## Course Number Change

### Arts and Sciences

**Autumn 2019 Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1120.01</td>
<td>Arts Scholars Seminar</td>
<td>U 1</td>
<td>This seminar course is designed for first year arts scholars students and explores arts interests, interdisciplinary opportunities, campus and local community arts connections. Enrollment in Arts Scholars Program.</td>
<td>Enrollment in Arts Scholars Program</td>
</tr>
<tr>
<td>1120.03</td>
<td>Humanities Scholars Seminar</td>
<td>U 1</td>
<td>Designed for the first year Humanities Scholars to explore personal humanities interests, interdisciplinary opportunities, campus and local humanities resources, and cultural topics in the humanities. Enrollment in Humanities Scholars Program.</td>
<td>Enrollment in Humanities Scholars Program</td>
</tr>
</tbody>
</table>

### Environment and Natural Resources

**Spring 2019 Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>4342</td>
<td>Freshwater Fisheries Management</td>
<td>U 3</td>
<td>Ecological principles applied to conservation and management of aquatic vertebrates. Principles of fisheries management including social and economic factors.</td>
<td>3300, or permission of instructor</td>
</tr>
<tr>
<td>4345</td>
<td>Methods in Aquatic Ecology</td>
<td>U 4</td>
<td>Introduction to experimental designs, field and laboratory techniques, and statistical methods commonly used to study aquatic ecosystems.</td>
<td>2100, or permission of instructor, Not open to students with credit for 5345.</td>
</tr>
</tbody>
</table>

### Microbiology

**Spring 2019 Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>5161</td>
<td>Bioinformatics and Molecular Microbiology</td>
<td>U G 3</td>
<td>Application of computational tools to the analysis of microbial genomes and their gene products.</td>
<td>4330 or MolGen 4500, and Biochem 4511; or Grad standing; or permission of instructor, Not open to students with credit for 5161H.</td>
</tr>
</tbody>
</table>

### Welding Engineering
Spring 2019 Semester

2601  Introductory Arc Welding Laboratory

Basic skills required for manual and semiautomatic arc welding processes.
Prereq: Chem 1250 or 1210; and Math 1151 or 1161; and Physics 1250 or 1260; and enrollment as WeldEng-BS major or pre-major student; or permission of instructor.

New Course

African American and African Studies  AFAMAST

Spring 2019 Semester

2275  Blackness and the Politics of Sports

This interdisciplinary course considers the role of Black athletes in society and culture, the racial politics involved, and the global implications of race on courts, playing fields, tracks, and other athletic arenas.

Spring 2019 Semester

4610  African Americans and the Law

This is an interdisciplinary course that puts major legal cases affecting African Americans into conversation with their historical underpinnings, as well as the social contexts and how those contexts manifest in African American cultural productions. A central goal of the course is to interrogate the idea of a “colorblind” justice system.

Architecture  ARCH

Spring 2019 Semester

2610  Introduction to Digital Design Software

This course introduces students to architectural design strategies as they relate to introductory computer tools.
Prereq: A grade of B- or above in 2310 or LArch 2310. Repeatable to a maximum of 15 cr hrs.

Spring 2019 Semester

4780  Undergraduate Research Methods

Focuses on a broad scope of research methods and the development of architectural design and planning research techniques and skills.
Prereq: Enrollment in a major within the Knowlton School of Architecture.

Arts and Sciences  ARTSSCI

Autumn 2019 Semester

1120.02  Biological Sciences Scholars Seminar

Scholars Program academic and co-curricular requirements and expectations; University procedures relative to the BIO SCI Scholars experience; resources and opportunities related to the BIO SCI Scholars program theme. Students will explore involvement related to service, research, and preparation for graduate/professional school and careers in the biological sciences.
Prereq: Enrollment in Biological Sciences Scholars Program.

Autumn 2019 Semester

1120.04  International Affairs Scholars Seminar

Introduction to major topics and themes in International Affairs; introduction to expectations and guidelines of the IA Scholars Program; overview of university resources and services related to the IA Scholars theme; overview of professional development and potential career paths; connections to and awareness of campus, city, and national resources related to IA Scholars theme.
Prereq: Enrollment in International Affairs Scholars Program.
Autumn 2019 Semester

1120.05  Politics, Society, & Law Scholars Seminar
U  1
This seminar course is designed to explore interdisciplinary opportunities, campus and community resources, personal and professional development, and themes specific to the Politics, Society, and Law Scholars Program. Thematic topics will include but are not limited to those related to Ohio's judicial system, free speech, communication, and conflict.
Prereq: Enrollment in Politics, Society, and Law Scholars Program.

Autumn 2019 Semester

1120.06  STEM Exploration & Engagement Scholars Seminar
U  1
This seminar course is designed for first year Scholars students to explore personal interests, interdisciplinary opportunities, campus and local community resources, and specific theme activities related to STEM Exploration and Engagement Scholars.
Prereq: Enrollment in STEM Exploration and Engagement Scholars Program.

Biomedical Informatics  BMI

Spring 2019 Semester

7600  Metabolomics, Principles and Practice
G  3
Introduces students to the principles and practice of metabolomics. Metabolomics is the study of the totality of small molecules existing within a system. We will focus here on the application of metabolomics to plant, food, nutrition and health-related research, although concepts are applicable to other disciplines.
Prereq: Permission of instructor. Cross-listed in FdScTe, HCS, and HumnNtr.

Business Admin: Finance  BUSFIN

Spring 2019 Semester

4211H  Honors Corporate Finance
U  3
The course introduces students to key concepts in financial management, including capital budgeting, the valuation of projects and companies, methods for determining the cost of capital, capital structure and payout policies, securities issuance, mergers and acquisitions, and corporate governance.
Prereq: Admission to the Finance Honors Program, and a CPHR of 3.5 or above.

Spring 2019 Semester

4221H  Honors Investments
U  3
Designed to teach the principles of financial decision making and the investment process. The course will cover current market moving events, multiple asset classes, asset allocation, diversification, security valuation, key player types, efficient market hypothesis, adaptive market hypothesis, behavioral finance, pricing models, active investment management, investment funds, and fin. reg.
Prereq: Admission to the Finance Honors Program, and a CPHR of 3.5 or above.

Civil Engineering  CIVILEN

Spring 2019 Semester

6510  Advanced Concrete Materials
G  3
This course takes a materials science-based approach to understanding the materials and processes involved in hydration and property development of cementitious materials. Students will then apply that learning to understand how to design systems which will prevent, and/or mitigate durability concerns common in concrete infrastructure.
Prereq: Grad standing in CivilEn, or permission of instructor.

Comparative Studies  COMPSTD
### Spring 2019 Semester

**5240 Race and Public Policy in the United States**

**UG 3**

This course explores Race and Public Policy in the United States from Reconstruction to the present. In particular, the class is designed to look at the long list of "hot topics" in the current policy landscape, including policing, housing, wealth gap, immigration, voting, political representation, and others.

Prereq: Jr, Sr, or Grad standing; or permission of instructor. Not open to students with credit for AfAmAsT 5240 or PubAfrs 5240. Cross-listed in AfAmAsT and PubAfrs.

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**Consumer Sciences: Fashion and Retail Studies**

**CSFRST**

### Spring 2019 Semester

**5555 Management Consulting for Hospitality and Fashion Retail Operations**

**UG 3**

A conceptual foundation, discussion, and application of management consulting in the hospitality and retail industries.

Prereq: Sr or Grad standing, or permission of instructor. Cross-listed in CSHpMg.

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**Consumer Sciences: Hospitality Management**

**CSHSPMG**

### Spring 2019 Semester

**5555 Management Consulting for Hospitality and Fashion Retail Operations**

**UG 3**

A conceptual foundation, discussion, and application of management consulting in the hospitality and retail industries.

Prereq: Sr or Grad standing, or permission of instructor. Cross-listed in CSFRSt.

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**Electrical and Computer Engineering**

**ECE**

### Spring 2019 Semester

**8851 Advanced Topics in Control Theory**

**G 3**

Current topics in control theory, optimization, and decision theory.

Prereq: Permission of instructor.

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**Education: Teaching and Learning**

**EDUTL**

### Spring 2019 Semester

**5189.02 Field Experience: Middle Childhood**

**UG 1 - 15**

Planned field experience under supervision in a 4th-9th grade classroom.

Prereq: Enrollment in Master of Education program, and permission of instructor. Repeatable to a maximum of 30 cr hrs or 4 completions.

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**Spring 2019 Semester**

**5189.03 Field Experience: Integrated Language Arts & Social Studies**

**UG 1 - 15**

Planned field experience under supervision in a ILA or ISS 7th-12th grade classroom.

Prereq: Enrollment in Master of Education program, and permission of instructor. Repeatable to a maximum of 30 cr hrs or 4 completions.

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**Spring 2019 Semester**

**5189.06 Field Experience: TESOL or World Language**

**UG 1 - 15**

Planned field experience under supervision in TESOL or World Language Classroom.

Prereq: Enrollment in Master of Education program, and permission of instructor. Repeatable to a maximum of 30 cr hrs or 4 completions.
Spring 2019 Semester
5189.07  Field Experience: STEM
U  G  1 - 15
Planned field experience under supervision in STEM 7th-12th grade classroom.
Prereq: Enrollment in Master of Education program, and permission of instructor. Repeatable to a maximum of 30 cr hrs or 4 completions.

Spring 2019 Semester
5189.11  Field Experience: Early Childhood Generalist Endorsement
U  G  1
This field experience is designed to provide an opportunity to work with a mentor teacher to gain insight into:
best practices in lesson planning, teaching, and classroom management; student learning, interests, and
perspectives; how to effectively implement methods and pedagogical approaches specific to grades 4 & 5 for
the ECG endorsement.
Prereq: Enrollment in the Early Childhood Generalist endorsement program, or Jr or Sr standing in BSEd in
ECE.

Spring 2019 Semester
5189.22  Field Experience: Middle Childhood Generalist Endorsement
U  G  1
This field experience is designed to provide an opportunity to work with a mentor teacher to gain insight into:
best practices in lesson planning, teaching, and classroom management; student learning, interests, and
perspectives; how to effectively implement methods and pedagogical approaches specific to grades 4-6 grade
MCG content areas.
Prereq: Enrollment in the Middle Childhood Generalist endorsement program, or Jr or Sr standing in BSEd in
MCE.

Food Science and Technology

Spring 2019 Semester
7600  Metabolomics, Principles and Practice
G  3
Introduces students to the principles and practice of metabolomics. Metabolomics is the study of the totality of
small molecules existing within a system. We will focus here on the application of metabolomics to plant, food,
nutrition and health-related research, although concepts are applicable to other disciplines.
Prereq: Permission of instructor. Cross-listed in BMI, HCS, and HumnNtr.

German

Spring 2019 Semester
1102.61  Beginning German II (Self-Paced Distance Learning)
U  1 - 4
German 1102.61 is an online version of German 1102. This course allows students to work through the second
of Ohio State's 3-course introductory German sequence at their own pace. Students will learn to write, read,
listen to and speak German, completing work independently with materials and instructor support.
Prereq: 1101.01, 1101.51, or 1101.61. Not open to students with credit for 1102.01 or 1102.51. Repeatable to a
maximum of 4 cr hrs. This course is available for EM credit. GE for lang course.

Horticulture and Crop Science

Summer 2019 Term
2300  Introduction to Hydroponics
U  1
This hands-on intensive course will introduce students to soilless hydroponic crop production. The course will
provide basic information on key components of hydroponics, different systems adopted for different crop
species, as well as ideas of implementing them in commercial settings, home gardening as well as school
science teaching programs.
Introduces students to the principles and practice of metabolomics. Metabolomics is the study of the totality of small molecules existing within a system. We will focus here on the application of metabolomics to plant, food, nutrition and health-related research, although concepts are applicable to other disciplines.
Prereq: Permission of instructor. Cross-listed in BMI, FdScTe, and HumnNtr.

This course aims to introduce students to the principles and practices of metabolomics with a focus on the application of metabolomics to plant, food, nutrition and health-related research. Prereq: Permission of instructor. This course is available for EM credit. Cross-listed in BMI, FdScTe, and HCS.

This course will examine the application of physiological principles to human performance across the spectrum of exercise training paradigms, nutritional interventions, environmental challenges, and selected clinical exercise interventions. Prereq: 3414.

This course is focused on the application of the parameter space approach of robust control to mechatronic systems including ADAS and automated driving. The students will learn how to design multi-objective low order controllers in parameter space based on Hurwitz stability, D-stability, phase margin bounds, gain margin bounds and mixed sensitivity bounds. Prereq: Grad standing in MechEng or ECE, or permission of instructor.

Students learn methods of occupational therapy assessment of and intervention to improve impairments in persons with physical disabilities. Application of these skills is completed in an interactive experiential environment individually, in groups, and in practical lab examinations. Prereq: Enrollment in the Doctorate in Occupational Therapy Program.

This module will provide students with essential skills and tools for successful matriculation to their advanced pharmacy practice experiences. It will also continue the development of skills within the affective domain. Prereq: Enrollment in PharmD program.
Spring 2019 Semester

7351 Special Topics in Medicinal Chemistry and Pharmacognosy
P 2
This course provides advanced training in specialized topics in medicinal chemistry relevant to research interests in the field. The course will enhance students’ problem-solving skills, and students will develop grant writing skills related to research topics in medicinal chemistry.
Prereq: 7350, or permission of the instructor. Not open to students with credit for 8350, 8360, or 8370.

Spring 2019 Semester

7407 Integrated Patient Care Laboratory VI
P 2½
The sixth course in a series of authentic, hands-on experiences that enable students to master component skills that are essential for exemplary patient care. Students will practice integration of these patient care skills in simulated practice settings.
Prereq: Enrollment in PharmD program.

Spring 2019 Semester

7604 Integrated Pharmacotherapy IV
P 7½
This course is designed to help PharmD students develop a rigorous understanding of the scientific basis for preventing and managing human health disorders, and the ability to integrate and apply that knowledge while providing exemplary medication-related patient-centered and population-based care.
Prereq: Enrollment in PharmD program.

Spring 2019 Semester

7804 Interprofessional Education IV
P ½
This is the fourth of a four-course sequence designed to teach PharmD students how to advance collaboration and quality of patient care by providing interprofessional opportunities for students to learn about, from, and with other members of the healthcare team.
Prereq: Enrollment in PharmD program. This course is graded S/U.

Political Science

Spring 2019 Semester

3798 Field Research Methods for Politics & Development in Africa: Education Abroad in Malawi
U 3
This education abroad course focuses on research methodologies used to understand political and economic outcomes in Africa. The course will be especially useful for undergraduate students who plan to conduct research or design programs and interventions in the developing world.

Autumn 2019 Semester

4131 American Supreme Court
U 3
This course focuses on the U.S. Supreme Court as an institution and emphasizes the ways in which its formal and informal norms and structures shape the nature and content of the law the Court makes.

Public Affairs, John Glenn College

Spring 2019 Semester

4191.03 Student Internship in Public Affairs
U 3
Students will work an average of 10-12 hours per week at their designated internship. Internship placements are made with the intent of serving the needs of the host organization or government agency. This class will serve as the academic component of OGIP, sponsored by the State of Ohio Leadership Institute.
Prereq: 2120 or PolitSc 3115.
<table>
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<tbody>
<tr>
<td>5250</td>
<td>Poverty, Inequality, and Public Policy</td>
<td>Presents the distribution, trends, causes, and consequences of poverty and inequality in the US and social science frameworks for understanding and analyzing public programs available to poor and near-poor Americans. Current and historical issues in social policy and poverty, program design, and implementation. The role of government, personal choice, education, employment, and discrimination. Prereq: Econ 2001.01, or permission of instructor.</td>
</tr>
<tr>
<td>6500</td>
<td>Statistical Machine Learning</td>
<td>Statistical models and algorithms for supervised and unsupervised learning; linear and logistic regression; classification and LDA; cross-validation and bootstrap; variable selection; ridge and LASSO penalization; smoothing splines and GAMs; SVM and kernels; CART and random forests; bagging; boosting; feed-forward and convolutional neural networks; k-means clustering and Gaussian mixtures; PCA. Prereq: 6450, or permission of instructor. Not open to students with credit for 7620.</td>
</tr>
<tr>
<td>6702</td>
<td>Theatre Pedagogy</td>
<td>In this course, we will delve into teaching our discipline on the college level. We will explore best practices, strategies, techniques, and key concerns in our field. We will develop teaching philosophies and portfolios to aid on the job market, but more importantly, we will demonstrably improve our ability to impact our students' lives.</td>
</tr>
<tr>
<td>7710</td>
<td>Method: Historiography</td>
<td>In this course, we will explore the ways theatre and performance history have been (and could be) written. Attention will be paid to the roles of evidence, embodiment, and narrative. Throughout we will ask the question: how can we write a history of an evanescent art? To what end?</td>
</tr>
<tr>
<td>7720</td>
<td>Method: Performance Studies</td>
<td>Performance Studies has been described as a marriage of Theater and Anthropology, yet it is both more and less than those two disciplines. We will read foundational texts by its major figures, as well as familiarize ourselves with its newer voices. Students will create a practical project that allows them to apply the methodologies we study, including participant-observation ethnography.</td>
</tr>
<tr>
<td>7730</td>
<td>Method: Practice As Research</td>
<td>In this course, we will delve into the method of practice as research as it pertains to the field of theatre studies. We will read key texts in the field, grapple with approaches, and undertake projects that prioritize practice as research acuity.</td>
</tr>
<tr>
<td>7384</td>
<td>Chinese Syntax</td>
<td>The syntactic structure of modern (Mandarin) Chinese; related topics such as syntax-semantics interface. Prereq: 6380; or permission of instructor.</td>
</tr>
</tbody>
</table>
**Greek**

Spring 2019 Semester  
5014 Greek Drama  
U G 3  
Readings in Greek drama, from tragedies of Aeschylus, Sophocles and Euripides, and comedies of Aristophanes and Menander.  
Prereq: Two courses at 2000 level, or Grad standing, or permission of instructor.

**History of Art**

History of Art  
Summer 2018 Term  
4030 Museum Studies Seminar  
U 3  
Provide a hands-on exploration of museum exhibitions and how they shape knowledge in the field.  
Prereq: Permission of instructor. Not open to students with credit for 430.

Spring 2019 Semester  
8301 Studies in Ancient Greek and Roman Art  
G 4  
Advanced study and specialized research on major topical problems in ancient art.  
Prereq: Permission of instructor. Repeatable to a maximum of 12 cr hrs. Cross-listed in Clas.

**Music**

Spring 2019 Semester  
8886 Theories and Methods of Ethnomusicology  
G 2  
A study of scholarly approaches and research methods in ethnomusicology.  
Prereq: Grad standing, and enrollment in Music program. Not open to students with credit for 886.

**Surgery**

Spring 2019 Semester  
5610 Techniques in Transplantation Research  
U G 2  
Provides students with exposure to theoretical & practical aspects of techniques in transplant research.  
Prereq: Permission of instructor. Not open to students with credit for 610. This course is graded S/U.

Spring 2019 Semester  
5611 Transplantation Research  
U G 2  
Gives students the opportunity to design, execute, and report research in transplantation.  
Prereq: 5610 and permission of instructor. Not open to students with credit for 611.

**Art Education**

Autumn 2019 Semester  
7775 Social and Cultural Theories in Art and Art Education  
G 3  
Critical investigation of theoretical, artistic, and pedagogical concepts related to diversity.

**Educational Studies**
Interdisciplinary approach to exploring issues in the identification, treatment, and prevention of child abuse and neglect.
Prereq: Jr standing, or above. Repeatable to a maximum of 4 cr hrs. Cross-listed in MedColl 6880.07.

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

Spring 2019 Semester
6403 Ethics and the Professional Context of Teaching
G 3
Examines the practice of teaching at national, state, and local levels, highlighting the legal, professional, and ethical issues surrounding American schools and teaching.

**African American and African Studies**

Spring 2019 Semester
2253 Introduction to Caribbean Literature
U 3
An introduction to Caribbean literature with a focus on prose, poetry, and drama.
GE lit and diversity global studies course

Spring 2019 Semester
5240 Race and Public Policy in the United States
U G 3
This course explores Race and Public Policy in the United States from Reconstruction to the present. In particular, the class is designed to look at the long list of "hot topics" in the current policy landscape, including policing, housing, wealth gap, immigration, voting, political representation, and others.
Prereq: Jr, Sr, or Grad standing; or permission of instructor. Not open to students with credit for CompStd 5240 or PubAfrs 5240. Cross-listed in CompStd and PubAfrs.

Spring 2019 Semester
8998 Research in African-American and African Studies: Candidacy Exams
G 1 - 12
Research for candidacy exams.
Repeatable to a maximum of 12 cr hrs or 4 completions. This course is graded S/U.

Spring 2019 Semester
8999 Dissertation Research and Writing
G 1 - 3
Dissertation research and writing.
Repeatable to a maximum of 36 cr hrs or 12 completions. This course is graded S/U.

**Anatomy**

Spring 2019 Semester
7900 Clinically Oriented Anatomy
G 3
Provides a regionally based clinical approach to the study of human anatomy. Basic anatomy and its correlation with clinical concepts will be examined while an emphasis on clinical associations of disease and assessment techniques will be explored.
Prereq: 6900, and Grad standing.

**Art Education**
Spring 2019 Semester
7735  Art Museum History, Theory, and Practices  
G  3  
Critical examination of the historic and theoretical foundations of art and other museums as an institution, drawing on multiple disciplinary perspectives. Counts toward Museum Education specialization.

Spring 2019 Semester
7736  Teaching and Learning in Art Museums  
G  3  
A theoretical and practical study of teaching and learning in and through museums. Counts toward Museum Education specialization.

Spring 2019 Semester
7748  Art Museum Education & Administration Practicum  
G  3  
An examination of the role of education in art museums through an in-depth experience in a museum setting. Counts toward Museum Education specialization.

Spring 2019 Semester
8191.03  Internship: Engaging with Art Museums & Communities  
G  1 - 9  
Supervised professional experience within a museum or public gallery that provides educational services. Prereq: Permission of instructor. Repeatable to a maximum of 9 cr hrs or 9 completions. This course is graded S/U.

Communication  
COMM

Spring 2019 Semester
4635  Communication Dynamics in Groups  
U  3  
This class examines how communication dynamics affect group performance in organizations through topics such as: communication roles and norms, effective communication in teamwork and decision-making, leadership, group cohesion, managing conflict and using communication technologies.

Computer Science and Engineering  
CSE

Spring 2019 Semester
3241  Introduction to Database Systems  
U  3  
Database systems use, logical design, entity-relationship model, normalization, query languages and SQL, relational algebra and calculus, object relational databases, XML, active databases; database design project. Prereq: 2133 or 2231, and 2321 or Math 2366. Not open to students with credit for 5241.

Dental Hygiene  
DENTHYG

Spring 2019 Semester
4420  Current Concepts in Dental Hygiene  
U  2  
Instruction in the significant aspects of dental hygiene practice within the context of dentistry and health care. Prereq: 3400 or 3410.

Design  
DESIGN

Spring 2019 Semester
3400.01  Design Media I for Industrial Design  
U  3  
Introductory-level digital, three-dimensional modeling and visualization strategies for Industrial Design. Prereq: Enrollment in Design major, or permission of instructor. Concur: 3101, 3200, and 3301; or 3102, 3200, and 3302; or 3103, 3200, and 3503. Not open to students with credit for 3400, 3400.02, or 3400.03.
Spring 2019 Semester
3400.02  Design Media I for Interior Design
U  3
Introductory-level digital, three-dimensional modeling and visualization strategies for Interior Design. 
Prereq: Enrollment in Design major, or permission of instructor. Concur: 3101, 3200, and 3301; or 3102, 3200, and 3302; or 3103, 3200, and 3503. Not open to students with credit for 3400, 3400.01, or 3400.03.

Spring 2019 Semester
3400.03  Design Media I for Visual Communication Design
U  3
Introductory-level digital, user-interface and user-experience strategies for Visual Communication Design. 
Prereq: Enrollment in Design major, or permission of instructor. Concur: 3101, 3200, and 3301; or 3102, 3200, and 3302; or 3103, 3200, and 3503. Not open to students with credit for 3400, 3400.01, or 3400.02.

Spring 2019 Semester
4400.01  Design Media III for Industrial Design
U  3
Time-based media and storytelling strategies for Industrial Design. 
Prereq: 3450.01, and enrollment in Design major; or permission of instructor. Concur: 4101 and 4200; or 4103 and 4200. Not open to students with credit for 4400, 4400.02, or 4400.03.

Spring 2019 Semester
4400.02  Design Media III for Interior Design
U  3
Time-based media and storytelling strategies for Interior Design. 
Prereq: 3450.02, and enrollment in Design major; or permission of instructor. Concur: 4101 and 4200; or 4103 and 4200. Not open to students with credit for 4400, 4400.01, or 4400.03.

Spring 2019 Semester
4400.03  Design Media III for Visual Communication Design
U  3
Time-based media and storytelling strategies for Visual Communication Design. 
Prereq: 3450.03, and enrollment in Design major; or permission of instructor. Concur: 4101 and 4200; or 4103 and 4200. Not open to students with credit for 4400, 4400.01, or 4400.02.

Spring 2019 Semester
5453  Design Media IV for Visual Communication Design
U G  3
Advanced-level digital, user-interface and user-experience strategies for Visual Communication Design. 
Prereq: 4400, or Grad standing, or enrollment in Design major, or permission of instructor. Concur: 5153.

Education: Teaching and Learning  
EDUTL

Spring 2019 Semester
5226  Literacy, New Media, and Creative Pedagogies for Classrooms
U G  3
Focuses on active and creative approaches to literacy education (including visual and performing arts) that draw on new media and are particularly useful in early and middle childhood classrooms.

Environment and Natural Resources  
ENR

Spring 2019 Semester
2367  Communicating Environmental and Natural Resources Information
U  3
Concepts, skills development, and practice in accessing and communicating information about the environment and natural resources to varied audiences; emphasis on written and oral communication. 
Prereq: English 1110, and Soph standing or above. GE writing and comm course: level 2.
Spring 2019 Semester
4999  Research with Distinction
U  1-6
Conducting and reporting undergraduate research. Students are expected to present at the CFAES Undergraduate Research Forum and the Denman Undergraduate Research Forum.
Prereq: CPHR 3.0 or above, and permission of project supervisor. Repeatable to a maximum of 9 cr hrs or 3 completions. This course is graded S/U.

Spring 2019 Semester
4999H Honors Research With Distinction
U  1-6
Conducting and reporting honors research with distinction.
Prereq: Honors standing, and CPHR 3.4 or above, and permission of instructor. Repeatable to a maximum of 6 cr hrs or 3 completions. This course is graded S/U.

Spring 2019 Semester
8998 Research
G  1-18
Research for thesis or dissertation purposes only.
Au, Sp, Su Sems. Prereq: Grad standing. Repeatable. This course is graded S/U.

Entomology

Spring 2019 Semester
2200 Beekeeping
U  3
This class presents general information on the biology, behavior and management of honey bee colonies, including pollination behavior and simple honey processing.

Educational Studies: Special Education

Spring 2019 Semester
8861 Single Case Research Design
G  3
Designing, conducting, and critically evaluating research involving applications of the experimental analysis of behavior to problems and needs of individuals with disabilities in educational, clinical, and community settings.

History

Spring 2019 Semester
3354 Islamic Spain and North Africa
U  3
Lecture/discussion course examining Spain and North Africa under Islamic rule, from the Muslim conquests of the early 7th century through the early 19th century.
Prereq or concur: English 1110 or equiv, or permission of instructor. GE historical study course.

Kinesiology: Health and Exercise Science

Spring 2019 Semester
2360 Introduction to Exercise Science
U  3
An exposure to the wide-range of topics that comprise the exercise science discipline. Components: LEC

Mathematics
### Autumn 2019 Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6111</td>
<td>Abstract Algebra I</td>
<td>G</td>
<td>Group theory; series and actions of groups; ring theory; modules; UFDs and PIDs; polynomial and Noetherian rings; linear and multilinear algebra. Prereq: 5112, or Grad standing.</td>
</tr>
</tbody>
</table>

### Spring 2019 Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHILOS</td>
<td>Philosophy</td>
<td></td>
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<tr>
<td>3260</td>
<td>Movements in 20th-Century Philosophy</td>
<td>U</td>
<td>Three or more of the following Anglo-American and European philosophical movements will typically be surveyed: existentialism, philosophical analysis, positivism, Marxism, pragmatism, linguistic philosophy. Prereq: 3 cr hrs in Philos, or permission of instructor.</td>
</tr>
</tbody>
</table>

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<tr>
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<tbody>
<tr>
<td>PHR</td>
<td>Pharmacy</td>
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</tr>
<tr>
<td>2510</td>
<td>Introduction to Pharmacy</td>
<td>U</td>
<td>A survey of the profession of pharmacy, dealing with its history, educational requirements, organization, regulation, and current developments. Prereq: Not open to students with credit for 2511H, 4510, 4511H.</td>
</tr>
</tbody>
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<tr>
<td>PUBAFRS</td>
<td>Public Affairs, John Glenn College</td>
<td></td>
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<tr>
<td>5240</td>
<td>Race and Public Policy in the United States</td>
<td>U G</td>
<td>This course explores race and public policy in the United States from Reconstruction to the present. In particular, the class is designed to look at the long history of hot topics in the current policy landscape, including policing, housing, wealth gap, immigration, voting, political representation, and others. Prereq: Jr, Sr, or Grad standing; or permission of instructor. Not open to students with credit for AfAmASt 5240 or CompStd 5240. Cross-listed in AfAmASt and CompStd.</td>
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<tr>
<td>STAT</td>
<td>Statistics</td>
<td></td>
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<tr>
<td>7630</td>
<td>Nonparametric Function Estimation</td>
<td>G</td>
<td>Function estimation with emphasis on smoothing splines, flexible model building with multivariate data, reproducing kernel Hilbert space methods, additional topics in smoothing. Prereq: 6802 and 6850, or permission of instructor.</td>
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<tr>
<td>WELDENG</td>
<td>Welding Engineering</td>
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<tr>
<td>4023</td>
<td>Brazing and Soldering</td>
<td>U</td>
<td>Brazing and soldering processes with emphasis on physical and metallurgical principles, materials, design and application considerations. Prereq: 3001 and MatScEn 2251, and enrollment in the WeldEng-BS or MatSEng-BS major; or permission of instructor.</td>
</tr>
<tr>
<td>4101</td>
<td>Welding Metallurgy I</td>
<td>U</td>
<td>Application of physical metallurgy principles to nonequilibrium thermo-mechanical conditions associated with welding in structural alloys and focus on carbon steels. Includes welding metallurgy laboratories. Prereq: MatScEn 2251 and 3141, and enrollment as a WeldEng-BS or MatSEng-BS major. Not open to students with credit for 4611.</td>
</tr>
</tbody>
</table>

Components: LEC LAB
Autumn 2019 Semester

4102 Welding Metallurgy II
U 4
Addresses the welding metallurgy and weldability principles associated with stainless steels, nickel-base, aluminum-base, and titanium-base alloys and other nonferrous alloys. Includes laboratories. Prereq: 4101, and enrollment as WeldEng-BS major; or permission of instructor. Not open to students with credit for 4612.

Components: LEC  LAB

Spring 2019 Semester

4115 Computational Modeling of Additive Manufacturing and Welding
U 3
Theory of temperature, stress, deformation and phase transformation for additive manufacturing and welding, as well as application of industry-standard simulation codes. Prereq: 4201, or permission of instructor.

Components: LEC  LAB

Spring 2019 Semester

7115 Computational Modeling of Additive Manufacturing and Welding (Grad)
G 3
Graduate-level instruction on the theory of temperature, stress, deformation and phase transformation for additive manufacturing and welding, as well as application of industry-standard simulation codes. Prereq: Grad standing in Engineering, Mathematics, Physics, or Chemistry; or permission of instructor. Not open to students with credit for 4115.

Components: LEC  LAB

Withdraw Course

Engineering

Spring 2019 Semester

2361 History of Ancient Engineering
U 3
History of ancient engineers, engineering processes and products. Prereq: English 1110 (110) or equiv. Not open to students with credit for Engineer 360.01. GE historical study course.

Spring 2019 Semester

2362 History of American Technology
U 3
History of the interaction of American technology and society from colonial times to the present. Prereq: English 1110 (110) or equiv. Not open to students with credit for Engineer 360.02. GE historical study course.
<table>
<thead>
<tr>
<th>New Program</th>
<th>Proposed By</th>
<th>Status</th>
<th>Date Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interprofessional Healthcare Graduate Certificate</td>
<td>College of Nursing</td>
<td>Approved by CAA</td>
<td>09/05/2018</td>
</tr>
<tr>
<td></td>
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<td>No additional approvals necessary</td>
<td></td>
</tr>
<tr>
<td>Certificate in Healthcare Leadership and Innovation</td>
<td>College of Nursing</td>
<td>Approved by CAA</td>
<td>09/05/2018</td>
</tr>
<tr>
<td></td>
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<td>No additional approvals necessary</td>
<td></td>
</tr>
<tr>
<td>Combined Doctor of Veterinary Medicine/Master of Public Health – Veterinary Public Health Specialization Degree Program</td>
<td>College of Public Health and College of Veterinary Medicine</td>
<td>Approved by CAA</td>
<td>09/05/2018</td>
</tr>
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<td>No additional approvals necessary</td>
<td></td>
</tr>
<tr>
<td>Graduate Business Leadership Certificate (Option 3)</td>
<td>Fisher College of Business</td>
<td>Approved by CAA</td>
<td>09/05/2018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No additional approvals necessary</td>
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