Ohio State Lima
Course Offerings Bulletin 2024-2025

Important Dates and Deadlines
registrar.osu.edu/registration/index.asp
**Accounting and Management Information Systems**

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**Human Anatomy**

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**American Sign Language**

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**Arts and Sciences**

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2 Biology

1101 Introductory Biology U 4
Basic principles of biology; topics include the nature of science, organismal diversity, evolution, ecology, genetics, reproduction, and cellular structure and function. Not intended students majoring in one of the biological sciences. Prereq: Not open to students with credit for 1101E, 1113 (113), 1113H (115H), 101, Entmy 1110 (101), or MolGen 1101 (PreBio101). This course is available for EM credit. GE nat sci bio course. GE foundation natural sci course.

1102 Human Biology U 4
Exploration of human biology; topics include structure and physiological function, reproduction and development, genetics and disease, ecology, and evolution. Not intended for students majoring in one of the biological sciences. Prereq: Not open to students with credit for 1102. This course is available for EM credit. GE nat sci bio course.

1113.01 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. Prereq: Math 1120, 1130, 1148, 1150, or above, or Math Placement Level L or M. Prereq or concur: Chem 1110, 1208, 1210, 1610, or 1910H, or permission of course coordinator. Not open to students with credit for 1113 or 1113.02. This course is available for EM credit. GE nat sci bio course. GE foundation natural sci course.

1113E 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 1113E and 1114E. Prereq: Honors standing; and Math 1149, or 1150 or above, or Math Placement Level L or M. Prereq or concur: Chem 1110, 1208, 1210, 1610, or 1910H, or permission of course coordinator. GE nat sci bio course. GE foundation natural sci course.

1114.01 Biological Sciences: Forms, Function, Diversity, and Ecology U 4
Exploration of biology and biological principles; evolution and speciation, diversity in structure, function, behavior, and ecology among prokaryotes and eukaryotes. A broad introduction to biology comprises both Biology 1113 and 1114. Prereq: Math 1120, 1130, 1148, or 1150 or above, or Math Placement Level L or M. Prereq or concur: Chem 1110, 1208, 1210, 1610, or 1910H, or permission of course coordinator. GE nat sci bio course. GE foundation natural sci course.

2105 Human Biology in Cinema U 3
Human Biology in Cinema will explore biological insights related to human health and well-being through the lens of mainstream films. These biological insights will enhance comprehension and appreciation of films and in turn the films will provide a narrative structure that make the information more accessible and memorable. Films will serve as a starting point for a class discussion each week. High School Biology recommended. Prereq: Soph standing, or permission of instructor. Not open to students with credit for 1105. GE nat sci bio course. GE foundation natural sci course.

3401 Integrated Biology U 4
A case studies approach is used to gain a better understanding of biological concepts and principles. This course is designed for biology majors. Prereq: 1113, 1114, Chem 1220, and Math 1140, or 1148 and 1149, or 1150 or above; or permission of instructor.

Business Admin: Finance

3220 Business Finance U 3
Introductory finance class which allows students develop the skills to understand how financial instruments, Stocks and Bonds and Corporate Finance issues such as Corporate Governance, Cost of Capital and Capital Budgeting. Prereq: 3220 (620), BusMgt 2230 (330), and 2231 (331). Not open to students with credit for 3210, 3211 (721), 4220, 4221, or 4222 (722).

Business Admin: Management & Human Rsrs

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. Prereq: 3220 (620), BusMgt 2230 (330), and 2231 (331). Not open to students with credit for 4210, 4211, 4212 (721), 4220, 4221, or 4222 (722).

4999 Business Admin: Operations and Business Analytics

3230 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. Prereq: Math 1131 or 1151, and Stat 1430, and CSE 1113 or 2111, and Econ 2001.01 or 2002.01. Prereq or concurrent: Econ 2002.01 or 2002.02. This course is available for EM credit.

3231 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. Prereq: Math 1131 or 1151 or equiv., and CSE 1113 or 2111, and Econ 2001.01 or equiv., and Econ 2002.01 or equiv. Not open to students enrolled in BUS, UEXP, or PREBSSBA-PR.

3232 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. Prereq: Econ 2001.01, and 2002.01, and Stat 1430, or equiv.; or Math 1151 or 1154, and enrollment in BSET program. Not open to students with credit for 3210, or to students enrolled in UEXP or PREBSSBA-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. Prereq: 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 PREBSSBA-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. Prereq: Econ 2001.01, or equiv.; and 2002.01, or equiv. Not open to students enrolled in UUSS, UEXP, or PREBSSBA-PR.

4204 Marketing Projects U 3
In this advanced marketing course students will act as a consulting team and work with a client firm on a marketing problem, produce a report and present their work. Prereq: 4201 (750), 4202 (753), and BusMHR 2282 (BusAdm 499.01), or equiv; or enrollment in regional campus General Business Program.

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 ActcMIS 2200, 2300, and BusOBRA 2321, 2321; and BusMHR 2282 or 2291. Not open to students enrolled in BUS, UEXP, or PREBSSBA-PR.
2510 Organic Chemistry Laboratory I  U  4
Introduction to spectroscopic characterization, scientific writing, computational chemistry, and laboratory techniques of organic chemistry, including synthesis, isolation, purification, and identification of organic compounds. PreReq: or concur: 2510, 2810 or 2910H.

2550 Organic Chemistry Laboratory II  U  2
Introduction to spectroscopic characterization, scientific writing, computational chemistry, and laboratory techniques of organic chemistry, including synthesis, isolation, purification, and identification of organic compounds. PreReq: 2540 or 2940H. PreReq or concur: 2520, 2620, or 2920H.

Communication

1100 Communication in Society  U  3
Role of communication in society; forms, strategies, theories and issues; interpersonal, group, organizations, public and mass communication. PreReq: Not open to students with credit for 200. GE soc sci indivs and groups course. GE foundation social and behavioral sci course.

1101 History of Communication  U  3
History of human communication from the beginning of spoken and written communication to modern mediated and mass communication. GE soc sci indivs and groups course. GE foundation social and behavioral sci course.

2367 Persuasive Communication  U  3
This course is designed to increase your understanding of persuasive communication as it relates to citizenship and the American experience. As an advanced level writing course, the course is specifically designed to improve your persuasive writing, speaking, and critical thinking skills as specific citizenship behaviors. PreReq: Completion of GE Foundation Writing and Information Literacy course. Not open to students with credit for 2367H. GE writing and comm course; level 2. GE theme citizenship for div and just wrtd course.

2850 Media and Citizenship  U  3
This course provides an overview of media's role in citizenship by learning about media industry operations, how media influence us, critical evaluation of media, media responsibility and literacy, and how our experiences and biases affect the current relationship between mass media and democracy. We will learn how to engage with media to promote informed, active, and responsible citizenship. GE theme citizenship for div and just wrtd course.

3442 Violence in Society and Violence in the Media  U  3
This course examines the causes, consequences, and solutions to human aggression and violence. It discusses how aggression and violence are defined and measured, aggression theories, individual risk factors, contextual factors, and aggression targets. It examines in detail violent media research. It also discusses how to reduce anger, aggression, and violent media effects. GE soc sci indivs and groups course. GE theme health and well-being course.

Comparative Studies

2281 American Icons  U  3
Interdisciplinary methods in American studies, with an emphasis on plurality and the intersectional study of identities (including but not limited to race, gender, and ethnicity) in American culture. PreReq: English 1110.xx, or equiv. GE cultures and ideas and diversity soc div 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.

1223 Introduction to Computer Programming in Java  U  3
Introduction to computer programming and to problem solving techniques using computer programs; programming lab experience. PreReq: Math 1130, 1140, 1148, 1150, or 1151, or Math Placement Level L. This course is available for EM credit.

2111 Modeling and Problem Solving with Spreadsheets and Databases
Spreadsheet 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. GE foundation math and quant reasoning or data anyl course.

2221 Software I: Software Components  U  4
Intellectual foundations of software engineering; design-by-contract principles; mathematical modeling of software functionality; component-based software from client perspective; layered data representation. PreReq: 1212, 1221, 1222, 1223, 1224, Engr 1221, 1281.01H, 1281.02H, or CSE Placement Level A. PreReq or concur: Math 1151, 1161.01H, or 1161.02. Not open to students with credit for 5022. This course is available for EM credit.

Construction Systems Management

2305 Professional Development I  U  2
Business communications and professional development in construction systems management including informative and persuasive writing, academic planning, 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.

Design

2700 Introduction to Design Practice  U  3
Introduction to theory, rationale, practice, and societal impact of design; design process, critical issues, relationship to the environment.

Earth Science

1105 Geology of the National Parks  U  3

1200 Introduction to Earth Science Laboratory  U  1
Laboratory application of basic earth sciences principles to identify and categorize rocks and minerals, use and construct maps to solve geological problems, and analyze Earth's physical processes. Pair with ES 1105, 1110H (110B), 1108, 1121, 1151, 2203, 2204, 2205, or 2206(S) for physical science GE with lab. Pair with ES 1105, 1110H (110B), 1108, 1121, 1151 to fulfill GE Foundations Natural Sciences. PreReq or concur: 1105, 1108, 1110, 1110H, 1121, 1151, 2203, 2204, 2205, 2206, or 2206S. Not open to students with credit for 1100 or 2122. Not open to students with credit for EarthSc 1121 prior to Au 21. GE nat sci phyx course. GE foundation natural sci course.
4 Earth Science

2203 Environmental Geoscience U 3
Concepts and challenges of geological hazards and resources, environmental pollution, and health; regional and long-range planning; and global change and sustainability. GE nat sci phy course. GE theme sustainability course.

2206 Principles of Oceanography U 3
Introduction to the four basic disciplines of oceanography: biological, geological, chemical, and physical. Requisite: 2201. This course is available for EM credit. GE soc sci human, nat, and ecom resources course. GE foundation social and behavioral sci course. SS Admis Cond course.

2210 Energy, Mineral Resources, and Society U 3
Geologic origin, world distribution, and uses of mineral resources critical to society; topics include mineral and fossil fuels, metallic ores, and industrial minerals. GE nat sci phy course. GE theme lived environments course.

2189 Field Experience U 1 - 2
The EDUTL 2189 field experience is designed to provide undergraduate students, in pre-education programs, with an opportunity to work with youth within a professional setting in a school, tutoring environment or community agency. Prerequisite: 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. Prerequisite: English 1110, or equiv. Not open to students with credit for 467. GE lit course. GE foundation lit. vis and performing arts course. GE foundation social and behavioral sci 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. Prerequisite: Not open to students with credit for 460. GE soc sci indivs and groups course. GE foundation social and behavioral sci course.

3189.01 Field Experience: Early Childhood Education U 1 - 2
This field experience is designed as a practice-based companion to the EC Pedagogy 3160 course. Prerequisite: Not open to students with credit for 460. GE soc sci indivs and groups course. GE foundation social and behavioral sci course.

3189.02 Field Experience: Middle Childhood Education U 1 - 2
The experience is designed to provide: lesson planning, teaching, and classroom management; student learning, interests, and perspectives; (3) the requirements of being a professional educator; and effectively bringing together the work done in a university classroom with work done in grade 4-9 classrooms. Prerequisite: Admission to Middle Childhood Education Major. Repeatable to a maximum of 4 cr hrs or 4 completions.

3189.09 Field Experience: Child and Youth Studies U 1 - 2
Field experience designed to provide undergraduate students in the Child & Youth Studies program an opportunity to work with a cooperating professional within an educational or community organization focusing on teaching & learning. Prerequisite: Admission to Child and Youth Studies Major. Repeatable to a maximum of 4 cr hrs or 4 completions.

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. Prerequisite: English 1110 or equivalent. Not open to students with credit for 656 or 3356E. GE lit course. GE foundation lit. vis and performing arts 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. Prerequisite: 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. Prerequisite: Admission to Middle Childhood Education Major. Repeatable to a maximum of 12 cr hrs or 3 completions.

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

4303 Language, Diversity, and Education U 3
This course is designed to develop your critical language awareness with respect to language diversity and to prepare you to engage effectively with linguistically diverse populations in educational contexts. We explore language diversity, how it shapes teaching and learning, and how we can reshape linguistic environments to make them more equitable. GE theme lived environments course.

5005 Equity and Diversity in Education U G 3
Focuses on issues of diversity, equity, justice, teacher agency, and interdisciplinary approach to curriculum and pedagogy. Emphasis is placed on the role of teachers in affirming students' identities and lived experiences and its influences on approaches to teaching and learning in diverse educational settings. GE theme citizenship for div and just world course.

5101 Teaching and Learning with Drama: Introduction U G 3
Introduction to the use of drama and social imagination in education. Prerequisite: Jr or Sr standing with some field experience, or experienced teacher. Not open to students with credit for 633. Repeatable to a maximum of 6 cr hrs.

5102 Teaching & Learning of Literacy in Grades Pre-K-5 U G 3
Examination of children's oral and written language development and related theoretical understandings; instrumental for teaching language arts including evaluation processes and instructional materials. Prerequisite: 5469, and enrollment in Education major or Master of Education.

5108 Teaching and Learning of Mathematics in Grades Pre-K-3 U G 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 to 3 early childhood mathematics in a diverse classroom. Prerequisite: Admission to Early Childhood teaching licensure program, or permission of instructor.

5123 Early Childhood Pedagogy U G 3
Pedagogy I explores sociocultural perspectives on teaching and learning in early childhood and elementary education, the role of teacher as researcher/inquirer, and the ways in which sociocultural pedagogies interface with standard-based education. Prerequisite: Admission to major or M.Ed. Not open to students with credit for 723.

5129 Teaching and Learning of Science in Grades Pre-K - 5 U G 3
This course is designed to prepare early childhood teacher candidates to teach PreK-5 students science. Prerequisite: Enrollment in Education major or Master of Education.

5137 Teaching and Learning of Social Studies Grades Pre-K - 3 U G 3
Designed to provide opportunities to examine interesting and effective social studies content knowledge, cultural understandings, and pedagogies for the early childhood learner within global contexts. Prerequisite: Not open to students with credit for 737.

5191.01 Supervised Student Teaching Internship: Early Childhood Education U G 3 - 15
Student teaching is designed to assess and support preservice prek-3rd grade teachers as they develop the necessary knowledge, skills, and dispositions required for beginning level teachers. Prerequisite: Admission to Early Childhood Education major or MEd program. Repeatable to a maximum of 30 cr hrs or 2 completions.

5191.02 Supervised Student Teaching Internship: Middle Childhood Education U G 3 - 15
Student teaching is designed to assess and support preservice 4th-9th grade teachers as they develop the necessary knowledge, skills, and dispositions required for beginning level teachers. Prerequisite: Admission to Middle Childhood Education Major or MEd program. Repeatable to a maximum of 30 cr hrs or 2 completions.

5195.01 Reflective Seminar: Early Childhood Education U G 1 - 4
This course serves as the place for mediating learning & applying it to the practical. You will engage in reading, discussion, & reflection to develop your understanding of the relationship between what you learn in the university classroom & what you experience in the elementary classroom. Prerequisite: Admission to Early Childhood Education Major or MEd program. Repeatable to a maximum of 10 cr hrs or 5 completions. This course is graded S/U.

5195.02 Reflective Seminar: Middle Childhood Education U G 1 - 4
Reflective Seminar is part of one of a 3-part seminar that takes place over the course of 3 semesters. This course includes what is often viewed as the more traditional 'science' of teacher preparation. Prerequisite: Admission to Middle Childhood Education Major or MEd program. Repeatable to a maximum of 10 cr hrs or 5 completions. This course is graded S/U.
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<td>5220</td>
<td>Foundations of Middle Childhood Teaching and Learning</td>
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<td>5225</td>
<td>Diverse Literature and Comprehension - Elementary-Middle Education</td>
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<td>Language Arts Methods for Preservice Middle Childhood Teachers</td>
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<td>5275</td>
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<td>5280</td>
<td>Social Studies Methods for Preservice Middle Childhood Teachers</td>
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<td>Language and Word Study for All Learners</td>
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<td>Clinical Practice in Treating Reading Disabilities</td>
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<td>Seminar: Personal Growth to Increase Career Competencies</td>
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<td>Learning and Motivation Strategies for College Success</td>
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<td>Becoming a Self-Regulated Learner</td>
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<td>Psychological Perspectives on Education</td>
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<td>School and Society</td>
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<td>Learner Centered Classroom Assessment</td>
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<td>Field Experience: Special Education</td>
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<td>1 - 12</td>
</tr>
<tr>
<td>5189</td>
<td>Field Experience: Special Education</td>
<td>U G</td>
<td>1 - 12</td>
</tr>
<tr>
<td>5651</td>
<td>Introduction to Exceptional Children</td>
<td>U G</td>
<td>3</td>
</tr>
<tr>
<td>5734.02</td>
<td>Methods of Instruction for Elementary Children with Mild/Moderate Disabilities</td>
<td>U G</td>
<td>3</td>
</tr>
<tr>
<td>5735.02</td>
<td>Methods of Instruction for Secondary Students with Mild/Moderate Disabilities</td>
<td>U G</td>
<td>3</td>
</tr>
<tr>
<td>8189</td>
<td>Field Experience in Special Education</td>
<td>G</td>
<td>1 - 15</td>
</tr>
</tbody>
</table>

**Educational Studies: Teaching and Learning**

**Educational Studies: Educational Psychology**

- **1259** Learning and Motivation Strategies for College Success (U, 3 cr): Teaches learning and motivation strategies to help students manage time, improve grades, and achieve college success. Students will develop practical skills for personal and academic effectiveness, while also understanding the related research. Topics include boosting motivation, overcoming procrastination, enhancing organization and concentration, and applying effective study strategies.

**Educational Studies: Philo & Hist of Education**

- **3206** School and Society (U, 3 cr): Use of concepts and methods of history, philosophy, and the social sciences to grasp the interrelationship between a diverse society and education. GE diversity soc div in the US course. GE foundation race, ethnicity and gender div course.

**Educational Studies: Special Education**

- **3189** Field Experience: Special Education (U, 1 - 12 cr): Professional service in school or community settings. Prereq: Admission to the Special Education program, or permission of instructor. Repeatable to a maximum of 12 cr or hrs or 12 completions. This course is graded S/U.
- **5189** Field Experience: Special Education (U G, 1 - 12 cr): Professional service in school or community settings. Prereq: Admission in Special Education program, or permission of instructor. Repeatable to a maximum of 12 cr or hrs or 12 completions. This course is graded S/U.

**Educational Studies: Quant Rsrch, Evaltn & Msrmnt**

- **3005** Learner Centered Classroom Assessment (U, 3 cr): Offers an in-depth look at classroom assessment that meets the needs of 21st century teaching and learning. During this course, prospective teachers will determine how classroom assessment strategies can benefit their teaching practices and their students learning. They will study how to plan, develop, and manage student-centered assessment.

**Educational Studies: Teaching and Learning**

- **5468** Foundations of Reading and Literacy (U G, 3 cr): 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 - the need for teachers to be aware of the diversity of backgrounds and abilities that children bring to the classroom and of strategies for dealing with that diversity.

- **5469** Language and Word Study for All Learners (U G, 3 cr): This course provides a detailed examination of the ways that oral and written languages work and how this supports development of English word reading and spelling skills for learners who are monolingual speakers of Standard English as well as those who speak other languages and varieties of English. Prereq: 5468.

- **5471** Clinical Practice in Treating Reading Disabilities (U G, 3 cr): Use of test materials in the diagnosis of reading disabilities; practice with remedial procedures. Prereq: 5470, or permission of instructor. Not open to students with credit for 671. Repeatable to a maximum of 6 cr hrs.

**Educational Studies**

- **2189S** First Education Experience Program (FEED) (U G, 3 - 5 cr): Provides opportunities for students to explore education as a possible career path via a combination of field and seminar requirements. Students spend time in local, public PreK-12 school-based settings, interacting with various professionals and students. GE service learning course.

**Educational Studies: Counselor Education**

- **2272** Seminar: Personal Growth to Increase Career Competencies (U G, 2 cr): Designed to provide opportunities to assist in self-exploration of and clarification for more effective development beyond the level of average performance. Prereq: Not open to students with credit for EduPAES 270.02. This course is progress graded (S/U).

**Engineering**

- **8189** Field Experience in Special Education (G, 1 - 15 cr): Planned counseling, supervisory, assessment, or teaching experience in a public school or other human service setting under supervision. Prereq: Admission to Special Education graduate program or permission of instructor. Repeatable to a maximum of 15 or hrs or 15 completions.
6 Engineering

1181.01 Fundamentals of Engineering I  U  2
Engineering problem solving utilizing computational tools such as Excel and MATLAB; hands-on experimentation; modeling; teamwork; written, oral and visual communications. Prereq or concour: Math 1140, or Math 1150 or above. Not open to students with credit for Engr 1182.01, 1182.02, 1182.03, 1182.04, 1282.01H, 1282.02H, 1282.03H, 1282.04H, 1186.01, 1187.01, or 1188.01.

1182.01 Fundamentals of Engineering II  U  2
Introduction to 3D visualization and CAD; engineering design-build process; teamwork; written, oral and visual communications; project management. Prereq: 1181.01, or 1181.02, or 1281.01H, or 1281.02H, or 1281.03H. Prereq or Concurr: Math 1141; or Math 1151 or above. Not open to students with credit for 1186.01, or 1187.01, or 1188.01; not repeatable if credit earned for 1182.01, or 1182.02, or 1182.03, or 1182.04H, or 1282.01H, or 1282.02H, or 1282.03H, or 1282.04H.

Engineering Technology (BS)

1200 Introduction to Engineering Technology  U  1
Introduction to the roles available in engineering technology, professional development planning for students pursuing this degree, and exposure to common elements in engineering technology. Course work will emphasize written and verbal communication skills. Prereq: Enrollment in the BSET program.

1500 Manufacturing Processes I  U  3
History of manufacturing, tools and machines, and operations of the machine shop equipment. Opportunity to function individually and on teams, and communicate effectively to learn to work in groups to accomplish a task. The skills learned from this class are transferrable to all areas of day to day professional life which makes it valuable in other contexts.

1600 Engineering Graphics  U  3
Develops skills in graphic design and visualization through creating and interpreting 2D Computer Aided Drawings in AutoCAD. Explore various forms of technical graphics used in the field of Engineering Technology including facility layouts, piping and instrumentation diagrams, and electrical schematics. Emphasis on utilizing technical graphics to solve Engineering Technology problems.

2100 Introduction to Robotics with Vision  U  2
Introduction to Robotics teaches the basics of robotics, focused on the role of an operator, technician, or engineer/programmer. It covers robots, robot safety, robot programming, and setup and training of a 2D vision system. The knowledge learned in lectures will be applied to a robot in a laboratory environment through a series of guided labs. Prereq or concour: 2500.

2300 Electrical Circuits for Engineering Technology  U  3
Fundamentals of electrical circuits, measuring & analyzing data, & troubleshooting those circuits. Analysis of Direct Current (primarily) & Alternating Current circuits (less content) & effects of different components—resistors, capacitors, inductors, and other components in electrical circuits, DC/AC circuit dynamics that will be used in studies of industrial & electronic control applications. Prereq: Math 1155 or 1172, and Physics 1231 or 1251. Not open to students with credit for ECE 2300.

2500 Manufacturing Processes II  U  2
Modern manufacturing processes. Design, create, and assemble of structure/objects by combining the manufacturing and graphical design knowledge. Opportunity to function individually and on teams and communicate effectively to learn to work in groups to accomplish a task. The skills are transferrable to all areas of day-to-day professional life which makes it valuable in other contexts. Prereq: 1500.

3100 Material Science with Engineering Technology  U  3
Supplemental course for BSET students that should be taken along with MatSciEn 2010. This course will provide hands-on exposure to common manufacturing materials physical and chemical characteristics (like electrical and heat conductance) as well as testing methods (like stress, strain, hardness, brittleness, and microstructure). Prereq: Physics 1250 or 1260, and Math 1151 or 1154, and Chem 1210 or 1250; or permission of instructor.

3600 Technology, Structure and Applications for Controls  U  3
This course communicates the structure of a manufacturing organization, the technology and systems in each level of the organization and the roles in the automation, control, and monitoring of automation manufacturing systems. It provides insight in the types of manufacturing systems, equipment/machinery, sensors/controls devices and how to develop code for these systems for an integration. Prereq: 3900.

3700 Mechanical Processes  U  3
Mechanical Processes is a 3-credit hour course designed to help students become familiar with modern mechanical processes as well as hydraulic/pneumatics and mechanical systems in manufacturing applications. The fundamentals and applications of mechanical systems included are pneumatics and hydraulics, cams, gears, bearings, gears, rotary and linear actuation. Prereq: 2600 and Engr 1182.

3800 Project Management for Engineering Technology  U  3
Project Management is a course that focuses on waterfall (PMBOK) and Agile methodologies for managing projects in the manufacturing industry. Emphasis is placed on project initiation, planning, executing, monitoring & controlling, and closing processes. This course will provide students with an overview of leadership roles and responsibilities, as well as interpersonal skills, conflict resolution. Prereq: 2500 and ISE 2040, or permission of instructor. Not open to students with credit for ISE 3800.

3900 Industrial Automation PLC1  U  3
Industrial Automation PLC1 is a 3-credit hour course designed as the first of two courses intended to provide the students with skills in industrial automation that can be applied in a variety of technical fields related to manufacturing. Prereq: 2500; and CSE 1222 or 1223; and Math 1155 or 1172.

4200 Industrial Automation - PLC2  U  3
Industrial Automation PLC2 is designed as the second of two courses to provide the students with skills in industrial automation for manufacturing. The course is designed to provide students with the comprehensive review of functions, operation, and communication of automated industrial systems including PID loops, HMIs, data transfer, troubleshooting PLC networks for equipment/process integration. Prereq: 3900.

4300 Facility Layout and Integration  U  3
Facility Layout and integration is a 3-credit course designed to give student skills needed to create effective layouts considering people, technology, process, throughput, and support systems. The class will build upon skills gained in previous classes in AutoCAD and Manufacturing Processes as well as use skills in analysis and design skills. Prereq: 3800.

4400 Leadership and Change Management  U  3
In-depth evaluation of the concepts and principles of effective leadership, the characteristics of leaders and followers, and the principles of change management. Course work will emphasize written and verbal communication skills, in addition to presentation skills and exposure to real-world case examples. Prereq: 4300.

4500 Intelligent Manufacturing and Automation  U  3
Intelligent Manufacturing and Automation is a 3-credit course in advanced robotics and automation designed to teach students complex integrated manufacturing systems to solve industry-related issues. Along the way, this course will provide you with opportunities to work individually and as teams to accomplish tasks using the Connected Smart Manufacturing system cell. Prereq: 2100, 3600, and 4200.

4600 Power and Drives  U  3
ENGRTEC 4600, Power and Drives, is a 3-hour course designed to introduce the student to high-voltage power generation/production to distribution facilities and the facility. Further the course will focus on applications related to motors and variable frequency drives. Applications for power (12,000 volts to 120 volts) are found in typical production facilities. Prereq: 2300.

4700 Networks, Security, & Safety Applications  U  3
This course will provide you with an understanding of the basics of networking devices and systems along with the cyber security considerations and technology required for the deployment of these solutions. The cyber security materials will include a study of the human elements that impact this space. The course will provide an introduction to the safety control systems deployed in manufacturing. Prereq: 3600.

4900 ENGRTEC Capstone I  U  3
This course is designed to provide students the opportunity to test their level of acquired knowledge, experience, and leadership in an actual, well-defined customer project environment. Students will be provided an assigned project of interest, work in project teams, interacting with an engineering client/leadership people, to define, design, test, and implement an actual working product and service. Prereq: 3800.

4910 ENGRTEC Capstone II  U  3
This is the second course of the series designed to provide students the opportunity to test their level of acquired knowledge, experience, and leadership in an actual, well-defined customer project environment. Students will be provided an assigned project of interest, work in project teams, interacting with an engineering client. Prereq: 4900.

English

1110.01 First-Year English Composition  U  3
Practice in the fundamentals of expository writing, as illustrated in the student's own writing & in the essays of professional writers. May be available as a service learning course with five hours community service required at the Lima campus only. Prereq: EdTL1900 (108.01) or 1902.04 (108.01), or English Placement Level 4. Not open to students with credit for 1109 (108.01 or 108.02), 1110.01 (non-DL version), 1110.04H, 1110.02 (110.02), 1110.02H (110.02H), 1110.03 (110.03), 1167H (167H), 110.01. This course is available for EM credit. GE writing and comm course: level 1. GE foundation writing and info literacy course.
1110.03 First-Year English Composition  U  3
Intensive practice in fundamentals of expository writing illustrated in the student's own writing and essays of professional writers; offered in a small class setting and linked with an individual tutoring component in its concurrent course. 1193. This course is available for EM credit only through the AP program. Prereq: 1109, or English Placement Level 5 (Placement Level 4 allowed if student requests service). Concur: 1193. Not open to students with credit for 1110.01 (110.01), 1110.01H (110.01H), 1110.02 (110.02), 1110.02H (110.02H), 1167/167H, or 110.03, or equiv. GE writing and comm course: level 1. GE foundation writing and info literacy course.

1193 Individual Studies  U  1 - 4
Intensive practice in the fundamentals of expository writing. Prereq: Permission of Director of First-Year Writing. Concur: 1110.03. Repeatable to a maximum of 6 cr hrs or 6 completions. This course is graded SU.

2201 Selected Works of British Literature: Medieval through 1800  U  3
An introductory critical study of the works of major British writers from 800 to 1800. Prereq: 1110.01, or equiv. Not open to students with credit for 2202H. GE lit and diversity global studies course. GE foundation lit, vis and performing arts course.

2202 Selected Works of British Literature: 1800 to Present  U  3
An introductory critical study of the works of major British writers of the 19th and 20th centuries. Prereq: 1110, or GE foundation writing and info literacy course. Not open to students with credit for 2202H. GE lit and diversity global studies course. GE foundation lit, vis and performing arts course.

2276 Arts of Persuasion  U  3
Introduces students to the study and practice of rhetoric and how arguments are shaped by technology, media, and cultural contexts. Prereq: GE foundation writing and info literacy course. GE cultures and ideas course. GE theme citizenship for div and just wrld course.

2277 Introduction to Disability Studies  U  3
Foundational concepts and issues in disability studies; introduction to the sociopolitical models of disability. Prereq: 1110.01. GE cultures and ideas course. GE theme health and well-being course.

2281 Introduction to African-American Literature  U  3
A study of representative literary works by African-American writers from 1760 to the present. Prereq: Completion of GE Foundation Writing and Information Literacy course. Not open to students with credit for AfrAmSt 2281. GE lit and diversity soc div in the US course. GE foundation lit, vis and performing arts course. GE cultures and ideas course. Cross-listed in AfrAmSt.

2282 Introduction to Queer Studies  U  3
Introduces and problematizes foundational concepts of the interdisciplinary field of queer studies, highlighting the intersections of sexuality with race, class, and nationality. Prereq: 1110.01. Not open to students with credit for WGSSt 2282. GE lit and diversity soc div in the US course. GE foundation historical and cultural studies and race, ethnicity and gender div course. Cross-listed in WGSSt.

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 290. GE lit course. GE foundation lit, vis and performing arts course.

3000 Writing for Social Change  U  3
In this course we will use academic writing and research practices across various forms of media to investigate the role of citizenship historically and currently, exploring the ways that we as citizens can work towards a more just and diverse society. We will develop a definition of citizenship that emphasizes a citizen’s relationship to their local, national, and global environments. Prereq: GE foundation writing and info literacy course. GE theme citizenship for div and just wrld course.

3110 Citizenship, Justice, and Diversity in Literatures, Cultures, and Media  U  3
Since the beginning of the modern nation state, cultural texts (poems, novels, films, pamphlets, zines, short stories, advertisements, comics, etc.) have been the essential medium through which the discourse of citizenship has been developed, constructed, refined, and debated. In this course student examine a range of literary periods, genres, and media focused on citizenship and social justice. Prereq: Completion of GE Foundation Writing and Information Literacy course. GE theme citizenship for div and just wrld course.

3264 Monsters Without and Within  U  3
Storytellers have long used monsters not only to frighten us but also to jolt us into thinking deeply about ourselves, others, and the world we live in. This course examines how various horror genres use monsters to explore issues of wellbeing and citizenship, and debates about race, gender, sexual orientation, mental health, social justice, and personal responsibility. Prereq: Completion of GE Foundation Writing and Information Literacy course. GE theme citizenship for div and just wrld and health and well-being course.

3271 Structure of the English Language  U  3
Students learn basic characteristics of English linguistics focusing on the basic building blocks of language; the sounds of English and how they are put together, word formation processes, and rules for combining words into utterances/sentences. Students investigate and explore linguistic variation, accents of American English, and the implications of language evaluation in educational settings. Prereq: 1100.01 (110.01). Not open to students with credit for 4570 (570), 6760 (760), 271, 669, 671, 2271, or Linguist 601. GE cultures and ideas course. GE foundation historical and cultural studies course.

3305 Technical Writing  U  3
Study of principles and practices of technical writing. Emphasis on the style, organization, and conventions of technical and research reports, proposals, memoranda, professional correspondence, etc. Prereq: 1110.01.

3364 Special Topics in Popular Culture  U  3
Focused study in reading popular culture texts, organized around a single theme, period, or medium. Prereq: 1110.01 (110.01) or equiv. Repeatable to a maximum of 6 cr hrs. GE cultures and ideas course. GE foundation historical and cultural studies course.

3378 Special Topics in Film and Literature  U  3
Focuses on the relationship between film and literature; topics may include adaptation, cross-media themes and modes, influence of cinema on literature and vice versa. Prereq: 1110. Not open to students with 10 qtr cr hrs or 378. Repeatable to a maximum of 6 cr hrs. GE cultures and ideas course. GE foundation historical and cultural studies course.

3395 Literature and Leadership  U  3
In this course students consider leadership as a component of national citizenship and literature as a mode of exploring and analyzing a range of perspectives on leadership. The course will encourage students to think about how responses to power are mediated by race, gender, and class and how literary study can help them reflect on and articulate their own leadership strengths and aspirations. Prereq: 1110. GE theme citizenship for div and just wrld course.

4514 Middle English Literature  U  3
A study of non-Chaucerian classics from late medieval England, such as Sir Gawain and the Green Knight, Piers Plowman, and The Book of Margery Kempe. Prereq: 6 cr hrs in English at 2000-3000 level, or permission of instructor. 5 qtr cr hrs of 367 or 6 sem cr hrs of 2367 in any subject are acceptable towards the 6 cr hrs. Not open to students with credit for 514.

4578 Special Topics in Film  U  3
Examination of particular topics, themes, genres, or movements in cinema; topics may include particular directors (Orson Welles), periods (The Sixties), genres (horror). 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 15 qtr cr hrs of 578 or 9 sem cr hrs for 4578/H or 4578/H. Repeatable to a maximum of 9 cr hrs.

4583 Special Topics in World Literature in English  U  3
Study of literatures written in English and produced outside of the U.S. and Britain; topics include colonial/postcolonial writing, regional literature, theoretical and historical approaches, genres. 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 10 qtr cr hrs for 583. Repeatable to a maximum of 6 cr hrs.

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 Adams Cond course.

3310.01 Evolution  U  4
Basic conceptual issues and processes in evolution with an emphasis on the ecological basis of adaptation and consequences of natural selection. Also available summer term at Stone Lab. Prereq: Biology 1114 or 1114H, or permission of instructor. Not open to students with credit for 3310 or 3310.02.

3420 Behavioral Ecology  U  4
Comparative study of animal behaviors, and analysis of their adaptive value, physiological mechanisms, development, and evolution, within their ecological and social context. Also available summer session at Stone Lab. Prereq: Biology 1114 or 1114H, or permission of instructor. Not open to students with credit for 448, 620, 730, or 740.

3510 Cellular and Developmental Biology  U  3
Introduction to the structure and function of animal cells, and to patterns of early development in vertebrates and invertebrates. Prereq: 3310, and Biology 1113 or 1113H. Not open to students with credit for 415 and MolGen 5802.

4220 Focused Study of Ecology and Evolution - Mammals  U  3
Mammals of the world, their natural history, distribution, taxonomy, and major anatomical and physiological adaptations; study of local species emphasized in lab. Prereq: 3310.
## Evolution, Ecology and Organismal Biology

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<tr>
<th>CRN</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>4520</td>
<td>Comparative Physiology</td>
<td>3</td>
<td>Functional systems in invertebrates and vertebrates: respiration, circulation, water, ion, and energy balance; communication; locomotion; and reproduction. Prereq: Biology 1114 or 1114H, and 1 course in Biological Sciences.</td>
</tr>
<tr>
<td>4998</td>
<td>Undergraduate Research</td>
<td>1 - 12</td>
<td>Undergraduate research in evolution, ecology, and organismal biology. Prereq: 2 courses in Biological Sciences, and permission of instructor. Repeateable to a maximum of 12 cr hrs or 5 completions. This course is graded S/U.</td>
</tr>
<tr>
<td>4999</td>
<td>Undergraduate Thesis Research</td>
<td>1 - 12</td>
<td>Undergraduate research towards a thesis in Evolution and Ecology, or Zoology. Prereq: 8 cr hrs in Biological Sciences, and permission of instructor. Repeateable to a maximum of 12 cr hrs or 5 completions. This course is graded S/U.</td>
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## Exploration

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<tbody>
<tr>
<td>1100.01</td>
<td>University Exploration Survey</td>
<td>1</td>
<td>Introduction to the process of decision making and exploring majors at Ohio State; introduction to the 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.</td>
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## Food Science and Technology

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<th>CRN</th>
<th>Course Title</th>
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<tr>
<td>2300</td>
<td>Role of Food Science in Human Health</td>
<td>3</td>
<td>This course explores the role of food in an individual's health by addressing mainstream controversies. Students will have an understanding of food supply chain, food components, food safety, food processing, food additives, labeling, food laws and regulations and their impact on ensuring a safe food supply and protecting consumer's health. Prereq: Not open to students with credit for 2200 or 4597.02. GE theme health and well-being course.</td>
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## French

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<th>CRN</th>
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<th>Description</th>
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<tbody>
<tr>
<td>1101.61</td>
<td>Beginning French I: Individualized DL</td>
<td>1 - 4</td>
<td>Individualized introduction to French via distance learning; development of listening, speaking, and writing skills. Taught in French. Course open to native speakers, students with EM credits, and transfer students with two or more years of study in this language in high school. Prereq: Not open to students with credit for 1101.01, 1101.21, or 4 cr hrs of 1101.51 or 1101.61. Repeatable to a maximum of 4 cr hrs or 4 completions. This course is available for EM credit. GE for lang course. GE world languages course.</td>
</tr>
<tr>
<td>1102.61</td>
<td>Beginning French II: Individualized DL</td>
<td>1 - 4</td>
<td>Continued individualized study of French via distance learning; development of listening, speaking, and writing skills; readings based on contemporary French culture and literature. Taught in French. Prereq: 1101.01, 1101.21, or 4 cr hrs of 1101.51 or 1101.61, or French Placement Level II. Not open to students with credit for 1102.01, 1102.21, or 4 cr hrs of 1102.51 or 1102.61. Repeatable to a maximum of 4 completions or 4 cr hrs. This course is available for EM credit. GE for lang course. GE world languages course.</td>
</tr>
<tr>
<td>1103.61</td>
<td>Beginning French III: Individualized DL</td>
<td>1 - 4</td>
<td>Continued development of listening, speaking, and writing with an emphasis on oral and written skills; focus on functional topics and thematic vocabulary. Taught in French via distance learning. Prereq: 1102.01, 1102.21, 1105.01, 1105.21, 1105.25, or 4 cr hrs of 1102.51 or 1102.61, or French Placement Level II. Not open to students with credit for 1103.01, 1103.21, 1103.25, or 4 cr hrs of 1103.51 or 1103.61. Repeatable to a maximum of 4 cr hrs or 4 completions. This course is available for EM credit. GE for lang course. GE world languages course.</td>
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## General Education

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<tr>
<th>CRN</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>1201</td>
<td>GE Launch Seminar</td>
<td>1</td>
<td>This course is first GE Bookend class. The Launch seminar provides a strong introduction for the broad goals of the General Education program, introduces key skills, and supports sustained growth in terms of attaining program goals. This course is graded S/U. GE bookend launch seminar course.</td>
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## History

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<tr>
<th>CRN</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2001</td>
<td>Launching America</td>
<td>3</td>
<td>An intermediate-level approach to American history in its wider Atlantic context from the late Middle Ages to the era of Civil War and Reconstruction. Prereq or conc: English 1110.xx, GE foundation writing and info literacy course, or permission of instructor. Not open to students with credit for 1151. GE historical study and diversity soc div in the US course. GE foundation historical and cultural studies course.</td>
</tr>
<tr>
<td>2002</td>
<td>Making America Modern</td>
<td>3</td>
<td>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 conc: English 1110.xx, GE foundation writing and info literacy course, or permission of instructor. Not open to students with credit for 1152. GE historical study and diversity soc div in the US course. GE foundation historical and cultural studies course.</td>
</tr>
<tr>
<td>2120</td>
<td>Revolutions and Social Movements in Modern Latin America</td>
<td>3</td>
<td>Latin American history from independence (1825) to the present focusing on revolutions, dictatorships, labor, political, and social movements, women, and indigenous populations. Sometimes this course is offered in a distance-only format. Prereq or conc: English 1110.xx, or permission of instructor. GE historical study and diversity global studies course. GE foundation historical and cultural studies course.</td>
</tr>
<tr>
<td>2125</td>
<td>The History of Latin America Through Film</td>
<td>3</td>
<td>Latin American history from the pre-colonial era to the present as depicted in film, including the analysis of colonialism, revolutions, society, women, and current events. Sometimes this course is offered in a distance-only format. Prereq or conc: English 1110.xx, or permission of instructor. GE historical study and diversity global studies course. GE foundation historical and cultural studies course.</td>
</tr>
<tr>
<td>2231</td>
<td>The Crusades</td>
<td>3</td>
<td>Examines the various European crusades - in the Holy Land, Spain, Eastern Europe, and southern France - from their origins to the late 15th century. Sometimes this course is offered in a distance-only format. Prereq or conc: English 1110.xx, or completion of GE Foundation Writing and Information Literacy Course, or permission of instructor. GE historical study and diversity global studies course. GE foundation historical and cultural studies course.</td>
</tr>
<tr>
<td>2550</td>
<td>History of War</td>
<td>3</td>
<td>A survey of the main concepts and issues involved in the study of war in world perspective, using case studies from prehistoric times to the present. Prereq or conc: English 1110.xx, or completion of GE Foundation Writing and Information Literacy Course, or permission of instructor. GE historical study and diversity global studies course. GE foundation historical and cultural studies course.</td>
</tr>
<tr>
<td>2642</td>
<td>Global History 1500 to Present</td>
<td>3</td>
<td>Examines the major issues that have shaped the human experience of various regions since 1500 C.E. through comparative study of civilizations within the context of religion, trade, technology, art, culture, industrialism, imperialism, revolution, and gender relations. Prereq or conc: English 1110.xx, or completion of GE Foundation Writing and Information Literacy course, or permission of instructor. Not open to students with credit for 1582. GE historical study and diversity global studies course. GE foundation historical and cultural studies course.</td>
</tr>
<tr>
<td>2650</td>
<td>The World since 1914</td>
<td>3</td>
<td>Global perspective on major forces that shaped the world since 1914. Provides students with factual knowledge and a critical perspective of issues such as nationalism, internationalism, revolution, and gender relations. Prereq or conc: English 1110.xx, GE foundation writing and info literacy course, or permission of instructor. GE historical study and diversity global studies course. GE foundation historical and cultural studies course.</td>
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<tr>
<td>2651</td>
<td>World History before the Modern Age</td>
<td>3</td>
<td>A thematic approach to exploring selected major processes and events that shaped human experience between the Stone Age and 1750. Specific topics and content can vary. Prereq or conc: English 1110, or equiv. Not open to students with credit for 1681. GE historical study and diversity global studies course. GE foundation historical and cultural studies course.</td>
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<tr>
<td>2703</td>
<td>History of Public Health, Medicine and Disease</td>
<td>3</td>
<td>Survey of the history of public health, disease and medicine in a global context. Prereq or conc: English 1110.xx, or GE Foundation Writing and Information Literacy course, or permission of instructor. GE historical study and diversity global studies course. GE theme health and well-being course.</td>
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</tbody>
</table>
Investigation of postwar America's pivot point, focusing on civil rights; liberal, radical, and conservative politics; sweeping social, cultural, and economic change; and the Vietnam War. Prereq: English 1115.xx, or permission of instructor. GE historical study course. GE theme citizenship for div and just world course.

3017 The Sixties U 3
Examination of postwar America's pivot point, focusing on civil rights; liberal, radical, and conservative politics; sweeping social, cultural, and economic change; and the Vietnam War. Prereq: English 1110.xx, or permission of instructor. GE historical study course. GE theme citizenship for div and just world course.

3105 History of Brazil U 3
History of Brazil during colonial and independent periods with major emphasis on the 19th and 20th centuries. Prereq: English 1110.xx, or permission of instructor. Not open to students with credit for 534.02. GE historical study course.

3270 History of World War I U 3
Origins, conduct, and consequences of the First World War in global context. Prereq or concur: English 1110.xx, or permission of instructor. GE historical study course.

3561 Citizenship and American Military History: 1902 to the Present U 3
This course examines how uniformed service impacted Americans' conception of citizenship from the aftermath of the Spanish-American War through the wars in Afghanistan and Iraq after the terrorist attack on the U.S. homeland on September 11, 2001. Prereq or concur: English 1110.xx, or completion of GE Foundation Writing and Information Literacy Course, or permission of instructor. GE historical study course. GE theme citizenship for div and just world course.

3580 The Vietnam War U 3
Study of the background, causes, conduct, and consequences of the Vietnam War, 1945-1975. Prereq or concur: English 1110.xx, or completion of GE Foundation Writing and Information Literacy Course, or permission of instructor. GE historical study and diversity global studies course. GE theme study course.

3642 Women in Modern Europe, from the 18th Century to the Present U 3
Study of women's lives and activism emphasizing the ways in which economic position, religion, sexuality, marital status, regional and national differences influenced their experiences. GE historical study course.

3675 How to Stage a Revolution U 3
Compares revolutionary movements in order to help explain why some fail and some succeed. Prereq or concur: English 1110.xx, or GE foundation writing and info literacy course, or permission of instructor. GE historical study and diversity global studies course.

3680 Religion and Law in Comparative Perspective U 3
Comparative, interdisciplinary approach to studying religion and law. Drawing on concrete cases, historical studies, and theoretical literature, the course explores how the relationship between religion and law has been configured differently in different liberal democracies, such as the U.S., France, and Israel, and what this might mean for contemporary debates. Prereq: Not open to students with credit for RELS 3170. GE historical study and diversity global studies course. GE theme citizenship for div and just world course. Cross-listed in RELS 3170.

4005 Seminar in Early American History U 3
Advanced research and readings on selected topics in Early American History. Prereq or concur: A grade of C or above in History 2800, and any 300-level History course, or permission of instructor.

Human Nutrition

2410 Science of Human Nutrition U 4
Basic principles of biological science, emphasizing the interaction between nutrients and physiological (including cellular) processes. Prereq: Not open to students with credit for 2210. GE nat sci bio course. GE foundation natural sci course.

Industrial and Systems Engineering

2040.02 Engineering Economics - Online U 2
Economic Analysis of engineering project alternatives. Cash flow modeling; time value of money; techniques for comparing project alternatives and making solid business recommendations; influence of financial accounting and cost accounting on cash flow models. Course uses MS Excel as primary business tool for modeling. Prereq: Soph standing in Engineering.

Materials Science and Engineering

2010 Introduction to Engineering Materials U 3
Introduction to the properties (mechanical, electrical, thermal, diffusive, degradative, magnetic, optical), structure, and processing of engineering materials, including ceramic, metals, polymers, biological, and composite materials. Prereq: Physics 1250 or 1260; and Math 1151, 1161, or 1154 and enrollment in BSET program; and Chemistry 1210 or 1250 or 1910H; or permission of instructor.
10 Mathematics

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 arly course. GE foundation math and quant reasoning or data 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 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 arly course. GE foundation math and quant reasoning or data 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 arly course. GE foundation math and quant reasoning or data any course.

1172 Engineering Mathematics A U 5
Techniques of integration, Taylor series, differential calculus of several variables. Applications.Prereq: A grade of C- or above in 1114 (114), 1151, 1158, 1181.xx, 152.xx, 161.xx, or 161.01H. Not open to students with credit for 1152, 1534 (153.xx), or 1544 (154), or for any Math class numbered 1172 or above, or for any quarter-system Math class numbered 254.xx or above. Not open to students majoring in Math, pre-Aricular, or Actuarial Science. This course is available for EM credit.

1193 Individual Studies in Mathematics U 1 - 3
Individual studies. Prereq: Permission of department. Repeatable to a maximum of 6 cr hrs or 2 completions. This course is graded S/U.

2137 Algebra and Coordinate Geometry for Teachers U 3
This is one of two independent courses which follow Math 1136 to provide necessary content for middle grade teachers. This course focuses on algebra, coordinate geometry, and their connections through equations in one or more unknowns. Modern and historical perspectives are woven throughout. Prereq: A grade of C- or above in 1136; and a grade of C- or above in 1149 or 1150, or credit for 150, or math placement level L.

Microbiology

4000.01 Basic and Practical Microbiology U 4
Provides an understanding of microorganisms and their interaction with the human experience. Prereq: 3 cr hrs in Biology. Not open to students with credit for 4000 or 4000.02. GE nat sci bio course. GE foundation natural sci course.

Molecular Genetics

4500.01 General Genetics U 3
The principles of genetics, including molecular genetics, transmission genetics of prokaraytes and eukaryates, developmental and non-chromosomal genetis, recombinant DNA and genomics, and the genetics and evolution of populations. Taught in person. Prereq: Biology 1101, 1113, or 1113H, and 3 additional sem cr hrs in Biological Sciences. Not open to students with credit for 4500, 4500.02, or 4606.

Music

2032S Drumming for Wellness U 4
Students will learn research, theories, skills, and techniques relevant to the use of music in settings in which the focus is to assist in the rehabilitation, treatment, or well-being of people with motor disorders and their caregivers. Course will not count as an elective for music degree programs. GE theme health and well-being course.

2251 The World of Classical Music U 3
An introduction to the world of classical music and to its genres, composers, styles, societies, and historical periods. No music background is required. Prereq: Not open to Music majors. GE VPA and diversity global studies course. GE foundation lit, vis and performing arts course.

2252 History of Rock 'n' Roll U 3
The history and culture of rock 'n' roll. Prereq: Not open to students with credit for 252. GE VPA course. GE foundation lit, vis and performing arts course.

2254 Video Game Music U 3
An introduction to the history and function of musical sound in video games. GE VPA course. GE foundation lit, vis and performing arts course.

3364 Musical Citizenship: Activism, Advocacy and Engagement in Sound U 3
This course examines the sonic expressions of people's status, identity, rights, and duties as political subjects across multiple scales of place. We will consider the value of cultural advocacy in the public sector and social activism in the public sphere and the importance of partnering with (non)governmental institutions, community organizations, and grassroots affiliates to advance musical art. GE VPA and diversity global studies course. GE theme citizenship for div and just world course.

3370 Music for Elementary Teachers U 2
Music literature and teaching aids for children, including singing, rhythmic, creative, and listening experiences, and their presentation.

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. GE cultures and ideas course. GE foundation historical and cultural studies 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. GE cultures and ideas course. GE foundation historical and cultural studies course.

1420 Philosophical Approaches to Racism and Sexism U 3
An introductory survey of philosophical ways of thinking about and remedying racism and sexism. GE foundation race, ethnicity and gender div course.

2340 The Future of Humanity U 3
Examination of long-term ethical challenges facing humanity due to technological, environmental, and other developments. GE cultures and ideas course. GE theme sustainability course.

2465 Death and the Meaning of Life U 3
Explore the question of whether there is a relation between mortality and a meaningful life. GE life course. GE theme health and well-being course.

3430 The Philosophy of Sex and Love U 3
This course will explore both historical and contemporary philosophical perspectives on both sex and love, and the many ways in which sex and love are integral to human health and well-being. Prereq: Completion of GE Foundation Writing and Information Literacy course and GE Foundation Historical and Cultural Studies course, or permission of instructor. GE theme health and well-being course.

3440 Theorizing Race U 3
Introduction to issues of “race,” consideration of the historical emergence and development of ideas of “race” and of racist practices, along with their contemporary formations. Prereq: 3 cr hrs in AfrAmASt or Philos or REGD Foundation; or enrollment in Philosophy, Politics, and Economics major, AfrAmASt major, or Philos major; or permission of instructor. Not open to students with credit for AfrAmASt 3440. GE theme citizenship for div and just world course. Cross-listed in AfrAmASt.

Physic

1200 Mechanics, Kinematics, Fluids, Waves U 5
Algebra-based introduction to classical physics: Newton's laws, fluids, waves. Prereq: A grade of C- or above in Math 1120 or 1148, or Math Placement Level M. This course is available for EM credit. GE nat sci phy course. GE foundation natural sci course.

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 Admis Cond course.

1231 Physics for Engineering Technology: Electricity and Magnetism U 3
Calculus-based introduction to electricity and magnetism, for students in Engineering Technology. Prereq: 1250, 1250H, or 1250; and Math 1141 or 1151 or 1154 or above; or permission of instructor. Concur: Math 1152, 1159, 1161, 1172, 1181H, or 4181H. Not open to students with credit for 1251. This course is available for EM credit. GE nat sci phy 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 or concur: Math 1141, 1151, 1154, 1156, 1161, 1181H, or 4181H. This course is available for EM credit. GE nat sci phy course. GE foundation natural sci 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: 1250, 1250H, 1250R, or 1270; and Math 1141, 1151, 1154, or above; or permission of instructor. Concurrent Math 1152, 1155, 1161, 1172, 1181H, or 4181H. This course is available for EM credit. GE nat sci phys course.

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 3100 (300), 101, or 101H. This course is available for EM credit. GE soc sci orgs and polit sci course. GE foundation social and behavioral sci course. SS Adma Cond course.

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 course. GE foundation social and behavioral sci course.

1100E 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: Honors standing, or permission of instructor. Not open to students with credit for 1100 or 1100H. GE soc sci indivs and groups and diversity soc div in the US course. GE foundation social and behavioral sci course.

1375 I Am. The Psychology of Identity and Culture U 3
Contemporary and historical research into psychological identity. The science of how individuals experience personal and cultural differences. Reading and discourse on the psychology research of: personality, social roles, cultural neuroscience, social categorization, intergroup contact, race, ethnicity, diversity, and more. GE foundation race, ethnicity and gender div course.

2220 Data Analysis in Psychology U 3
Discussion of statistical analysis of psychological data - random samples, graphical and numerical techniques of descriptive statistics, correlation, regression, probability, sampling distribution, and hypothesis testing. Prereq: 1100 or 1100H, and Stat 1450, Math 1120, 1130, 1148, 1149, 1150, or 1151, or equiv, or Math Placement Level M or higher; or permission of instructor.

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 or 1100H.

2303 Positive Psychology U 3
Introduction to the field of positive psychology. Topics include positive affect, subjective well-being, optimism, psychological strengths, emotional intelligence, compassion, humor, and spirituality. GE theme health and well-being course.

2311 Psychology of Motivation U 3
A survey of major approaches to motivation and the study of important concepts in motivation, with emphasis on everyday applications. Prereq: 1100 or 1100H (100H). Not open to students with credit for 311.

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 or 1100H (100H), and English 1110.01, 1110.01H, 1110.02, 1110.02H, 1110.03, 111, or equiv, and Soph standing or above. Not open to students with credit for 3325 (325), 3325H (255H), or 367.01. GE writing and comm level 2 and soc sci indivs and groups course.

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.

3325 Introduction to Social Psychology U 3
An introduction to research in social psychology; topics include individual motivation, group behavior, attitudes, and perception of self and others. Prereq: Honors standing, and 1100 or 1100H. Not open to students with credit for 2367.01 or 3325.

3331 Abnormal Psychology U 3
Examination of current theories and empirical findings regarding the major forms of psychopathology and treatment. Prereq: 1100 or 1100H. Not open to students with credit for 2367.02, 3331H, or 3331E.

3340 Introduction to Life Span Developmental Psychology U 3
Consideration of theories and research on psychological development across the lifespan; includes consideration of social policies that influence developmental outcomes. Prereq: 1100 or 1100H.

3375 Stereotyping and Prejudice U 3
Lectures address experiential research in stereotyping and prejudice; readings focus on historical, cultural, and sociological perspectives on issues related to gender, ethnicity, and social class. Prereq: 1100 or 1100H. GE diversity soc div in the US course.

3530 Theories of Personality U 3
Major theoretical and research orientations in the study of normal and abnormal personality development, with a focus on personality processes. Prereq: 1100 (100) or 1100H (100). Not open to students with credit for 475.

4475 The Self U 3
Survey of classic and contemporary theory and research on social psychological study of the self, diverse approaches, and various gender, ethnic, and cross-cultural perspectives. Prereq: A grade of C- or above in 2220, 2300, and 2367 prior to SU13, 2367.01, 3325, 3325H, or 3375. Not open to students with credit for 475.

4540 Counseling 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.

4552 Psychology of Adult Years U 3
Theory and research related to adulthood as a sequence of psychological stages involving adjustment and coping behaviors; relationship of adulthood to other life-span stages. Prereq: A grade of C- or above in 2220 and 2300.

4998 Undergraduate Research in Psychology U 1 - 5
Supervised collaborative research in psychology. Prereq: Permission of instructor. Repeatable to a maximum of 15 cr hrs or 8 completions. This course is graded S/U.

Public Affairs, John Glenn College

2120 Public Service and Civic Engagement U 3
This course introduces students to the role an engaged citizen plays in a democracy. Students will explore trends in civic engagement, the reasons behind these trends, and their consequences; along with issues of social equity in engagement and strategies to increase civic participation. GE theme citizenship for div and just wrld course.

Religious Studies

2370 Introduction to Comparative Religion U 3
Introduction to the academic study of religion through comparison among major traditions (Judaism, Christianity, Islam, Hinduism, Buddhism, etc.) and smaller communities. Prereq: English 1110 or equiv. Not open to students with credit for 2370H or CompStd 2370H or 2370. GE cultures and ideas and diversity global studies course. GE foundation historical and cultural studies and race, ethnicity and gender div course.

3680 Religion and Law in Comparative Perspective U 3
Comparative, interdisciplinary approach to studying religion and law. Drawing on concrete cases, historical studies, and theoretical literature, the course explores how the relationship between religion and law has been configured differently in different liberal democracies, such as the U.S., France, and Israel, and what this might mean for contemporary debates. Prereq: Not open to students with credit for History 3680. GE historical study and diversity global studies course. GE theme citizenship for div and just wrld course. Cross-listed in History.

Social Work

1120 Introduction to Social Welfare U 3
An introduction to the history, structure, and function of the social welfare institution. Prereq: Not open to students with credit for 220 or 520. GE soc sci human, nat, and econ resources course. GE foundation social and behavioral sci course.

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. GE foundation social and behavioral sci course.

1140 Issues in Social Justice: Race, Gender and Sexuality U 3
Examines the history of social oppression directed at certain minority populations in the United States and its impact on their current opportunities and lived experiences. The primary purpose is to analyze how racism, sexism, heterosexism and institutionalized discrimination based on ethnicity affect the social welfare and well-being of those living in the United States. GE diversity soc div in the US course. GE foundation race, ethnicity and gender div course.

Physics 11

3340 Introduction to Life Span Developmental Psychology U 3
Consideration of theories and research on psychological development across the lifespan; includes consideration of social policies that influence developmental outcomes. Prereq: 1100 or 1100H.

3375 Stereotyping and Prejudice U 3
Lectures address experiential research in stereotyping and prejudice; readings focus on historical, cultural, and sociological perspectives on issues related to gender, ethnicity, and social class. Prereq: 1100 or 1100H. GE diversity soc div in the US course.

3530 Theories of Personality U 3
Major theoretical and research orientations in the study of normal and abnormal personality development, with a focus on personality processes. Prereq: 1100 (100) or 1100H (100H). Not open to students with credit for 530.

4475 The Self U 3
Survey of classic and contemporary theory and research on social psychological study of the self, diverse approaches, and various gender, ethnic, and cross-cultural perspectives. Prereq: A grade of C- or above in 2220, 2300, and 2367 prior to SU13, 2367.01, 3325, 3325H, or 3375. Not open to students with credit for 475.

4540 Counseling 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.

4552 Psychology of Adult Years U 3
Theory and research related to adulthood as a sequence of psychological stages involving adjustment and coping behaviors; relationship of adulthood to other life-span stages. Prereq: A grade of C- or above in 2220 and 2300.

4998 Undergraduate Research in Psychology U 1 - 5
Supervised collaborative research in psychology. Prereq: Permission of instructor. Repeatable to a maximum of 15 cr hrs or 8 completions. This course is graded S/U.
2110 Sport and Positive Youth Development  U  3
This course focuses on how characteristics of individuals, families, peer systems, schools, neighborhoods & other environmental contexts contribute to the development of social, academic, & health-related problems among youth. Students will apply the knowledge & skills of generalist practice to the design and delivery of prevention and youth development programs in sport/recreation/play settings. GE theme health and well-being course.

3101 Professional Values and Ethics  U  3
Introduction to the NASW Code of Ethics, ethical theory, and ethical issues and dilemmas that confront professional social workers.
Prereq: Enrollment in SocWork major. Not open to students with credit for 690.

3201 Social Justice & Social Welfare Policy  U  3
This course will introduce students to social policy analysis and strategies to promote social justice through advocacy. Students will learn how social policy shapes the development, design, and delivery of social welfare programs and how policy contributes to social justice (and injustice). Students will learn different strategies to pursue social justice.
Prereq: 1120, and enrollment in SocWork major.

3301 Lifespan Development in Social Work  U  3
Explores human development across the lifespan, with an emphasis on conceptualizing individuals holistically, taking into account factors from various theories that may have relevance to each age group. Offers information about the importance of understanding lifespan development in social work. Focuses on lifespan development, research and the scientific method, and major theories and theorists.

3401 Research & Statistics for Understanding Social Work  U  3
Problems and Diverse Populations
This is the first course in the BSSW program sequence preparing students to effectively work with research evidence and statistics as social work professionals. Students will develop the requisite skills and knowledge for beginning to identify, assess, and apply existing bodies of evidence to answer questions about social work problems and diverse populations.
Precon: Math 1060 or 1075 or above, or Stat 1450 or above, or Math Placement Level R or above; and admission to the Social Work major. Not open to students with credit for 3401E.

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.
Precon: 3401.

3501 Building Engagement & Interpersonal Skills  U  3
This foundation course provides the opportunity for undergrad students in the professional social work program to focus on the understanding and use of core engagement and communication skills critical to social work practice. The course will engage each student in the learning and development of social work skills through didactic presentations, skill demonstrations, and experiential exercises.
Precon: Jr or Sr standing, and enrollment in SocWork major.

3502 Generalist Practice with Individuals  U  4
Introduces students to the theories, knowledge and skills of generalist social work practice, with an emphasis on work with individuals. The content provides didactic and experiential learning of generalist practice skills that will facilitate and enhance the student's entry into the senior year field practicum and will serve as a foundation for entry level professional practice.
Precon: 3501.

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.
Precon: 1140, or any Race, Ethnicity and Gender Diversity GE course.
Precon: or concurs: 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.
Precon: Admission to SocWork major.

4188.01 Practicum Seminar I  U  1
Integration of knowledge and practice; problem solving and discussion of social work practice issues, values, and ethics. Taken concurrently with field practicum.

4188.02 Practicum Seminar II  U  1
Integration of knowledge and practice; problem solving and discussion of social work practice issues, values, and ethics. Taken concurrently with field practicum.
Precon: 4188.01. Concurs: 4189.

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

4501 Generalist Practice with Families  U  3
This course addresses professional values, knowledge, and skills essential for effective generalist social work practice with families. Emphasis is placed on family theory, models, and strategies for intervention, practice skills, and ethics necessary for beginning practice in social service agencies. The development of culturally competent practice is an integral part of this course.
Precon: 3502.

4502 Generalist Practice with Groups  U  3
This course will provide instruction on professional values, knowledge, and skills essential for effective intervention with small groups.
Precon: 3502.

4503 Generalist Practice with Organizations & Communities  U  3
The purpose of this course is to assist students in understanding the values, knowledge base, and skills associated with generalist practice when working with task groups, organizations, and communities. Emphasis will be placed on the identification of and utilization of those assessment & intervention skills which enable the social work practitioner to intervene on behalf of various populations.
Precon: 4502.

5024 Social Work Licensure Exam Strategies and Skills  U  G  2
Course provides instruction on test taking strategies and developing a study plan and learning content and strategies to pass the Bachelors/Masters level licensure exam. Instruction and a five-volume AATBS study guide provided. All content reflects the changes in the Ohio Social Worker rules and provides students with access to multiple online, full-length practice tests in study and exam modes.
Precon: Sr or Grad standing in Social Work. This course is graded SU.

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.
Precon: Not open to students with credit for 101H1, 101E1, 1102, RUSoc 1500, or equiv. GE soc sci orgs and polities and diversity soc div in the US course. GE foundation social and behavioral sci course.

2463 Social Inequality: Race, Class, and Gender  U  3
The study of social inequality with a focus on inequalities by race/ethnicity, gender, and class.
Precon: Not open to students with credit for 3463. GE soc sci human, nat, and econ resources course. GE foundation race, ethnicity and gender div course.

3597.01 World Problems in Global Context  U  3
Sociological analysis of contemporary world societies - non-industrialized, industrializing, and industrialized - with special attention to major social institutions and patterns of social change. GE diversity global studies and cross-disciplinary seminar course. GE theme citizenship for div and just wld course.

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 0-2 years of high school Spanish must take the MultICAT placement exam.
Precon: Spanish Language Placement Level 9, or permission of department.
Not open to students with credit for 1101, 1102, 1102.01, 1102.02, 1103, 1103.01, 1113, 1155, or equiv. courses. This course is available for EM credit. GE for lang course. GE world languages 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.
Precon: 1101, or Spanish Placement Level 8. Not open to students with credit for 1102, 1102.01, 1103, 1103.01, 1103.51, 1155, or equiv. courses. GE for lang course. GE world languages course.

1103 Spanish III  U  4
Continuing development of listening, reading, speaking, and writing skills in cultural contexts. Both classroom-based and 100% online sections available each semester. A grade of C- or above is required to continue to 2202 or 2213. Not open to native speakers of this language through regular course enrollment or EM credit.
Precon: 1101, or Spanish Placement Level 7. Not open to students with credit for 1103.51, 1113, 2202.01, 2202.51, or 2213. This course is available for EM credit. GE for lang course.

Statistics
### Elementary Statistics

3831 Movement and Voice

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 (AE/EE/Comp 2005, AnimSci 2290, Astron 3350, Chem 2210, 2210H, Com/Ltr 3537, EarthSci 2245, Econ 3400, ENR 2000, Geog 2200.01, 2200.02, HCS 2260, Inf/StdS 3400, Ling 2051, 2051H, Philos 1520, Physics 3700, PolitSci 3780, 4781, Social 3549, Stat 1350, 1350.01, 1430, 1430.01, 1430.02, 1430H, 1450, 1450.01, 1450.02, 2450, 2450.01, 2480, 2480.01, 2480.02, 2480.03, 2450, 3450.01, 3450.02, 3460, 3470, 3470.01, 3470.02, 4202, 5301, or 5302). GE data any course. GE foundation math and quant reasoning or data anyl course.

### Statistics

3821S Creation of Outreach Theatre

The creation, development and performance of interactive and instructional theatre for social awareness. Repeatable to a maximum of 6 cr hrs.

4000.08 Practicum: Acting

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

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.

4921S Performance Studies in Outreach Theatre

Use of improvisational acting techniques to develop the performance of an outreach touring theatre production. Prereq: Permission of instructor, by audition. Repeatable to a maximum of 6 cr hrs.

5961 Playwriting

Students will write 10-minute plays as exploratory exercises, analyze contemporary plays to deepen familiarity with the theatrical form, and, as a final project, write a one-act play which will receive a staged reading. Seminar and Workshop.

### Theatre

2000.11 Technical Production Practicum: Box Office

Provides experience in technical production activities. Repeatable to a maximum of 6 cr hrs or 6 completions.

2100 Introduction to Theatre

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. GE foundation hist, lit, vis and performing arts course.

2700 Criticizing Television

A critical analysis of a wide variety of television programs through viewing, discussing, reading, and writing. Students will focus on the ways in which racial, ethnic, and gender diversity issues are represented on television. Prereq: Not open to students with credit for 2367.03, ArtEduc 2367.03, or 2700. GE writing and comm course: level 2 and diversity soc div in the US course. GE foundation writing and info literacy and race, ethnicity and gender div course. Cross-listed in ArtEd.

2811 The Craft of Acting

An introductory acting class exploring the basic techniques of imagination, concentration, character development, and script analysis through work on monologues, scenes, and plays. Prereq: Not open to students with credit for 280. GE VPA course. GE foundation hist, lit, vis and performing arts course.

3000 Production Run Crew Practicum

Students in this course will serve as production technicians as part of the running crew for a theatre production. Each student will receive training for their specific role which may focus on lighting, costumes, media, sound, properties or scenery. No conventional class meetings, only one orientation meeting and three weeks of evening/weekend productions. Repeatable to a maximum of 8 cr hrs or 4 completions.

3411 Introduction to Scenic Design

Introduction to basic design elements for the stage including research, sketching, color theory, model building, drafting and stagecraft. Prereq: 2211. Not open to students with credit for 220.

3710 Global Performance Traditions

This course examines contemporary manifestations of global performance ritual traditions, including those of Asia and the Asian Diaspora, Africa and the African Diaspora, and the Indigenous Americas. Historical and cultural context is used to center our discussion of the tradition in contemporary practice. GE theme traditions, cultures, and transformations course.

3732 History of Performance II

In this course, we will delve into the history of theatre from 1780 to the present. Attention will be paid to global contexts, theatrical texts, as well as the history of the crafts of theatrical design, directing, and acting. Prereq: 2100, 2100H, or 2101H.