanding of the language. Lower intermediate grammar, additional kanji scripts, and oral communication skills will be emphasized in the course. |
| 56 | MATH 1100 | Precalculus | 3 | This course prepares students for success in Calculus by developing a strong foundation inalgebraic, graphical, and trigonometric concepts. Students learn to analyze functions, solveequations, model real-world problems, and apply mathematical reasoning. Topics includefunctions and graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, analytic geometry, sequences, probability, and an introduction to limits andderivatives. |

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| 57 | MATH 1535 | Calculus with Analytic Geometry I | 3 | An introductory course in calculus and analytic geometry that focuses on the core concepts and applications of single-variable calculus. It develops a strong foundation in differential and integral calculus, with an emphasis on understanding the geometric interpretation of these concepts. Topics include functions, limits, derivatives, L'Hopital's Rule, antiderivatives, and definite integrals. Students will learn to solve a variety of problems using calculus, including optimization, related rates, and modeling real-world phenomena. |
| 58 | MATH 2016 | Introduction to Mathematical Methods | 3 | Mathematical Methods is an introductory course designed to equip students with fundamental mathematical tools necessary for advanced studies in various fields such as physics, engineering, economics, and computer science. The course covers topics including calculus, linear algebra, differential equations, and probability theory. Through lectures, problem-solving sessions, and practical applications, students will develop proficiency in mathematical techniques essential for modeling, analysis, and problem-solving in diverse disciplines. |
| 59 | MATH 2245 | Multivariable Calculus | 3 | This course extends the principles of calculus from single-variable functions to functions withmultiple variables. Topics include vectors, vector-valued functions, Green ' s Theorem, Stokes ' Theorem, and Gauss' Theorem, multivariable functions, partial derivatives, multiple integrals, line integrals, surface integrals, vector fields, and their applications. Additionally, students willexplore applications in physics, engineering, and other fields. |
| 60 | MATH 2455 | Introduction to Biostatistics | 3 | This course introduces probability and statistical analysis with applications in biostatistics, focusing on biological, health, and environmental sciences. Students will explore key probability distributions, hypothesis testing, regression, and using computational tools for data analysis. The purpose of the course is to introduce students to foundational concepts within the field, foster a statistical perspective for interpreting health-related data, and develop essential critical evaluation skills to assess the credibility of research evidence. |
| 61 | MATH 2500 | One Variable Calculus II | 3 | One Variable Calculus provides students with a comprehensive understanding of calculus concepts and techniques that are essential for various STEM disciplines, including engineering, economics, physical and biological sciences, statistics, and data science. The course covers topics such as calculus of elementary transcendental functions, techniques of integration, indeterminate forms, Taylor's formula, and infinite series. Through lectures, problem-solving sessions, and practical exercises, students will develop proficiency in calculus applications and problem-solving strategies. An honors version of the course is available for students seeking additional challenges and advanced learning opportunities. |
| 62 | MATH 2825 | Introduction to Complex Analysis | 3 | This course provides a comprehensive introduction to complex variable theory and its applications to current engineering problems. It deals with complex numbers, analytic functions, integration, Laurent series, residue calculus and conformal mappings. The course also covers one or more applications of the theory are reviewed. |
| 63 | MATH 3371 | Numerical Methods Analysis | 3 | Numerical methods play a crucial role in solving complex mathematical problems that often arise in engineering, science, and various fields. The course provides students with a comprehensive introduction to the fundamental numerical techniques used to approximate and solve mathematical problems. Topics include interpolation and polynomial approximation, numerical differentiation and integration, numerical methods of differential equations, error analysis, the number of conditions for a linear system, linear and nonlinear systems. By the end of the course.students will develop the skills necessary to apply numerical methods effectively.MATLAB software will be uses in this course. |
| 64 | MATH 3500 | Applied Machine Learning | 3 | This course introduces students to a wide range of machine learning techniques and tools used in data analysis, predictive modeling, and pattern recognition. The course covers a comprehensive range of topics, such as multivariate linear and multiple regressions, k-nearest neighbors and bootstrap. And it also introduces some typical Statistical Learning methods, including naive Bayes, cross-validation, tree-based methods and so on. Through a combination of theoretical concepts and practical applications, students will gain a solid foundation in machine learning methods. |
| 65 | MATH 3520 | Discrete Mathematics With Applications | 3 | The course is structured to serve as an introduction to the realm of discrete mathematics, aiming to familiarize students with prevalent concepts and methodologies within this field. Its purpose is to acquaint students with fundamental ideas and methods from discrete mathematics that hold broad applicability.Topics included in this course will cover logic and proof, set theory, Algorithms, functions, sequences, number theory, cryptography, mathematical induction, counting methods, graph theory applications, combinations, discrete probability, the inclusion/exclusion rule, relations, etc. Students will develop problem-solving skills and mathematical reasoning abilities. |
| 66 | MATH 4100 | Functional Analysis | 3 | This course introduces the fundamental structures and theorems of functional analysis and their applications to operator theory, distribution theory, and partial differential equations. Topics include topological vector spaces, normed and Banach spaces, duality, Banach algebras, spectral theory, distributions, and semigroups of operators. The course emphasizes both theoretical development and applications to analysis, PDEs, and mathematical physics. |

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| 67 | MATH 4200 | Fundamentals of Partial Differential Equations | 3 | This course serves as an essential introduction to the world of Partial Differential Equations (PDEs). PDEs are mathematical tools used to describe and analyze complex physical and scientific phenomena, from heat diffusion to quantum mechanics. This course covers the fundamental principles, techniques, and applications of PDEs, such as maximum principles for elliptic equations and classical solution of the Laplace equation, Green's functions and variational methods, providing students with the knowledge and skills to understand and work with these equations effectively. |
| 68 | MATH 4650 | Mathematics of Data Science | 4 | This course introduces the mathematical foundations and computational tools used in modern data science. Students learn Python programming, data cleaning and visualization, regression models, classification, resampling, model selection, tree-based methods, SVMs, deep learning basics, unsupervised learning, and multiple testing. Emphasis is placed on mathematical intuition, hands-on implementation, and interpretation of results. Labs provide structured real-world practice. |
| 69 | MATH 4701 | Deterministic Optimization Models in Operations Research | 4 | This course provides a rigorous introduction to deterministic optimization models in operations research, emphasizing the mathematical formulation, analysis, and algorithmic solution of optimization problems that arise in management, engineering, logistics, and public policy. Topics include linear programming formulation, simplex method, degeneracy, and geometric interpretation through convex polyhedra; duality and sensitivity analysis; special linear programming models for transportation, assignment, and network flow problems; integer programming and branch-and-bound; and dynamic programming for multistage decision making. Through these frameworks, students learn to translate real-world decision situations into formal mathematical models and apply deterministic optimization techniques to obtain and interpret optimal solutions. |
| 70 | MGMT 4110 | Investment and Portfolio Management | 3 | This course examines the principles, theories, and practices of modern portfolio management. Students will explore asset classes, investment instruments, market operations, and quantitativemodels for risk and return. Emphasis is placed on portfolio construction, performance evaluation, and risk management strategies across both domestic and international markets. The course combines theoretical foundations with empirical evidence and real-world applications. |
| 71 | MUSC 1900 | American Popular Music | 3 | This course examines the evolution of American popular music, exploring its role in reflecting and shaping American culture, identity, and politics. Students will engage in critical discussions of genres such as blues, jazz, country, musical theatre, rock, and hip-hop, analyzing their significance as both artistic expressions and historical texts. The course will highlight the ways in which music has served as a marker of cultural identity, political protest, and social change across various time periods in American history. |
| 72 | PHIL 1100 | Introduction to Philosophy | 3 | This course introduces students to philosophical inquiry, facilitating a thorough examination of essential questions that have influenced human thought across history. By critically analyzing fundamental philosophical themes, students will cultivate a profound comprehension of reality, the boundaries and origins of knowledge, the notion of God, and the quest for meaning in human life. |
| 73 | PHIL 2400 | Introduction to Business Ethics | 3 | This course explores ethical considerations and principles as they relate to the business world.The course examines the moral dimensions of various business practices and decisions, aiming to cultivate a critical understanding of ethical issues and develop skills for ethical decision-making in business environments. Topics covered include corporate social responsibility, ethical leadership, stakeholder theory, sustainability, business and the environment, consumer ethics, and global business ethics. |
| 74 | PHIL 2520 | Social Philosophy | 4 | This course explores how society is structured and how power operates within it. We will explore how social structures, institutions, and ideologies shape identity, power, freedom, and justice. Topics include how gender and race affect social standing, how class influences political and economic life, and how major philosophical traditions—liberalism, critical social theory, and postmodernism—analyze, justify, or challenge existing social institutions. |
| 75 | PHYS 1401 | Physics for Life Sciences I | 4 | The primary goal of this course is the presentation of selected principles and topics in physics with applications to the life sciences. Main topics will involve mechanics, work, energy and power, linear momentum and impulse, angular momentum, rotational motion, heat and the first law of thermodynamics. Students in this course are required to have basic knowledge of calculus and analytical methods. |
| 76 | PHYS 2301 | Circuit Theory and Electronics | 4 | Analysis of circuit variables and elements, including resistive networks, operational amplifiers, and transient responses of RL, RC, and RLC circuits. Investigation of linear and nonlinear circuit behavior, element I-V characteristics, AC power computations, and balanced three-phase systems. Application of Laplace and Fourier transforms in circuit analysis to facilitate frequency-domain interpretations. A laboratory component integrates theoretical principles with practical circuit design and experimentation. |

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| 77 | PHYS 2537 | Introduction to Electromagnetism | 4 | This course provides students with a solid foundation in the principles and concepts of electromagnetism. The course begins with an exploration of vector analysis, covering orthogonal coordinate systems and the calculus of field quantities. Students will learn about length, surface, and volume integrals, as well as the del operator, gradient of a scalar, divergence theorem, Stoke ' s theorem, and Laplacian. The course further examines the classification of vector fields and delves into electrostatic fields, including key concepts such as electric potential, capacitance, current, and current density. Additionally, magnetostatic fields, including inductance, will be explored. |
| 78 | PSYC 2040 | Introductory Psychology | 3 | This introductory course offers a comprehensive exploration of the fascinating field of psychology, providing students with a foundational understanding of the mind, behavior, and the scientific principles that underlie psychological research. Through a combination of lectures, readings, discussions, and practical exercises, students will embark on a journey to unravel the complexities of human thought and behavior. |
| 79 | PSYC 3225 | Quantitative Research in Psychology | 3 | In-depth study of quantitative research in psychology. Modules include frequency distributions, measures of central tendency and variability, normal curve and more. The course equips students with the essential knowledge and skills required to conduct empirical research using quantitative methodologies in the field of psychology. Students will master the intricacies of designing, implementing, and analyzing quantitative research project. |
| 80 | PSYC 3252 | Introduction to Cognition | 3 | This course explores the fundamental theories, research, and applications related to cognitive development from infancy through adulthood. Topics include perception, attention, memory, language acquisition, problem-solving, executive function, and the influence of culture and environment on cognitive growth. Emphasis is placed on contemporary research findings and their practical implications for education, parenting, and cognitive enhancement strategies. |
| 81 | PSYC 4600 | Human Sexuality | 3 | Human sexuality is a multifaceted and interdisciplinary field that examines the biological, psychological, cultural, and social dimensions of sexual behavior and identity. The course explores human sexual development, gender identity, sexual orientation, reproductive health, communication, and ethics. Drawing on perspectives from biology, psychology, sociology, and public health, students will engage critically with topics such as the sexual response cycle, contraception, sexually transmitted infections, sexual functioning, and the diversity of sexual experiences and expressions across cultures and throughout the lifespan. |
| 82 | SOCI 1060 | Foundations of Sociology | 3 | Foundations of Sociology is a comprehensive course designed to provide students with a foundational understanding of the key concepts, theories, and methodologies within the field of sociology. The course aims to develop critical thinking skills and sociological imagination to analyze and interpret social phenomena, structures, and processes. By examining various social institutions, social interaction, and social change, students will gain insights into the complexities of human behavior and social relations. |
| 83 | SOCI 4815 | Social Work Practice With Families | 3 | Focusing on the family as a dynamic and interconnected system, this course explores theories, practices, and intervention strategies relevant to social work with diverse family structures. It examines family roles, rules, relationships, communication patterns, and the influence of cultural, economic, and psychosocial factors on family functioning. Students will learn to assess family systems and apply evidence-based approaches to support families in managing life challenges, mental health issues, intergenerational conflict, and transitions such as divorce or migration. Emphasis is placed on ethical, culturally sensitive, and strengths-based social work practice with families across the life course. |
| 84 | STAT 1100 | Introduction to Statistics | 3 | This course is an introduction to statistics, focusing on fundamental concepts and techniques foranalyzing and interpreting data. Topics covered include descriptive statistics, probability, probability distributions, statistical inferences, and various statistical analyses. Emphasis will be placed on applying statistical concepts to real-world problems and developing critical thinking skills. |
| 85 | STAT 3055 | Introduction to R for Data Science | 3 | This course introduces students to the fundamental concepts in data science, covering the entire data science workflow, various aspects of statistical and machine learning techniques. It explores the R programming language and R packages for data manipulation, visualization, and modeling. Through hands-on laboratory sessions, students will engage in practical exercises, turning raw data into meaningful insights, knowledge, and understanding, and effectively communicating analytical results using R, RStudio and R Markdown. |
| 86 | STAT 3200 | Statistical Methods for Data Science | 3 | The course provides an introduction to statistical methods commonly used in the experimentalsciences for data analysis and inference. It covers fundamental techniques for analyzing data sets, including parameter estimation and inferential methods, encompassing graphical displays, summary statistics, probability concepts, sampling techniques, distributions, hypothesis testing, confidence intervals, t-tests, correlation, and simple linear regression. Through lectures, practical exercises, and assignments, students will develop a solid understanding of these statistical methods and their applications in scientific research. |

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| 87 | STAT 4011 | Applied Statistical Models | 3 | This course introduces students to the theory and application of statistical and computationalmodels for analyzing data and making informed decisions in business and finance. Students willlearn how to summarize and visualize data, quantify uncertainty, perform statistical inference, and build predictive models for both continuous and categorical outcomes. Advanced topicsinclude time series forecasting, Monte Carlo simulation, and optimization models for decisionmaking. |
| 88 | STAT 4202 | Mathematical Statistics | 3 | An advanced course designed to provide a rigorous foundation in mathematical statistics. This course will delve into the core concepts and methods used in statistical inference, including point estimation, interval estimation, and hypothesis testing. Students will learn how to develop and evaluate statistical models, estimate parameters, and make inferences about populations based on sample data. The course emphasizes both theoretical foundations and practical applications, preparing students for further study or work in statistics, data science, and related fields. |