1105 Human Biology in Cinema U 3
Human Biology in Cinema will show that mainstream films with a core biological theme can be entertaining AND educational and that including some basic biological insights will enhance your understanding of the biological aspects of these films. Lectures and discussions will cover basic principles in biology that will help elucidate the content of each film.
GE nat sci bio course.

1113 Biological Sciences: Energy Transfer and Development U 4
Exploration of biology and biological principles; evolution and the origin of life, cellular structure and function, bioenergetics, and genetics. A broad introduction to biology comprises both Biology 1113 and 1114.
Pre-req: Math 1130 (130), 1148, 1150, or above, or Math Placement Level L or M, Pre-req or concur: Chem 1110 (101), 1210 (121), 1610, or 1910H (201H), or permission of course coordinator. Not open to students with credit for 113. This course is available for EM credit. GE nat sci bio course.

Business Admin: Finance

4200 Applications in Finance U 3
Applications in Finance with a discussion of Investment alternatives such as Money Market instruments, Stocks and Bonds and Corporate Finance issues such as Corporate Governance, Cost of Capital and Capital Budgeting. Pre-req: Econ 3200 (701), BusMgt 2320 (330), and 2321 (331). Not open to students with credit for 4210, 4211, 4212 (721), 4220, 4221, or 4222 (722).

Business Admin: Management & Human Rsrs

4324 Staffing: Concepts and Competencies for Acquiring Talent U 3
Introduction to the scientific, legal, and administrative issues associated with the recruitment, hiring, and placement of individuals by organizations. Pre-req: 2291 or 2292 (BusAdm 499.01); and 3200 (701), 4320 (653), and AcctMIS 2200 (211), 2300 (212), BusMgt 2320 (330), 2321 (331); or enrollment regional Business Management program. Not open to students with credit for 756.

4490 Strategic Management U 3
Introduction to the concepts and analytic tools in the field of strategic management to understand the competitive position of firms. Pre-req: 2000 (BusADM 555), 2292 (BusADM 499.01), 3200 (701), and BusMgt 2320 (330), 2321 (331), 3230 (630), and BusFin 3500 (510), 3200 (620), and BusML 3120 (650), 3330, and Sr standing in Business Administration major program. Not open to students with credit for BusAdm 799. Not open to students in UUSS, UEXP, or PREBSSA-PR.

Business Admin: Management Sciences

2320 Decision Sciences: Statistical Techniques U 3
Examination of the use of statistical techniques in managerial decision-making processes; statistical inference, simple and multiple regression, time series. Pre-req: Math 1131 (132), or 1151 (152), and Stat 1430 (133); and CSE 1113, or 2111 (201); and Econ 2001.01 (200). Pre-req or Concur: Econ 2002.01 (201). Not open to students with credit for 330. This course is available for EM credit.

2321 Business Analytics U 1½
Examination of the use of business analytic models used in managerial decision making processes. Emphasis on formulation and interpretation of models, supported by spreadsheet based software. Pre-req: Math 1131 (132), or 1151 (152), or equivalent; and CSE 1113, or 2111 (201); and Econ 2001.01 (200), or equivalent; and Econ 2002.01 (201), or equivalent. Not open to students with credit for 331.

3230 Introduction to Operations Management: Improving Competitiveness in Organizations U 3
Introduction to operations and supply chain management to improve manufacturing and service organizations; analyzing, controlling and improving resources and processes to increase productivity, generate value-added output and meet business goals. Pre-req: Econ 2001.01 (200), 2002.01 (201), and Stat 1430 (133) or equivalent. Not open to students with credit for 3130 (430) or 630, or to students enrolled in UUSS, UEXP or PreBSSA-PR.

Business Admin: Marketing & Logistics

3250 Principles of Marketing U 3
Presents the concepts, framework and tools of market-based management to deliver superior customer satisfaction, value and profitability. The focus of the course is on identifying, creating, delivering and measuring value creation. Pre-req: Econ 2001.01 and 2002.01. Not open to students with credit for 3150 (650) or 450 or to students enrolled in UUSS, UEXP or PreBSSA-PR.

3380 Logistics Management U 1½
Concepts and methods used to plan and manage logistics activities in a business environment. Understanding of the components of logistics management and tradeoffs required to manage the integrated flow of goods through the supply chain. Pre-req: Econ 2001.01 (200), or equivalent; and 2002.01 (201), or equivalent. Not open to students with credit for 780 or to students enrolled in UUSS, UEXP, or PreBSSA-PR.
2 Business Admin: Marketing & Logistics

4380 Advanced Logistics Management U 1½
Advanced coverage of the concepts and methods used to plan and manage logistics activities in a business environment, in-depth understanding of the components of logistics management and tradeoffs required to manage the integrated flow of goods. Prereq: 3380, and AcctMIS 2200 (211), 2300 (212), and BusMGT 2320 (330), 2321 (331), and BusMHR 2291 or 2292 (BusADM 499.01).

1100 Chemistry and Society U 3
Terminology, methods, and principles of chemistry; examination of the roles of chemistry in our modern technological society.
Prereq: Math 1050 (075 or 076) or an ACT math subscore of 22 or higher that is less than two years old, or satisfactory score on the Ohio State Math Placement Test. Not open to students with credit for 1110 (101), 1210 (121), 1910H (201H), or 100, or any Chem course that uses these courses as prerequisites. GE nat sci phys course (BA in ASC only).

1110 Elementary Chemistry U 5
Introductory chemistry for non-science majors, including dimensional analysis, atomic structure, bonding, chemical reactions, states of matter, solutions, chemical equilibrium, acids and bases, along with topics in organic and biological chemistry. Prereq: Math 1073, 1074, 1075 or above; Math Placement Level L, M, N, or R; or ACT Math subscore of 22 or higher that is less than two years old. Not open to students with credit for 1210, 1250, 1610, or 1910H. This course is available for EM credit. GE nat sci phys course.

1210 General Chemistry I U 5
First course for science majors, covering dimensional analysis, atomic structure, the mole, stoichiometry, chemical reactions, thermodynamics, electron configuration, bonding, molecular structure, gases, liquids, and solids. Prereq: One unit of high school chemistry, and Math Placement Level L or M, or a grade of C- or above in Math 1120, 1130, 1131, 1148, 1150, or above. Not open to students with credit for 1220, 1620, 1920H, 1250, 1610, or 1910H. This course is available for EM credit. GE nat sci phys course.

1220 General Chemistry II U 5
Continuation of 1210 for science majors, covering solutions, kinetics, chemical equilibrium, solubility and ionic equilibria, qualitative analysis, thermodynamics, electrochemistry, descriptive chemistry, coordination compounds, and nuclear chemistry. Prereq: 1210, 1215, 1225, 1610 (162), 1910H (201H), or 122, and Math Placement Level L or M; or a grade of C- or above in Math 1130 (130), 1131 (131), 1148 (148), or 1150 (150), or above. Not open to students with credit for 1620 (163), 1920H (203H), 123, 2310, 2510 (251), 2610, or 2910H (251H). This course is available for EM credit. GE nat sci phys course.

1250 General Chemistry for Engineers U 4
First course for engineering majors, covering dimensional analysis, atomic and molecular structure, the mole, stoichiometry, chemical reactions, states of matter, solutions, kinetics, equilibrium, acids and bases, thermodynamics, and electrochemistry. Prereq: One unit of high school chemistry, and Math Placement Level L or M, or a grade of C- or above in Math 1130 (130), 1131 (131), 1148 (148), or 1150 (150), or above. Not open to students with credit for 1210, 1610, 1910H, 1250, 2310, 2510 (251), 2610, or 2910H (251H). This course is available for EM credit. GE nat sci phys course.

Computer Science and Engineering

1222 Introduction to Computer Programming in C++ for Engineers and Scientists U 3
Introduction to computer programming and to problem solving techniques using computer programs with applications in engineering and the physical sciences; algorithm development; programming lab experience. Concur: Math 1151, 1154, or 1161. Not open to students with credit for Engr 1281.01 or 1281.02. This course is available for EM credit.

2111 Modeling and Problem Solving with Spreadsheets and Databases U 3
Spreadsheets and database modeling/programming concepts and techniques to solve business related problems; efficient/effective data handling, computational analysis and decision support. Additional topics: computer concepts, networking, project integration. Prereq: Math 1130 or above, or Math Placement Level L. Not open to students with credit for 1111 or 1112. This course is available for EM credit. GE quant reason math and logical anly course.

Earth Science

1100 Planet Earth: How It Works U 4
The materials of the Earth's crust, the processes that produce and modify them, the development of the Earth and its life forms through time, and responsible stewardship of the earth's resources. Not intended for ASC B.S. students. Prereq: Not open to students with credit for 1121. This course is available for EM credit. GE nat sci phys course.

1121 The Dynamic Earth U 4
Plate tectonics; rock forming processes; climate change; energy resources. Prereq: Math 1075 or above, or ACT Mathematics Subscore of 22 or higher, or Math Placement Level R or better. Not open to students with credit for 1100. This course is available for EM credit. GE nat sci phys course.

Economics

2001.01 Principles of Microeconomics U 3
Introduction to economic theory; supply and demand for goods, services, and factor inputs; market structure; international trade, the distribution of income. First required course for students planning to take 4000-level courses in Econ. Prereq: Not open to students with credit for 2001.02, 2001.03H, 200, 200H, or AEDEcon 2001 (200). This course is available for EM credit. GE soc sci human, nat, and econ resources course. SS Admis Cond course.

2002.01 Principles of Macroeconomics U 3
Introduction to the theory of national income determination; economic fluctuations; money; government policy; international economics. Prereq: Not open to students with credit for 2002.02, 2002.03H, 201, or 201H. This course is available for EM credit. GE soc sci orgs and politi courses.

Education: Teaching and Learning

2189 Field Experience U 1 - 2
Professional service with children or youth in a school or community agency. Prereq: Permission of instructor. Repeatable to a maximum of 15 cr hrs or 15 completions.

2368 Introduction to Children's Literature U 3
This is a survey course in which students study the historical and contemporary elements of literature intended for children, including picturebooks; traditional tales; novels of realism, and fantasy; nonfiction; poetry; and multicultural books. Prereq: English 1110, or equiv. Not open to students with credit for 467. GE lit course.

3160 Application of Development in Learning Contexts U 3
Designed for students to apply theories and research of child growth and development in multiple learning contexts. Prereq: Not open to students with credit for 460. GE soc sci indivs and groups course.

3356 Literature for Adolescents U 3
Literature for individual, group, and whole-class reading in junior and senior high schools; interest factors and literary value as criteria for selection; bibliographic aids. Prereq: English 1110 or equivalent. Not open to students with credit for 656 or 3356E. GE lit course.

4189.01 Advanced Field Experience: Early Childhood Education U 1 - 4
The field experience is designed to provide: classroom practices in lesson planning, teaching, and guidance and discipline; student learning, interests, and perspectives; the official and unofficial requirements of being a professional educator; and how you can effectively bring together the work done in a university classroom with your work in classrooms with students age 3 to grade 3. Prereq: Admission to Early Childhood Education Major. Repeatable to a maximum of 12 cr hrs or 3 completions.

4189.02 Advanced Field Experience: Middle Childhood Education U 1 - 4
The field experience is designed to provide: best practices in lesson planning, teaching, and classroom management; student learning, interests, and perspectives; the official and unofficial requirements of being a professional educator; and how you can effectively bring together the work done in a university classroom with grade 4-9 classrooms. Prereq: Admission to Middle Childhood Education Major. Repeatable to a maximum of 12 or cr hrs or 3 completions.

4191 Internship U 1 - 15
Internship in an educational or community setting. Prereq: Permission of instructor. Repeatable to a maximum of 15 cr hrs or 15 completions.

5005 Equity and Diversity in Education U 3
Focuses on issues of diversity, equity, teacher beliefs, and multicultural education. Emphasis is placed on the roles of identity and lived experience and its influences on approaches to teaching and learning in educational settings. Prereq: Not open to students with credit for 815.

5101 Teaching and Learning with Drama: Introduction U 3
Introduction to the use of drama and social imagination in education. Prereq: Jr or Sr standing with some field experience, or experienced teacher. Not open to students with credit for 533. Repeatable to a maximum of 6 cr hrs.

5108 Teaching and Learning of Mathematics in Grades Pre-K - 3 U 3
Prepares preservice teachers with knowledge, skills of, and ability to use standards, learning theories, pedagogies, assessment, and technology for the teaching and learning of Pre-K - 3 early childhood mathematics in a diverse classroom. Prereq: Admission to Early Childhood licensure program, or permission of instructor.

5129 Teaching and Learning of Science in Grades Pre K - 3 U 3
Exploration of contemporary alternatives in early childhood science education and the development of knowledge and skills for teaching and learning in grades Pre-K - 3, with a focus on preschool and kindergarten. Prereq: Enrollment in Education major or Master of Education. Not open to students with credit for 729.

5195.09 Reflective Seminar: Child and Youth Studies U 3
This course is designed to assess and support student in their final year as they develop the necessary knowledge, skills, and dispositions required for entry level education professionals. Prereq: Admission to Child and Youth Studies Major. Repeatable to a maximum of 10 cr hrs or 5 completions. This course is graded SU.
prereq: not open to students with credit for 601 and 603.

5226 Composing Print + Digital Multimodal Texts U G 3

This course focuses on interactive, creative, critical, dialogic approaches for teaching and learning composed in both print and digital multimodal formats, and is particularly applicable to early and middle childhood classrooms.

5230 Language Arts Methods for Preservice Middle Childhood Teachers U G 3

Preservice teachers study methods for teaching middle childhood students' reading and writing. They explore the significance of students' interests, language, and communities to their knowledge and meaning-making of the Language Arts.

5280 Social Studies Methods for Preservice Middle Childhood Teachers U G 3

Preservice teachers study planning, teaching, and assessing of students' learning of social studies education, emphasizing the value of using effective and diverse teaching strategies and meaningful learning activities appropriate for grades 4-8.

5284 Integrating Language Arts and Social Studies in 4th and 5th Grades U G 3

Related to the integration of L/A/SS. The focus is on curriculum, pedagogy, and integration specific to 4th/5th grades.

5339 Development and Instructional Decision-Making in Literacy U G 3

Assessment instruments and processes to determine students' abilities and needs and instructional strategies to meet those needs as useful to early and middle childhood teachers are explored. Prereq: 5469, and enrollment in a B.S. Ed. major or Master of Education program. Not open to students with credit for 706 or 739.

5468 Foundations of Reading and Literacy U G 3

Introduction to the theories and practices of teaching and learning of literacy for children in early and middle childhood. Major themes of the course are a child-centered philosophy of literacy instruction and diversity awareness. Prereq: 1110 (110.01), or equiv. Not open to students with credit for 2202H (2202) or 2202. GE diversity soc div in the US course.

5501 Inclusion: Philosophical, Social, and Practice Issues: General Student Body U G 3

Philosophical, social, and practice issues related to the inclusion of students with disabilities in the P-12 general education classroom.

7713 K-8 Data Analysis and Probability G 2

Students will understand concepts such as chance and possible outcomes and predicting events as likely or unlikely, and testing predictions, and representational skills to depict and analyze data sets.

Educational Studies: Educational Psychology

1259 Individual Learning and Motivation: Strategies for Success in College U 3

Teaches learning and motivation strategies to help students manage time, improve grades, and achieve college success.

2059 Becoming a Self-Regulated Learner U 2

This course will build strategies and motivation to overcome recent academic challenges and prepare for success in the future. Main topics we will cover include self-regulation, active learning, studying, using resources, planning, goal setting, and time management. Our entire course is geared toward helping students become self-regulated learners.

2309 Psychological Perspectives on Education U 3

This course deals with the major theories of human development, motivation and learning. Planning of instruction, teaching strategies, assessment and classroom management are examined. Authentic pedagogical practices are used to gain an understanding of the teaching and learning process.

5401 Adolescent Learning and Development in School Contexts U G 3

Provides students with an introduction to the field of adolescent development and psychology and applications to education. Teacher education licensure course.

Educational Studies: Philo & Hist of Education

3206 School and Society U 3

Use of concepts and methods of history, philosophy, and the social sciences to grasp the interrelationship between society and education.

Prereq: Not open to students with credit for EduPL 306. GE diversity soc div in the US course.
4  English

2268  Introductory Creative Nonfiction Writing  U  3
An introduction to the fundamentals of technique, craft, and composition; practice in the writing of creative nonfiction; and analysis and discussion of student work as well as published essays by masters of the many forms of creative nonfiction. Prereq: 1110.

2290  Colonial and U.S. Literature to 1865  U  3
Introductory study of significant works of U.S. literature from its Colonial origins to 1865. Prereq: 1110.01 (110.01) or equiv. Not open to students with credit for 220. GE lit course.

2291  U.S. Literature: 1865 to Present  U  3
Introductory study of significant works of U.S. literature from 1865 to the present. Prereq: English 1110.01 (110.01), or equiv. Not open to students with credit for 291. GE lit course.

2367  Literature in the U.S. Experience  U  3
Discussion & practice of the conventions, practices, & expectations of scholarly reading of literature & expository writing on issues relating to diversity within the U.S. experience. Only one 2367 (367) decimal subdivision may be taken for credit. Prereq: 1110.01 (110.01) or equiv, and Soph standing; or EM credit for 1110.01 (110.01) or equiv; or a declared major in English. Not open to students with credit for 2367.01 (367.01), 210, 267, 267H, 301, 303, or equiv. GE: writing and comm: level 2 and lit (BS only) and diversity soc div in the US course.

4189  Professional Writing Minor: Capstone Internship  U  3
Students work onsite in an organization doing writing-related work and meet weekly to discuss related topics. Prereq: 4150 or CSTW 4150, and 2 courses in Professional Writing Minor. Not open to students with more than 6 cr hrs of CSTW 4191. Repeatable to a maximum of 9 cr hrs. This course is graded SKU.

4520  Special Topics in Shakespeare  U  3
Focused study of the works of Shakespeare in relation to a topic or critical problem. Prereq: 6 credit hours of English at the 2000-3000 level, or permission of instructor. 3 or hrs for 2367 in any subject is acceptable towards the 6 cr hrs. Repeatable to a maximum of 9 cr hrs.

4540  Nineteenth-Century British Poetry  U  3
Studies the origins of modern poetry in the years following the French Revolution in 1789 and its development throughout the nineteenth century. Prereq: 10 qtr cr hrs or 6 cr hrs of English at 2000-3000 level, or permission of instructor. 5 qtr cr hrs in 367 or 3 cr hrs in 2367 in any subject is acceptable towards the 6 cr hrs. Not open to students with credit for 540.

4573  Rhetoric and Social Action  U  3
Examination of persuasive strategies in social interaction, such as social movements, political protests, cultural trends, rituals and ceremonies, and everyday practices. Prereq: 10 qtr cr hrs or 6 cr hrs of English at 2000-3000 level, or permission of instructor. 5 qtr cr hrs in 367 or 3 cr hrs in 2367 in any subject is acceptable towards the 6 cr hrs. Not open to students with credit for 573.02.

Environment and Natural Resources

2000  Natural Resources Data Analysis  U  3
Introductory data analysis course that focuses on understanding and applying basic statistical concepts, problem solving, and interpreting the results of statistical analysis. Au, Sp Sems. GE data only course.

2367  Communicating Environmental and Natural Resources Information  U  3
Concepts, skills development, and practice in accessing and communicating information about the environment and natural resources to varied audiences; emphasis on written and oral communication. Prereq: English 1110, and Soph standing or above. GE writing and comm course; level 2.

Evolution, Ecology and Organismal Biology

2520  Human Physiology  U  3
A survey of the human nervous system, sense organs, muscle function, circulation, respiration, digestion, metabolism, kidney function, and reproduction. Prereq: 3 sem cr hrs in Biological Sciences. Not open to students with credit for 232. GE nat sci bio course. NS Admis Cond course.

Exploration

1100.01  University Exploration Survey  U  1
Introduction to the process of decision making and exploring majors at Ohio State; introduction to university community; strategies for successful transition to and participation in that community; university resources and procedures. Prereq: Fresh standing in Exp, and permission of instructor. Not open to students with credit for 100.01, 100.01H, 100.02, or 100.03.

French

1101.61  Beginning French I: Individualized DL  U  1 - 4
Individualized introduction to French via distance learning; development of listening, reading, speaking, and writing skills. Taught in French. Course not open to native speakers, students with EM credit, or to students with two or more years of study in this language in high school. Prereq: Not open to students with credit for 1101.01 or 4 credits of 1101.51. Repeatable to a maximum of 4 cr hrs or 4 completions. This course is available for EM credit. GE for lang course.

1102.61  Beginning French II: Individualized DL  U  1 - 4
Continued individualized study of French via distance learning; development of listening, reading, speaking, and writing skills; readings based on contemporary French culture and literature. Taught in French. Prereq: 1101.01, or completion of 4 cr hrs of 1101.51 or 1101.61. Not open to students with credit for 1102.01 or 4 credits of 1102.51. Repeatable to a maximum of 4 completions or 4 cr hrs. This course is available for EM credit. GE for lang course.

1103.61  Beginning French III: Individualized DL  U  1 - 4
Continued development of listening, speaking, reading and writing with an emphasis on oral and written skills; focus on functional topics and thematic vocabulary. Taught in French via distance learning. Prereq: 1101.01 and 1102.01; or completion of 4 cr hrs of 1101.51 or 1101.61, and completion of 4 cr hrs of 1102.51 or 1102.61. Not open to students with credit for 1103.01, 1103.02, 1103.03, or 1103.04; or 4 cr hrs of 1103.51. Repeatable to a maximum of 4 cr hrs or 4 completions. This course is available for EM credit. GE for lang course.

Geography

1900  Extreme Weather and Climate  U  4
Surveys characteristics and processes of Earth's atmosphere and how it interacts with the planet's surface, oceans, and human activity. The course focuses on how these interactions work to produce extreme weather events and climate extremes and how they affect people. Prereq: Not open to students with credit for 1900H (120H), 2960 (220), 5900 (520), 120, or AtmoSc 2940 (230). GE nat sci phys course.

2750  World Regional Geography  U  3
Develops students' knowledge of world geography through the twin concepts of region and globalization; focuses on culture, society, politics, economy, and interplay between people and environments. Prereq: Not open to students with credit for 200 or 2750H (200H). GE soc sci human, nat, and econ resources and diversity global studies course. SS Admis Cond course.

History

2002  Making America Modern  U  3
A rigorous, intermediate-level history of modern U.S. in the world from the age of industrialization to the age of globalization. Sometimes this course is offered in a distance-only format. Prereq or concur: English 1110.xx, or permission of instructor. Not open to students with credit for 1152 (152). GE historical study and diversity soc div in the US course.

2202  Introduction to Medieval History  U  3
Survey of medieval history from the late Roman Empire to the early sixteenth century. Sometimes this course is offered in a distance-only format. Prereq or concur: English 1110.xx, or permission of instructor. Not open to students with credit for 1211. GE historical study and diversity global studies course.

3229  History of Early Christianity  U  3
A survey of the history of Christianity from its Jewish and Greco-Roman roots to the late sixth century. Prereq or concur: English 1110.xx, or permission of instructor. Not open to students with credit for 536. GE historical study and diversity global studies course.

History of Art

2002  Western Art II: The Renaissance to the Present  U  3
Examination of the history of art in Europe and the United States, from 1400 to the present. Prereq: Not open to students with credit for 209 or 321. This course is available for EM credit. GE VPA and historical study and diversity global studies course.

Human Nutrition

2210  Science of Human Nutrition  U  3
Basic principles of biological science, emphasizing the interaction between nutrients and physiological (including cellular) processes. Prereq: Not open to students with credit for 210. GE nat sci bio course.

Kinesiology: Physical Education

2262  Coaching the Young Athlete  U  3
Skills and knowledge to coach young athletes.
1102 First Aid and CPR U 2
Necessary skills to sustain life, reduce pain, and minimize consequences of injury/illness during an emergency. Course is designed to lead to Certification. Lab fees required.
PreReq: Not open to students with credit for EduPAES 102.

1103 Introduction to Health and Wellness in American Society U 2
A study of student health problems, designed to foster understandings and attitudes needed for intelligent decision-making related to present and future health needs.

1150.02 Lifetime Fitness and Wellness Cardiovascular Exercise Training U 2
Online course that promotes principles of fitness and wellness over the lifespan. PreReq: Not open to students with credit for 1147, 1148.05 or 1149.05, 1150.01, or EduPAES 1147, 1148.05, 1149.05, 1150.01, or 1150.01.

2250 Cancer Prevention U 2
Discussion of the latest findings on avoiding cancer through lifestyle choices and assessment of one’s family health history.

Mathematics

1050 Precollege Mathematics I U 5
Fractions and decimals, basic algebra, graphing lines, factoring, systems of equations. Credit for this course will not count toward graduation in any degree program.
PreReq: 1040 (040) or 050, or Math Placement Level T, or permission of department. Not open to students with credit for any Math course above 1050 (050). This course is available for EM credit.

1075 Precollege Mathematics II U 4
Algebraic, rational, and radical expressions; functions and graphs; quadratic equations; absolute value; inequalities; and applications. Credit for this course will not count toward graduation in any degree program.
PreReq: 1074 or 075; or a grade of C- or above in 1050; or Math Skills Assessment Level R or S; or ACT math subscore of 22 or higher that is less than 2 years old. Not open to students with credit for any Math course above 1075, except for 1116; or for any quarter-system course above 075, except for 1116. This course is available for EM credit. GE quant reason basic computation course.

1116 Excursions in Mathematics U 3
Critical thinking and problem solving, with relevant topics met in everyday life. Appropriate for non-science majors.
PreReq: 1073, 1074, 1075, 75, or 104; or Math Placement Level R or above; or ACT math subscore of 22 or higher that is less than 2 years old. Not open to students with credit for 1152 (153) or above. GE quant reason math and logical any course.

1130 College Algebra for Business U 4
Algebraic, exponential, and logarithmic functions. Matrix algebra. Applications to business.
PreReq: Grade of C- or above in 1075, or credit for 104, or Math Placement Level M or N, or ACT math subscore of 22 or higher that is less than 2 years old. Not open to students with credit for 1131 (131), or for any Math course numbered 1149 (150) or above. This course is available for EM credit. GE quant reason math and logical any course.

1131 Calculus for Business U 5
Survey of calculus of one and several variables, applications to business.
PreReq: A grade of C- or above in 1130, 1144, 1148, or 1150; or credit for 130, 148, or 150, or Math Placement Level L. Not open to students with credit for 1151 (151) or above, or 1134 (152). This course is available for EM credit. GE quant reason math and logical any course.

1136 Measurement and Geometry for Teachers U 5
This course is the second in a two semester sequence for teachers of elementary and middle school grades. This course focuses on concepts of measurement and geometry, including modern and historical perspectives. PreReq: A grade of C- or above in 1135.

1148 College Algebra U 4
Functions: polynomial, rational, radical, exponential, and logarithmic. Introduction to right-angle trigonometry. Applications.
PreReq: A grade of C- or above in 1075, or credit for 104 or 148, or Math Placement Level N, or ACT math subscore of 22 or higher that is less than 2 years old, or permission of department. Not open to students with credit for 1144, or for Math courses numbered 1150 (150) or above. This course is available for EM credit. GE quant reason math and logical any course.

1149 Trigonometry U 3
Trigonometric functions and their properties. Vectors, polar coordinates and complex numbers.
PreReq: A grade of C- or above in 1148, or permission of department. Not open to students with credit for 1144, or for any Math course numbered 1150 (150) or above. This course is available for EM credit. GE quant reason math and logical any course.

1151 Calculus I U 5
Differential and integral calculus of one real variable.
PreReq: A grade of C- or above in 1148 and 1149, or in 1144, 1150, or 150, or Math Placement Level L. Not open to students with credit for 1152 or 152.xx, or above. This course is available for EM credit. GE quant reason math and logical any course.

1154 Calculus I for Engineering Technology U 4
Calculus I for Engineering Technology is the first in a two-course calculus sequence specifically designed for Engineering Technology. It covers standard Calculus topics including limits, differentiation, integration, optimization, and approximation with an emphasis on building mathematical intuition, problem solving ability and using appropriate technology to find solutions.
PreReq: A grade of C- or above in 1148 and 1149, or grade of C- or above in 1144 or 1150, or Math Placement Level L. Not open to students with credit for 2153 or above.

1155 Calculus II for Engineering Technology U 4
Calculus II for Engineering Technology is the second in a two-course calculus sequence specifically for Engineering Technology. It covers standard Calculus topics including related rates, Taylor Polynomial approximations, differential equations and functions of several variables with an emphasis on building mathematical intuition, problem solving and using appropriate technology to find solutions.
PreReq: A grade of C- or above in 1154.

Microbiology

4000 Basic and Practical Microbiology U 4
Provides an understanding of microorganisms and their interaction with the human experience. Online/in-person hybrid version of Microbio 4000.01.
PreReq: 3 cr hrs in Biology. Not open to students with credit for 4000 or 4000.01. GE nat sci bio course.

Music

3370 Music for Elementary Teachers U 2
Music literature and teaching aids for children, including singing, rhythmic, creative, and listening experiences, and their presentation.
PreReq: Not open to students with credit for 370.

Philosophy

1100 Introduction to Philosophy U 3
Examination of major problems, such as the nature of reality, knowledge, truth, morality, and the relation of philosophy to science and religion.
PreReq: GE cultures and ideas course.

1300 Introduction to Ethics U 3
The nature of right and wrong, good and evil; the grounds of moral choice and decision; the resolution of moral conflicts.
Pre Req: GE cultures and ideas course.

Physics

1201 E&M, Optics, Modern Physics U 5
Algebra-based introduction to electricity and magnetism, simple optics, overview of modern physics including special relativity and quantum mechanics.
PreReq: 1200 (111). Not open to students with credit for 112. This course is available for EM credit. GE nat sci phy course. NS Adms Cond course.

1250 Mechanics, Work and Energy, Thermal Physics U 5
Calculus-based introduction to classical physics: Newton's laws, work and energy, fluids, thermodynamics; for students in physical sciences, mathematics, and engineering.
PreReq: Not open to students with credit for 112. This course is available for EM credit. GE nat sci phy course.

1251 E&M, Waves, Optics, Modern Physics U 5
Calculus-based introduction to electricity and magnetism, waves, simple optics, and quantum mechanics; for students in physical sciences, mathematics, engineering.
PreReq: Not open to students with credit for 112. This course is available for EM credit. GE nat sci phy course.

2193 Individual Studies U 1 - 5
Designed to give a properly qualified student opportunity for independent reading, study, or laboratory work in a specialized field of interest.
PreReq: Permission of Instructor. Repeatable to a maximum of 20 cr hrs or 5 completions. This course is graded S/U.

Political Science

1100 Introduction to American Politics U 3
Introduction to American politics, the institutions and processes which create public policy, the strengths and weaknesses of the American political systems.
PreReq: Not open to students with credit for 3000 (300), 101, or 101H. This course is available for EM credit. GE soc sci orgs and polities course. SS Admis Cond course.

1200 Introduction to Comparative Politics U 3
Introduction to modern nation-states outside the United States: problems of state- and nation-building, representation, conflict, and making of government policy in selected countries.
PreReq: Not open to students with credit for 100 or 100H. This course is available for EM credit. GE soc sci orgs and polities and diversity global studies course.

Psychology
6 Psychology

1100 Introduction to Psychology U 3
A prerequisite to advanced courses; a broad survey of psychological science. Application of the scientific method to the empirical study of behavior with emphasis on individual and cultural differences. Prereq: Not open to students with credit for 100, 1100H (100H) or 1100E (100E). This course is available for EM credit. GE soc sci indivs and groups and diversity soc div in the US course.

2300 Research Methods in Psychology U 3
An overview of issues, methods, and techniques of scientific psychological research. Students must be pursuing majors or minors in Psychology. Prereq: 1100 (100) or 1100H (100H). Not open to students with credit for 300.

2367.01 Social Psychology U 3
Survey of group processes as they affect individual behavior; topics include individual motivation, group behavior, attitudes, and perception of self and others. Prereq: 1100 (100) or 1100H (100H) or English 1110.01, 1110.01H, 1110.02, 1110.02H, 1110.03, 110, or 111, or equiv. Prereq: Not open to students with credit for 3325 (325), 3325H (325H), or 367.01. GE writing and comm: level 2 and soc sci indivs and groups course.

3310 Sensation and Perception U 3
Examination of how observers perceive their environment through sensory information; emphasis on major sensory systems including vision, audition, spatial orientation, touch, taste, and olfaction. Prereq: 1100 (100) or 1100H (100H). Not open to students with credit for 310.

3313 Introduction to Behavioral Neuroscience U 3
Introduction to the structure and function of the nervous system in relation to behavior. Prereq: 1100 or 1100H.

3321 Quantitative and Statistical Methods in Psychology U 3
A concentrated examination of applications of statistical tools in inference in contemporary psychology; hypothesis testing, regression, correlation, and analysis of variance. Prereq: 1100 (100) or 1100H (100H), and a grade of B or above in 2220 (220) or 2220H (220H). Not open to students with credit for 321 or 321H.

4509 Perception of Space and Motion in Sports U 3
Discussion of cognitive, perceptual, and statistical issues that have special application to performance in sports. Prereq: A grade of C- or above in 2220, 2300, and 3310.

4540 Counselling Psychology U 3
Issues within the field of counseling psychology including assessment, counseling skills, multicultural issues, career, professional, and ethical issues. Prereq: A grade of C- or above in 2220 and 2300; and a grade of C- or above in 2367.02, 3331, 3335, or 3530.

Social Work

1130 Introduction to Social Work in Contemporary Society U 3
An introduction to the core values, fundamental goals, unique functions and methods of the social work profession. Prereq: Not open to students with credit for 230. GE soc sci indivs and groups course.

1140 Minority Perspectives: Race, Ethnicity, and Gender U 3
Examination of the structure of human societies, cultures, and institutions from the perspective of oppressed minority populations. Prereq: Not open to students with credit for 300. GE diversity soc div in the US course.

Introduces students to social and economic justice and injustice and presents multiple strategies to pursue social justice, with a particular emphasis on the role of advocacy. Prereq: Enrollment in SocWork major. Not open to students with credit for 521.

3402 Research & Statistics for Understanding Social Work U 3
Interventions
This is the second course in the BSSW program sequence preparing students to effectively work with research evidence and statistics as it applies to social work interventions at multiple levels. Students will develop the requisite skills and knowledge for beginning to identify, assess, and apply research evidence to inform and evaluate social work practices at multiple levels of intervention. Prereq: 3401.

3502 Foundations of Generalist Practice U 3
Introduces students to the theories, knowledge and skills of generalist social work practice, with an emphasis on work with individuals. Prereq: 3501. Not open to students with credit for 645.

3503 Social Work Practice with Diverse Populations U 3
Foundation knowledge and a social work perspective for working with diverse populations, especially those who are oppressed and marginalized. Prereq: 3501.

3600 Introduction to Psychopathology and Social Work Practice U 3
This course will familiarize students with the major mental disorders, offer strategies for building on clients’ strengths and resilience, provide basic tools for screening and referral, and impart knowledge of the mental health delivery system and its resources. Prereq: Jr or Sr standing in social work major, or permission of the department.

4188.01 Undergraduate Field Seminar U 1
Integration of knowledge and practice; problem solving and discussion of social work practice issues, values, and ethics. Taken concurrently with field practicum. Prereq: 3502 (645). Concur: 4186.01 or 4186.02. Repeatable to a maximum of 2 cr hrs.

4189 Field Practicum U 5
Internship in a social work agency. Students integrate classroom knowledge and skills with practice experiences. Prereq: 3502 (645). Concur: 4186.01 or 4186.02. Repeatable to a maximum of 10 cr hrs. This course is graded SU.

4503 Generalist Practice with Larger Systems U 3
Application of professional values, knowledge, and skills essential for effective generalist social work practice with organizations and communities. Prereq: 4502. Not open to students with credit for 647.

Sociology

1101 Introductory Sociology U 3
Fundamental concepts of sociology and introduction to the analysis of social problems and interactions (e.g., wealth, gender, race, inequality, family, crime) using sociological theories. Prereq: 1101H (101H), 1101E, 101, RunSoc 1500 (155), or equiv. GE soc sci orgs and polities and diversity soc div in the US course.

2202 Social Problems and Public Policy U 3
Analysis of contemporary social problems such as inequality, discrimination, and crime.

3306 Sociology of Poverty U 3
A study of low-income peoples, especially concerning the effect of poverty on them, and their consequent social participation. GE diversity soc div in the US course.

3487 Research Methods in Sociology U 3
Introduction to sociological research techniques, methodological approaches, and relevant quantitative procedures. Prereq: Not open to students with credit for 487.

4511 Juvenile Delinquency U 3
A sociological perspective in youth and crime; special attention to the magnitude of youth crime, theories, juvenile justice systems, and prevention and control efforts. Prereq: Jr or Sr standing; or permission of instructor, or department.

4610 Sociology of Deviant Behavior U 3
An examination of the nature, types, and societal reactions to deviant behavior; special emphasis on the process of stigmatization and the emergence of deviant subcultures. Prereq: Jr or Sr standing; or permission of instructor, or department. Not open to students with credit for 610.

Spanish

1101 Spanish I U 4
Development of listening, reading, speaking, and writing skills in cultural contexts. Not open to native speakers of this language through regular course enrollment or EM credit or to students with 3 or more years of high school Spanish. Students with 1+ years of high school Spanish must take the Multicat placement exam. Prereq: Not open to students with credit for 1101.01, 1102, 1102.01, 1103, 1103.01, 1155, or equiv. courses. This course is available for EM credit. GE for lang course.

1102 Spanish II U 4
Further development of listening, reading, speaking, and writing skills in cultural contexts. Both classroom-based and 100% online sections available each semester. Not open to native speakers of this language through regular course enrollment or EM credit. Prereq: 1101 or 1101.01. Not open to students with credit for 1102.01, 1103.01, 1103.51, 1155, or equiv. courses. This course is available for EM credit. GE for lang course.

1103.01 Spanish III U 4
Continuing development of listening, reading, speaking, and writing skills in cultural contexts. A grade of C- or above is required to continue to 2201.01.51 and/or 2202.01.51. Not open to native speakers of this language through regular course enrollment or EM credit. Prereq: 1102.01 (103.01) or 1155 (103.66). Not open to students with credit for 104, 104H, 2200H, 1103.51, 2201.01, 2201.51, 2202.01, or 2202.51. This course is available for EM credit. GE for lang course. FL Admis Cond course.

Statistics

1350.01 Elementary Statistics U 3
Introduction to probability and statistics, experiments, and sampling, data analysis and interpretation. Prereq: Math 1050, or Math Placement Level S, or permission of instructor. Not open to students with credit for GE Data Analysis course (AEDScn 2005, AnimSci 2280, Astron 3350, Chem 2210, 2210H, ComLr 3557, EarthSc 2245, Econ 3400, ENR 2000, Geog 2200.01, 2200.02, HCS 2280, IntStuds 3400, Lit 2051, 2051H, Philos 1520, Physics 3700, PolitSc 3780, 4781, Sociol 3549, Stat 1350, 1350.01, 1430, 1430.01, 1430.02, 1430.03, 1430.04, 1450, 1450.01, 1450.02, 1450, 2450, 2450.01, 2450.02, 2480, 2480.01, 2480.02, 2490, 2490.01, 2490.02, 2490, 3100, 3310, 3490.01, 3490.02, 3496, 3470, 3470.01, 3470.02, 4202, 5391, or 5902). GE data only course.
1450.01 Introduction to the Practice of Statistics  
Algebra-based introduction to data analysis, experimental design, sampling, probability, inference, and linear regression. Emphasis on applications, statistical reasoning, and data analysis using statistical software. Prereq: Math 1116 or 1130 or above, or Math Placement Level L or M, or permission of instructor. Not open to students with credit for 1450, 1450.02, 2450, 2450.01, 2450.02, 2480, 2480.01, or 2480.02. GE data only course.

| Theatre |
|---|---|
| 2000.09 Technical Production Practicum: General  | 3 |
| Provides experience in technical production activities.  
Prereq: Not open to students with credit for 205.  | |

| 2100 Introduction to Theatre  | 3 |
| A study of the art and profession of theatre, with an emphasis on evaluating and appreciating live performance, theatre’s cultural importance, and its relationship to issues of social diversity. Students study performance conventions, texts, & spaces from ancient times to present day. While not an acting class, students get firsthand experience in the collaborative process of theatre creation. Prereq: Not open to students with credit for 2100H or 2101H. GE VPA and diversity soc div in the US course.  | |

| 2367.03 Criticizing Television  | 3 |
| Study of theatre history at an intermediate level with emphasis on writing skills. A critical analysis of a wide variety of television programs through viewing, discussing, reading, and writing. Prereq: English 1110 (110) or equiv, and Soph, Jr, or Sr standing. Not open to students with credit for 2367.xx (367.xx) or ArtEduc 2367.03 (367.03). GE writing and comm course: level 2 and diversity soc div in the US course. Cross-listed in ArtEduc.  | |

| 3000 Production Run Crew Practicum  | 1 - 2 |
| Hands-on involvement in the production of live theatre; participation leading to a more thorough understanding of theatre and in particular theatre design and technology. Repeatable to a maximum of 8 cr hrs or 4 completions.  | |

| 4000.01 Practicum: Stage Management  | 1 - 3 |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor. Not open to students with credit for 405.01. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| 4000.02 Practicum: Sound  | 1 - 3 |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| 4000.03 Practicum: Video  | 1 - 3 |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| 4000.04 Practicum: Stage Design  | 1 - 3 |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| 4000.05 Practicum: Costuming & Makeup  | 1 - 3 |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| 4000.06 Practicum: Lighting  | 1 - 3 |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| 4000.08 Practicum: Acting  | 1 - 3 |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor, by audition. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| 4000.09 Practicum: General  | U  |
| Individual theatrical performance and production activities at an advanced level under faculty supervision.  
Prereq: Permission of instructor. Repeatable to a maximum of 18 cr hrs or 8 completions.  | |

| Women’s, Gender, and Sexuality Studies |
|---|---|
| 1110 Gender, Sex and Power  | 3 |
| Introduces students to the study of gender, sex, and power. We will draw on a variety of literatures to analyze gender, race, sexuality, and other identities. We will place the study of US women in broader transnational contexts.  
Prereq: Not open to students with credit for 110, 110H, WomStds 101, 101H, 110, or 110H. GE cultures and ideas and soc sci indivs and groups and diversity soc div in the US course.  | |