

**MINUTES OF THE MEETING
OF THE GRADUATE ACADEMIC POLICIES
AND PROCEDURES COMMITTEE
February 18, 2019
APPROVED**

The Graduate AP&P Committee met on Monday, November 19, 2018 at 3:00 p.m. in IG Greer 224.

Members present: Eric Berry, Will Canu, Scott Collier, Stacey Garrett, Dru Henson, Marie Hoepfl, Nickolas Jordan, Sandi Lane, Victor Mansure, Gary McCullough, Mike McKenzie, Brad Nash, Jennifer Natale, Ben Powell, Rob Sanders, David Shows, Sandy Vannoy, Ray Williams, Dale Wheeler, Susan Staub, Tracy Smith, Jennifer McGee

Administrative Staff & Guests: Laura Padgett, Lakshmi Iyer, Jim McGee, Tim Forsyth

Absent: James Douthit, Karen Fletcher, Onur Ince, Phyllis Kloda, Dontrell Parson, Terry Rawls, Adam McCourry, Debbie Race, Stephanie Lee

1. CALL TO ORDER

Chairperson Marie Hoepfl called the meeting to order at 3:00 p.m.

Guests were welcomed and asked to introduce themselves.

2. APPROVAL OF THE MINUTES

3. ANNOUNCEMENTS/FIOS

4. NEW BUSINESS:

A. CURRICULUM PROPOSALS:

Beaver College of Health Sciences

Department of Nutrition and Health Care Management

G_HS_NHM_2018_21

Change the prerequisite and course description for NUT 5000.
(Motion to approve from subcommittee)

G_HS_NHM_2018_22

Update the POS to: (a) add standards for retention to the Graduate Bulletin for MS/Dietary Internship concentration, (b) remove E S 5592 based on proposal #21, and (c) add 3 hours of elective credits based on proposal #21. **(Motion to approve from subcommittee)**

G_HS_NHM_2018_23

Update the POS to add standards for retention to the Graduate Bulletin for MS/Public Health Nutrition concentration.
(Motion to approve from subcommittee)

G_HS_NHM_2018_24 Update POS to include Academic Standards for Retention for the MHA degree Information Systems Concentration.
(Motion to approve from subcommittee)

G_HS_NHM_2018_25 Update POS to include Academic Standards for Retention to the Graduate Bulletin for the MHA degree Leadership Concentration.
(Motion to approve from subcommittee)

MOTION 1: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

Department of Social Work

G_HS_SW_2018_4 Change wording for S W 5010 in the bulletin description.
(Motion to approve from subcommittee)

G_HS_SW_2018_5 Change several sentences in the bulletin description for S W 5210.
(Motion to approve from subcommittee)

G_HS_SW_2018_6 1) Add wording the content in the bulletin description for S W 5220. 2) Change the title of the course from "Practice with Groups and Communities" to "Practice with Groups, Communities, and Organizations." **(Motion to approve from subcommittee)**

G_HS_SW_2018_7 Change several sentences in the bulletin description for S W 5730.
(Motion to approve from subcommittee)

G_HS_SW_2018_8 Change several sentences in the bulletin description for S W 5740.
(Motion to approve from subcommittee)

G_HS_SW_2018_9 Change several sentences in the bulletin description for S W 5810.
(Motion to approve from subcommittee)

MOTION 2: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

College of Arts & Sciences

Department of Biology

G_CAS_BIO_2018_18 Change the POS for the MS in Biology, Cell and Molecular Biology concentration (207B) as follows: change the required hours for BIO 6615 from 3 to 6 and adjust the number of elective hours to account for that change.

MOTION 3: There was a motion (Smith) and second (Mansure) to approve the proposal. A vote was taken. **Motion passed.**

G_CAS_BIO_2018_19 Change the POS for the MS in Biology, Ecology and Evolutionary

Biology concentration (207D) as follows: change the required hours for BIO 5250 from 3 to 6 and adjust the number of elective hours to account for that change. **(Motion to approve from subcommittee)**

MOTION 4: There was a motion from the Curriculum Subcommittee to approve the proposal. A vote was taken. **Motion passed.**

College of Fine & Applied Arts

Department of Art

GU_FAA_ART_2018_54 In the Graduate and Undergraduate Bulletins create a new prefix (GCM) and change the current prefix from GRA to GCM.

MOTION 5: There was a motion (Smith) and second (Mansure) to approve the proposal. A vote was taken. **Motion passed.**

Department of STBE

GU_FAA_STBE_2018_03 Add a new course TEC 4633/TEC 5633 – Photovoltaics II to the Undergraduate and Graduate Bulletins. **(Motion to approve from subcommittee)**

GU_FAA_STBE_2018_04 Add a new course TEC 4614/TEC 5614 – EV Design to the Undergraduate and Graduate Bulletins. **(Motion to approve from subcommittee)**

MOTION 6: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

GU_FAA_STBE_2018_05 Change the title of TEC 4700/TEC 5700 – Biofuels in Undergraduate and Graduate Bulletins. **(Motion to approve from subcommittee)**

GU_FAA_STBE_2018_06 Change the course description for TEC 4618/TEC 5618 – Sustainable Building Design and Construction in the Undergraduate and Graduate Bulletins. **(Motion to approve from subcommittee)**

GU_FAA_STBE_2018_07 Change the course description and prerequisites for TEC 4758/TEC 5758 – Planning and Scheduling in the Undergraduate and Graduate Bulletins. **(Motion to approve from subcommittee)**

MOTION 7: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

G_CAS-FAA_P&A-STBE_2018_1

Add a dual-degree graduate program in Engineering Physics and Technology/Appropriate Technology. **(Motion to approve from subcommittee)**

G_CAS-FAA_P&A-STBE_2018_2

Add a dual-degree graduate program in Engineering Physics and Technology/Renewable Energy Engineering. **(Motion to approve from subcommittee)**

MOTION 8: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

Reich College of Education

Department of Doctorate of Educational Leadership

G_COE_EDL_2018_01

Delete EDL 7030 - Concepts and Constructs in Curriculum & Instruction (3) (On Demand) **(Motion to approve from subcommittee)**

G_COE_EDL_2018_02

Add EDL 7035 - Curriculum History, Theory and Practice in Educational Organizations (3) (On Demand) **(Motion to approve from subcommittee)**

G_COE_EDL_2018_03

Change EDL 7065 - Writing for the Professional Educator (3) (On-Demand) Update (in a limited manner) the description of an existing course in the doctoral program core. **(Motion to approve from subcommittee)**

G_COE_EDL_04

Change the core requirements in all concentrations within the Doctoral Program to include the new course, EDL 7035 - Curriculum History, Theory and Practice in Educational Organizations rather than the deleted course, EDL 7030 - Concepts and Constructs in Curriculum & Instruction. **(Motion to approve from subcommittee)**

MOTION 9: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

Department of Curriculum & Instruction

G_COE_CI_2018_39

Change name of CI 5050 from Supervision of Instruction to Cultivating, Supporting, and Sustaining Excellence in Teaching **(Motion to approve from subcommittee)**

G_COE_CI_2018_40

Change name of CI 5055 from Connecting Learners and Subject Matter to Designing Student-Centered Curriculum and Instruction. **(Motion to approve from subcommittee)**

G_COE_CI_2018_41 Change description of CI 5581 Advanced Curriculum Design
(**Motion to approve from subcommittee**)

G_COE_CI_2018_43 We are requesting the addition of a 12-hour Graduate Certificate program titled "Teaching Emergent Bilingual Populations in Content Areas." (**Motion to approve from subcommittee**)

MOTION 10: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

G_RCOE_CI_2018_44 Add course, CI 5320: Teaching Mathematics to Emergent Bilingual Learners. (**Motion to approve from subcommittee**)

G_RCOE_CI_2018_45 Add course: CI: 5330: Teaching Emergent Bilinguals in Science. (**Motion to approve from subcommittee**)

G_COE_CI_2018_46 Add course, CI 5340: Culturally Sustaining Pedagogies for Emergent Bilingual Learners. (**Motion to approve from subcommittee**)

MOTION 11: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposal. A vote was taken. **Motion passed.**

Note: For catalog copy, pull information from Proposal 43, Section 3b, for Proposals 44, 45, and 46.

G_COE_CI_2018_47 Change Program of Study for the Curriculum Specialist Program. (Major Code: 416A/13.0301)

MOTION 12: Collier moved, Nash seconded, to approve this proposal. Discussion ensued regarding two concerns with this proposal: (1) taking a 39-hour program to a 33-hour program (two courses removed), without a rationale provided; and (2) There are errors on the POS that was submitted. Elizabeth Campbell, on behalf of Sara Zimmerman, provided information about the proposal. Rob Sanders shared that per the Graduate Bulletin a non-thesis program requires 36 hours. This policy prevents the proposal from going through if the GAPP is to be consistent. A new version of this proposal would be needed in any case for the minutes to correctly reflect what is needed for the Bulletin copy. Scott Collier amended his original motion to postpone consideration of this proposal. Nash seconded. A vote was taken. **Motion passed.**

Note: Victor Mansure recommended that the revised proposal go to the Curriculum Subcommittee before coming back to GAPP.

Department of Reading Education and Special Education

G_COE_RESE_2018_1 476B: Special Education - Emotional/Behavioral Disorders Concentration, MA 1. Change the Special Education - Emotional/Behavioral Disorders Concentration, MA -- Change

name to Special Education, MA and POS. 2. Change admission requirements to reflect alternative admission criteria. 3. Change requirement for Product of Learning. **(Motion to approve from subcommittee)**

- G_COE_RESE_2018_2** 476B: Special Education - Emotional/Behavioral Disorders Concentration, MA 1. Delete the Special Education - Emotional/Behavioral Disorders Concentration, MA. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_3** 476C Special Education - Intellectual Disabilities Concentration, MA Delete 476C: Special Education - Intellectual Disabilities Concentration, MA. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_4** Delete 476D: Special Education - Learning Disabilities Concentration, MA. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_5** SPE 5646 - Advanced Studies in Emotional and Behavioral Disorders (3) 1. Update "When Offered" to On Demand 2. Change/Update description. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_6** SPE 5640 - Educational and Career Planning (3) 1. Change/Update course title SPE 5640 - Educational and Career Planning (3) to SPE 5640 - Transition Planning and Assessment: Pathways to Independence for Students with Disabilities (3). **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_7** SPE 5230 - Assessment and Instruction of Individuals with Intellectual Disabilities (3) 1. Update "When Offered" to Fall, Spring 2. Edit the description for errors. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_8** SPE 5620 - Managing Curriculum for Mentally Retarded Students in Special and Regular Settings (3) 1. Change course name SPE 5620 - Managing Curriculum for Mentally Retarded Students in Special and Regular Settings (3) to SPE 5620 - Managing Curriculum for Students with Intellectual Disabilities in Special and Regular Settings (3) 2. Update course description. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_9** SPE 5636 - Advanced Studies in Specific Learning Disabilities (3) 1. Update "When Offered" to Fall, Spring 2. Change/Update description. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_10** SPE 5140 - Social Communication in Autism Spectrum Disorders (3) 1. Change course name SPE 5140 - Social Communication in Autism Spectrum Disorders (3) to SPE 5140 - Social Communication in Autism (3) 2. Update course description. **(Motion to approve from subcommittee)**
- G_COE_RESE_2018_11** SPE 5120 Effective Educational Practices for Students with Autism Spectrum Disorders 1. Change course name from SPE 5120 Effective Educational Practices for Students with Autism

Spectrum Disorders (3) to SPE 5120 Effective Educational Practices for Students with Autism (3) 2. Update course description. **(Motion to approve from subcommittee)**

G_COE_RESE_2018_12 Change course name SPE 5130 - Autism Spectrum Disorders: Contemporary Issues (3) to SPE 5130 - Autism: Contemporary Issues (3) 2. Update course description - see below 3. Change when offered to On Demand. **(Motion to approve from subcommittee)**

G_COE_RESE_2018_13 R E 5010 - Literacy Instruction and Assessment for Students with Autism Spectrum Disorders 1. Change course name R E 5010 - Literacy Instruction and Assessment for Students with Autism Spectrum Disorders (3) to R E 5010 - Literacy Instruction and Assessment for Students with Autism (3) 2. Change course description to reflect name change. **(Motion to approve from subcommittee)**

G_COE_RESE_2018_14 Reading Education - Classroom/Clinical Concentration MA_477E 1. Change language and remove "specific equivalent graduate courses" for Social and Philosophical Foundations Education Requirement to "equivalent graduate course approved by the advisor." 2. Deleted the requirement for Admission to Candidacy. 3. Deleted the requirement for Comprehensive Exam. **(Motion to approve from subcommittee)**

MOTION 13: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposals. A vote was taken. **Motion passed.**

Walker College of Business

Department of MSADA

G_COB_MSADA_2018_01 Add MDA as a new course designator.

Note: Proposal was withdrawn by the department (per Sandy Vannoy).

G_COB_MSADA_2018_02 Create a new course MBA5660 Web Analytics, Data Privacy and Security (3 hours). **(Motion to approve from subcommittee)**

MOTION 14: There was a motion from the Curriculum Subcommittee to approve the proposal. A vote was taken. **Motion passed.**

G_COB_MSADA_2018_03 Modify the MSADA Program of study (core only):
1. Remove: CIS5830 Security, Privacy and Ethical Issues in Analytics; and, MBA5230 Fundamentals of Business Analytics
2. Add MBA 5660 Web Analytics, Data Privacy and Security;
3. Add ECO5720 Applied Econometrics;
4. Add CS5245 Data Programming

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

MOTION 15: There was a motion (Mansure) and second (Shows) to approve the proposal. A vote was taken. **Motion passed.**

G_COB_2019_01

Correct the MS in Applied Data Analytics listing in the graduate bulletin under the umbrella of the Department of Computer Information Systems & Supply Chain Management to the college of business level, similar to the Master of Business Administration; it is not, nor has it ever been, housed in the CIS & SCM department. **(Motion to approve from subcommittee)**

MOTION 16: There was a motion from the Curriculum Subcommittee to approve the proposal. A vote was taken. **Motion passed.**

B. POLICY PROPOSALS:

G_GRD_2018_2

Change the requirements for the Accelerated Admissions program to (1) make it inclusive of early acceptance decisions (no graduate courses required), and (2) allow programs to set their own GPA requirement.

Note: This policy proposal was withdrawn by the Policy Subcommittee (per Scott Collier).

C. JOINT SUBCOMMITTEE:

Chairperson Hoepfl reported that the committee is meeting weekly and trying to clean up several items in the AP&P Manual.

5. OLD BUSINESS:

6. DISCUSSION ITEMS:

A. Updates from the Graduate School – Mike McKenzie and Rob Sanders

Rob reported that programs should be aware that the Office of Financial Aid is looking very carefully at courses included in Programs of Study insofar as determining financial aid eligibility.

7. Chairperson Hoepfl requested the group adjourn. Adjournment at 4:15 p.m.

**ADDENDUM TO THE
MINUTES OF THE MEETING
OF THE GRADUATE ACADEMIC POLICIES AND
PROCEDURES (GAPP) COMMITTEE
FEBRUARY 18, 2019**

G_HS_NHM_2018_21

Change the prerequisite and course description for NUT 5000.

1. a. current catalog copy

NUT 5000 - Research Methods in Nutrition
and Foods (3) When Offered: Spring

Examination of research methodologies in nutritional sciences and food systems, familiarization with the relevant research literature, utilization of statistical techniques, collection and interpretation of data, and preparation of reports. Research proposals will be prepared. Prerequisite: A 3 hour graduate statistics course at the level of E S 5592 - Data Analysis in Sport and Exercise Science.

b. proposed catalog copy

NUT 5000 - Research Methods in Nutrition
and Foods (3) When Offered: Spring

Examination of research methodologies in nutritional sciences and food systems, familiarization with the relevant research literature, utilization of statistical techniques including quantitative and qualitative methods, collection and interpretation of data, and preparation of reports. Research proposals will be prepared.

G_HS_NHM_2018_22

Update the POS to:

- (a) add standards for retention to the Graduate Bulletin for MS/Dietary Internship concentration,
- (b) remove E S 5592 based on proposal #21, and
- (c) add 3 hours of elective credits based on proposal #21.

CURRENT COPY

Nutrition - Dietetics Concentration, MS

Program Code: MS_841B

CIP Code: 51.3101

Program of Study for the Master of Science in Nutrition

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official general GRE exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Additional Information

Additional Admission Requirements: A verification statement or intent to complete form signed by the director of a Didactic Program in Dietetics (DPD) accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND); additional courses (up to 15 hours maximum) may be required if so indicated by the student's deficiencies as determined by the program director.

For admission to the Graduate Program in Nutrition - Dietetics Concentration a successful match for the Dietetic Internship is required. Meeting this condition does not guarantee admission.

Prerequisites: A student entering the program with curricular deficiencies may be required to complete more than the minimum number of hours for completion of the program. See the program director for more information.

Registered Dietitian Eligible Status: Requirements for the completion of the Dietetic Internship (NUT 5250, NUT 5255, and NUT 5900) are designed, and have been approved to meet the competencies as mandated by the Accreditation Council for Education in Nutrition and Dietetics.

Location: On Campus; Note: Second year students will intern at sites across western North Carolina.

Course Requirements for the Master of Science in Nutrition

Total Required (Minimum 39 Hours)

Required Courses (6 Hours)

[NUT 5000 - Research Methods in Nutrition and Foods \(3\)](#)

[NUT 5300 - Effective Rural Practice for Health Professionals \(3\)](#)

Concentration Requirements (30 Hours)

[E S 5592 - Data Analysis in Sport and Exercise Science \(3\)](#)

[NUT 5205 - Maternal and Child Nutrition \(3\)](#)

[NUT 5210 - Nutrition for Older Adults \(3\)](#)

[NUT 5220 - Advanced Concepts in Nutrition and Assessment \(3\)](#)

[NUT 5250 - Dietetic Practice I \(3\)](#)

[NUT 5255 - Dietetic Practice II \(3\)](#)

[NUT 5900 - Internship \(3-12\)](#) (12)

Thesis Option (3 Hours)

Choose One

With Thesis

[NUT 5999 - Thesis \(1-4\)](#) (3)

Without Thesis

[NUT 5901 - Research Project \(1-4\)](#) (3)

Other Requirements for the MS in Nutrition

Thesis: Optional for Dietetics Concentration

Proficiency: Not required

Candidacy: Required. For the Dietetics Concentration, admission to candidacy requires successful academic performance and positive assessment of professional conduct during the first year and second years. For the Public Health Nutrition Concentration, admission to candidacy requires successful academic performance during first year of program. Additionally, satisfactory evaluation of professional conduct is required during capstone project. See the academic standards for retention in the program in the department Graduate Nutrition Handbook for further information. Failure to meet these standards may result in dismissal from the program.

Comprehensive: Required for Dietetics Concentration - A comprehensive examination is administered at the end of the second year. Additionally, a poster of completed research must be presented at the end of the second year at one off-campus and one on-campus venue and an oral defense of the thesis is required when selecting the thesis option. Not required for the Public Health Nutrition Concentration.

Product of Learning: Capstone project required for Public Health Nutrition Concentration

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Nutrition - Dietetics Concentration, MS

Program Code: MS_841B

CIP Code: 51.3101

Program of Study for the Master of Science in Nutrition

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official general GRE exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#).

Meeting this condition does not guarantee admission.

Additional Information

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Additional Admission Requirements: A verification statement or intent to complete form signed by the director of a Didactic Program in Dietetics (DPD) accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND); additional courses (up to 15 hours maximum) may be required if so indicated by the student's deficiencies as determined by the program director.

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Prerequisites: A student entering the program with curricular deficiencies may be required to complete more than the minimum number of hours for completion of the program. See the program director for more information.

Registered Dietitian Eligible Status: Requirements for the completion of the Dietetic Internship (NUT 5250, NUT 5255, and NUT 5900) are designed, and have been approved to meet the competencies as mandated by the Accreditation Council for Education in Nutrition and Dietetics.

Location: On Campus; Note: Second year students will intern at sites across western North Carolina.

Course Requirements for the Master of Science in Nutrition

Total Required (Minimum 39 Hours)

Required Courses (6 Hours)

[NUT 5000 - Research Methods in Nutrition and Foods \(3\)](#)

[NUT 5300 - Effective Rural Practice for Health Professionals \(3\)](#)

Concentration Requirements (30 Hours)

[NUT 5205 - Maternal and Child Nutrition \(3\)](#)

[NUT 5210 - Nutrition for Older Adults \(3\)](#)

[NUT 5220 - Advanced Concepts in Nutrition and Assessment \(3\)](#)

[NUT 5250 - Dietetic Practice I \(3\)](#)

[NUT 5255 - Dietetic Practice II \(3\)](#)

[NUT 5900 - Internship \(3-12\)](#)

[Electives \(3\)](#)

Thesis Option (3 Hours)

Choose One

With Thesis

[NUT 5999 - Thesis \(1-4\)](#) (3)

Without Thesis

[NUT 5901 - Research Project \(1-4\)](#) (3)

Other Requirements for the MS in Nutrition

Thesis: Optional for Dietetics Concentration

Proficiency: Not required

Candidacy: Required. For the Dietetics Concentration, admission to candidacy requires successful academic performance and a positive assessment of professional conduct during the first year and second years. For the Public Health Nutrition Concentration, admission to candidacy requires successful academic performance during first year of program. Additionally, satisfactory evaluation of professional conduct is required during capstone project. See the academic standards for retention in the program in the department Graduate Nutrition Handbook for further information. Failure to meet these standards may result in dismissal from the program.

Comprehensive: Required for Dietetics Concentration - A comprehensive examination is administered at the end of the second year. Additionally, a poster of completed research must be presented at the end of the second year at one off-campus and one on campus venue and an oral defense of the thesis is required when selecting the thesis option. Not required for the Public Health Nutrition Concentration.

Product of Learning: Capstone project required for Public Health Nutrition Concentration

Note on Academic Standards For Retention in the MS/DI Program

Academic standards for retention in the MS/DI Program include abiding by the ASU Code of Student Conduct and Academic Integrity, and the Academy of Nutrition and Dietetics Code of Ethics, the MS/DI Program Competencies, and the following standards: 1) Professionalism; 2) Collaboration; 3) Honesty/Integrity; 4) Respect; 5) Reverence for Learning; 6) Emotional Maturity; 7) Flexibility; 8) Communication Skills; and 9) Cultural Competence. Failure to meet these standards may result in dismissal from the program. The standards are fully described in the Graduate Student Handbook: <https://nutrition.appstate.edu/academics/master-science-nutrition-and-dietetic-internship>.

G_HS_NHM_2018_23

Update the POS to add standards for retention to the Graduate Bulletin for MS/Public Health Nutrition concentration.

CURRENT COPY

Nutrition - Public Health Nutrition Concentration, MS

Program Code: MS_841C
CIP Code: 51.3101

Program of Study for the Master of Science in Nutrition

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official general GRE exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Additional Information

Additional Admission Requirements: Additional courses (up to 6 hours or as determined by program director including Introductory Nutrition and Medical Terminology) may be required if so indicated by the student's deficiencies.

Prerequisites: A student entering the program with curricular deficiencies may be required to complete more than the minimum number of hours for completion of the program. See the program director for more information.

Location: Online.

Course Requirements for the Master of Science in Nutrition

Total Required (Minimum 39 Hours)

Required Courses (6 Hours)

- [NUT 5000 - Research Methods in Nutrition and Foods \(3\)](#)
- [NUT 5300 - Effective Rural Practice for Health Professionals \(3\)](#)

Concentration (33 Hours)

-
- [A S 5005 - Global Appalachia \(3\)](#)
 - [HCM 5210 - Foundations of the U.S. Health Care System \(3\)](#)
 - [HCM 5220 - Statistics for Health Administration \(3\)](#)
 - [HCM 5240 - Health and Disease \(3\)](#)
 - [NUT 5100 - Introduction to Community and Public Health \(3\)](#)
 - [NUT 5200 - Lifecycle Nutrition for Public Health Nutrition Professionals \(3\)](#)
 - [NUT 5275 - Diet, Obesity, and Disease \(3\)](#)
 - [NUT 5350 - Public Health Nutrition Leadership and Practice \(3\)](#)

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- [NUT 5375 - Community and International Health Assessment \(3\)](#)
- [NUT 5450 - Capstone Proposal \(1\)](#)
- [NUT 5475 - Public Health Nutrition Capstone \(2\)](#)
- Elective in Environmental Health (3)

Other Requirements for the MS in Nutrition

- **Thesis:** Optional for Dietetics Concentration
- **Proficiency:** Not required
- **Candidacy:** Required. For the Dietetics Concentration, admission to candidacy requires successful academic performance and a positive assessment of professional conduct during the first year and second years. For the Public Health Nutrition Concentration, admission to candidacy requires successful academic performance during first year of program. Additionally, satisfactory evaluation of professional conduct is required during capstone project. See the academic standards for retention in the program in the department Graduate Nutrition Handbook for further information. Failure to meet these standards may result in dismissal from the program.
- **Comprehensive:** Required for Dietetics Concentration - A comprehensive examination is administered at the end of the second year. Additionally, a poster of completed research must be presented at the end of the second year at one off-campus and one on campus venue and an oral defense of the thesis is required when selecting the thesis option. Not required for the Public Health Nutrition Concentration.
- **Product of Learning:** Capstone project required for Public Health Nutrition Concentration

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Nutrition - Public Health Nutrition Concentration, MS

Program Code: MS_841C

CIP Code: 51.3101

Program of Study for the Master of Science in Nutrition

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official general GRE exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Additional Information

Additional Admission Requirements: Additional courses (up to 6 hours or as determined by program director including Introductory Nutrition and Medical Terminology) may be required if so indicated by the student's deficiencies.

Prerequisites: A student entering the program with curricular deficiencies may be required to complete more than the minimum number of hours for completion of the program. See the program director for more information.

Location: Online.

Course Requirements for the Master of Science in Nutrition

Total Required (Minimum 39 Hours)

Required Courses (6 Hours)

-
- [NUT 5000 - Research Methods in Nutrition and Foods \(3\)](#)
 - [NUT 5300 - Effective Rural Practice for Health Professionals \(3\)](#)

Concentration (33 Hours)

-
- [A S 5005 - Global Appalachia \(3\)](#)
 - [HCM 5210 - Foundations of the U.S. Health Care System \(3\)](#)
 - [HCM 5220 - Statistics for Health Administration \(3\)](#)
 - [HCM 5240 - Health and Disease \(3\)](#)
 - [NUT 5100 - Introduction to Community and Public Health \(3\)](#)
 - [NUT 5200 - Lifecycle Nutrition for Public Health Nutrition Professionals \(3\)](#)
 - [NUT 5275 - Diet, Obesity, and Disease \(3\)](#)
 - [NUT 5350 - Public Health Nutrition Leadership and Practice \(3\)](#)
 - [NUT 5375 - Community and International Health Assessment \(3\)](#)
 - [NUT 5450 - Capstone Proposal \(1\)](#)
 - [NUT 5475 - Public Health Nutrition Capstone \(2\)](#)
 - Elective in Environmental Health (3)

Other Requirements for the MS in Nutrition

-
- **Thesis:** Optional for Dietetics Concentration
 - **Proficiency:** Not required
 - **Candidacy:** Required. For the Dietetics Concentration, admission to candidacy requires successful academic performance and a positive assessment of professional conduct during the first year and second years. For the Public Health Nutrition Concentration, admission to candidacy requires successful academic performance during first year of program. Additionally, satisfactory evaluation of professional conduct is required during capstone project. See the academic standards for retention in the program in the department Graduate Nutrition Handbook for further information. Failure to meet these standards may result in dismissal from the program.
 - **Comprehensive:** Required for Dietetics Concentration - A comprehensive examination is administered at the end of the second year. Additionally, a poster of completed research must be

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Effective Fall 2019 unless otherwise noted.

presented at the end of the second year at one off-campus and one on campus venue and an oral defense of the thesis is required when selecting the thesis option. Not required for the Public Health Nutrition Concentration.

- **Product of Learning:** Capstone project required for Public Health Nutrition Concentration

Note on Academic Standards For Retention in the MS/PHN Program

Academic standards for retention in the MS/PHN Program include abiding by the ASU Code of Student Conduct and Academic Integrity, and the following standards: 1) Professionalism; 2) Collaboration; 3) Honesty/Integrity; 4) Respect; 5) Reverence for Learning; 6) Emotional Maturity; 7) Flexibility; 8) Communication Skills; and 9) Cultural Competence. Failure to meet these standards may result in dismissal from the program. The standards are fully described in the Graduate Student Handbook: <https://nutrition.appstate.edu/academics/graduate-programs-public-health-nutrition>.

G_HS_NHM_2018_24

Update POS to include Academic Standards for Retention for the MHA degree Information Systems Concentration.

CURRENT COPY

Health Administration - Information Systems Concentration, MHA

Program Code: MHA_855B

CIP Code: 51.0701

Program of Study for the Master of Health Administration

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official GMAT or GRE exam scores; written statement addressing prior experience and career goals in health care; satisfactory completion of coursework in financial accounting and statistics (at least 3 credit hours) at the undergraduate or graduate level. Work experience of two or more years in a health care setting is preferred prior to beginning the MHA program.

To be considered for admission, applicants must meet or exceed the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Students will be admitted each Fall semester.

Location: Online

Course Requirements for the Master of Health Administration

Total Required (Minimum 46 Hours)

Required Coursework (37 Hours)

- [HCM 5210 - Foundations of the U.S. Health Care System \(3\)](#)
- [HCM 5220 - Statistics for Health Administration \(3\)](#)
- [HCM 5240 - Health and Disease \(3\)](#)
- [HCM 5270 - Organizational Development and Behavior in Health Care \(3\)](#)
- [HCM 5570 - Financial Management for Health Organizations I \(3\)](#)
- [HCM 5575 - Financial Management for Health Organizations II \(3\)](#)
- [HCM 5590 - Performance Improvement Concepts and Applications in Health Care \(3\)](#)
- [HCM 5610 - Health Economics \(3\)](#)
- [HCM 5680 - Management and Human Resources in Health Organizations \(3\)](#)
- [HCM 5700 - Health Care Informatics \(3\)](#)
- [HCM 5800 - Executive Skills Development \(1\)](#)
- [HCM 5910 - Health Law and Policy \(3\)](#)
- [HCM 5950 - Strategic Management in Health Care \(3\)](#)

Concentration Requirements (9 Hours)

- [HCM 5710 - Health Care Data Management \(3\)](#)
- [HCM 5720 - Data Analytics in Health Care \(3\)](#)
- [HCM 5725 - Health Information Project Management \(3\)](#)

Other Requirements for the MHA

- **Thesis:** Not required
- **Proficiency:** Not required
- **Candidacy:** Not required
- **Comprehensive:** Not required
- **Product of Learning:** Not required

PROPOSED COPY

Health Administration - Information Systems Concentration, MHA

Program of Study for the Master of Health Administration

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official GMAT or GRE exam scores; written statement addressing prior experience and career goals in health care; current employment in a health care setting. Two years of work experience and satisfactory coursework in financial accounting and statistics (at least 3 credit hours) at the graduate or the undergraduate level preferred.

To be considered for admission, applicants must meet or exceed the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Students will be admitted each Fall semester.

Location: Online

Course Requirements for the Master of Health Administration

Total Required (Minimum 46 Hours)

Required Coursework (37 Hours)

- [HCM 5210 - Foundations of the U.S. Health Care System \(3\)](#)
- [HCM 5220 - Statistics for Health Administration \(3\)](#)
- [HCM 5240 - Health and Disease \(3\)](#)
- [HCM 5270 - Organizational Development and Behavior in Health Care \(3\)](#)
- [HCM 5570 - Financial Management for Health Organizations I \(3\)](#)
- [HCM 5575 - Financial Management for Health Organizations II \(3\)](#)
- [HCM 5590 - Performance Improvement Concepts and Applications in Health Care \(3\)](#)
- [HCM 5610 - Health Economics \(3\)](#)
- [HCM 5680 - Management and Human Resources in Health Organizations \(3\)](#)
- [HCM 5700 - Health Care Informatics \(3\)](#)
- [HCM 5800 - Executive Skills Development \(1\)](#)
- [HCM 5910 - Health Law and Policy \(3\)](#)
- [HCM 5950 - Strategic Management in Health Care \(3\)](#)

Concentration Requirements (9 Hours)

- [HCM 5710 - Health Care Data Management \(3\)](#)
- [HCM 5720 - Data Analytics in Health Care \(3\)](#)
- [HCM 5725 - Health Information Project Management \(3\)](#)

Other Requirements for the MHA

- **Thesis:** Not required
- **Proficiency:** Not required
- **Candidacy:** Not required

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

- **Comprehensive:** Not required
- **Product of Learning:** Not required

Note on Academic Standards For Retention in the MHA Program

Academic standards for retention in the MHA Program include abiding by the ASU Code of Student Conduct and Academic Integrity, and the MHA Program Competencies, and the following standards: 1) Scholastic Performance; 2) Professionalism; 3) Ethical Behavior; 4) Interpersonal Relationships; and 5) Commitment to Diversity and Inclusion. Failure to meet these standards may result in dismissal from the program. For detailed information, please review the complete "Admission & Retention Policies" on the program website (<https://hcm.appstate.edu/academics/master-health-administration>).

G_HS_NHM_2018_25

Update POS to include Academic Standards for Retention to the Graduate Bulletin for the MHA degree Leadership Concentration.

CURRENT COPY

Health Administration - Leadership Concentration, MHA

Program Code: MHA_855C

CIP Code: 51.0701

Program of Study for the Master of Health Administration

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official GMAT or GRE exam scores; written statement addressing prior experience and career goals in health care; satisfactory completion of coursework in financial accounting and statistics (at least 3 credit hours) at the undergraduate or graduate level. Work experience of two or more years in a health care setting is preferred prior to beginning the MHA program.

To be considered for admission, applicants must meet or exceed the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Students will be admitted each Fall semester.

Location: Online

Course Requirements for the Master of Health Administration

Total Required (Minimum 46 Hours)

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Required Coursework (37 Hours)

- [HCM 5210 - Foundations of the U.S. Health Care System \(3\)](#)
- [HCM 5220 - Statistics for Health Administration \(3\)](#)
- [HCM 5240 - Health and Disease \(3\)](#)
- [HCM 5270 - Organizational Development and Behavior in Health Care \(3\)](#)
- [HCM 5570 - Financial Management for Health Organizations I \(3\)](#)
- [HCM 5575 - Financial Management for Health Organizations II \(3\)](#)
- [HCM 5590 - Performance Improvement Concepts and Applications in Health Care \(3\)](#)
- [HCM 5610 - Health Economics \(3\)](#)
- [HCM 5680 - Management and Human Resources in Health Organizations \(3\)](#)
- [HCM 5700 - Health Care Informatics \(3\)](#)
- [HCM 5800 - Executive Skills Development \(1\)](#)
- [HCM 5910 - Health Law and Policy \(3\)](#)
- [HCM 5950 - Strategic Management in Health Care \(3\)](#)

Concentration Requirements (9 Hours)

- [HCM 5730 - Leadership in Health Care \(3\)](#)
- [HCM 5735 - Health Care Operations Management \(3\)](#)
- [HCM 5740 - Marketing in Health Care \(3\)](#)

Other Requirements for the MHA

- **Thesis:** Not required
- **Proficiency:** Not required
- **Candidacy:** Not required
- **Comprehensive:** Not required

PROPOSED COPY

Health Administration - Leadership Concentration, MHA

Program Code: MHA_855C

CIP Code: 51.0701

Program of Study for the Master of Health Administration

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official GMAT or GRE exam scores; written statement addressing prior experience and career goals in health care; current employment in a health care setting. Two years of work experience and satisfactory coursework in financial accounting and statistics (at least 3 credit hours) at the graduate or the undergraduate level preferred.

To be considered for admission, applicants must meet or exceed the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.
Students will be admitted each Fall semester.

Location: Online

Course Requirements for the Master of Health Administration

Total Required (Minimum 46 Hours)

Required Coursework (37 Hours)

- [HCM 5210 - Foundations of the U.S. Health Care System \(3\)](#)
- [HCM 5220 - Statistics for Health Administration \(3\)](#)
- [HCM 5240 - Health and Disease \(3\)](#)
- [HCM 5270 - Organizational Development and Behavior in Health Care \(3\)](#)
- [HCM 5570 - Financial Management for Health Organizations I \(3\)](#)
- [HCM 5575 - Financial Management for Health Organizations II \(3\)](#)
- [HCM 5590 - Performance Improvement Concepts and Applications in Health Care \(3\)](#)
- [HCM 5610 - Health Economics \(3\)](#)
- [HCM 5680 - Management and Human Resources in Health Organizations \(3\)](#)
- [HCM 5700 - Health Care Informatics \(3\)](#)
- [HCM 5800 - Executive Skills Development \(1\)](#)
- [HCM 5910 - Health Law and Policy \(3\)](#)
- [HCM 5950 - Strategic Management in Health Care \(3\)](#)

Concentration Requirements (9 Hours)

- [HCM 5730 - Leadership in Health Care \(3\)](#)
- [HCM 5735 - Health Care Operations Management \(3\)](#)
- [HCM 5740 - Marketing in Health Care \(3\)](#)

Other Requirements for the MHA

- **Thesis:** Not required
- **Proficiency:** Not required
- **Candidacy:** Not required
- **Comprehensive:** Not required

Note on Academic Standards For Retention in the MHA Program

Academic standards for retention in the MHA Program include abiding by the ASU Code of Student Conduct and Academic Integrity, and the MHA Program Competencies, and the following standards: 1) Scholastic Performance; 2) Professionalism; 3) Ethical Behavior; 4) Interpersonal Relationships; and 5) Commitment to Diversity and Inclusion. Failure to meet these standards may result in dismissal from the program. For detailed information, please review the complete "Admission & Retention Policies" on the program website (<https://hcm.appstate.edu/academics/master-health-administration>).

G_HS_SW_2018_4

Change wording for S W 5010 in the bulletin description.

1. a. current catalog copy

S W 5010 - Human Behavior and the Social
Environment I (3) When Offered: Fall

This is the first of two courses in the MSW foundation year that provide knowledge for understanding and assessing human behavior and interaction in varied social, cultural, and economic contexts as a necessary foundation for effective social work practice. The course will examine bio-psycho-social development from birth through early adolescence, utilizing ecological systems and life span/life course perspectives.

b. proposed catalog copy

S W 5010 - Human Behavior and the Social
Environment I (3) When Offered: Fall

This is the first of two courses in the MSW foundation year that provide knowledge for understanding and assessing human behavior and interaction in varied social, cultural, and economic contexts as a necessary foundation for effective social work practice with clients and constituencies. The course will examine bio-psycho-social-spiritual development from birth through early adolescence utilizing life course and person-in-environment perspectives, multidisciplinary theoretical frameworks, and research.

G_HS_SW_2018_5

Change several sentences in the bulletin description for S W 5210.

1. a. current catalog copy

S W 5210 - Human Behavior and the Social
Environment II (3) When Offered: Spring

This is the second of two human behavior courses in the MSW foundation year that provide a basis for effective social work practice. This course examines bio-psycho-social development from late adolescence through the late adulthood, utilizing ecological systems and life span/life course perspectives. The influence of macro systems on human development and behavior will be addressed.

Prerequisites: successful completion of SW 5005, SW 5010, SW 5020, SW 5030, and SW 5040 or permission of the instructor.

b. proposed catalog copy

S W 5210 - Human Behavior and the Social
Environment II (3) When Offered: Spring

This is the second of two courses in the MSW foundation year that provide knowledge for understanding and assessing human behavior and interaction in varied social, cultural, and economic contexts as a necessary foundation for effective social work practice with clients and constituencies.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

The course will examine bio-psycho-social-spiritual development from late adolescence through late adulthood utilizing life course and person-in-environment perspectives, multidisciplinary theoretical frameworks, and research. Prerequisites: successful completion of S W 5005, S W 5010, S W 5020, S W 5030, and S W 5040 or permission of the instructor.

G_HS_SW_2018_6

- 1) Add wording the content in the bulletin description for S W 5220.
- 2) Change the title of the course from "Practice with Groups and Communities" to "Practice with Groups, Communities, and Organizations."

1. a. current catalog copy

S W 5220 - Practice with Groups and Communities (3) When Offered: Spring

The course uses the knowledge and skills of social work and builds on this foundation to include groups and community practice. Knowledge of theories, models and interventions for group and community practice that are learned in the class are integrated and applied in the concurrent student field internship.

Prerequisites: successful completion of S W 5005, S W 5010, S W 5020, S W 5030, and S W 5040 or permission of the instructor.

b. proposed catalog copy

S W 5220 - Practice with Groups, Communities, and Organizations (3) When Offered: Spring

The course uses the knowledge and skills of social work and builds on this foundation to include group, community, and organizational practice. Knowledge of theories, models and interventions for group, community, and organizational practice that are learned in the class are integrated and applied in the concurrent student field internship.

Prerequisites: successful completion of S W 5005, S W 5010, S W 5020, S W 5030, and S W 5040 or permission of the instructor.

G_HS_SW_2018_7

Change several sentences in the bulletin description for S W 5730.

1. a. current catalog copy

S W 5730 - Advanced Social Work Practice with Children and Adolescents (3) When Offered: Spring

This course is the second practice course in the Individuals and Families concentration under the MSW degree building on S W 5710 - Advanced Social Work Practice with Families (3). It is designed to provide students with a theory, practice skills and techniques for social work practice with children and adolescents. Continued emphasis is given to a family systems theory and ecological systems and strengths-based perspective as it applies to treatment for children and adolescents within a social work practice context.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Prerequisites: successful completion of S W 5700, S W 5710, and S W 5720 or permission of the instructor.

b. proposed catalog copy

S W 5730 - Advanced Social Work Practice with Children and Adolescents (3) When Offered: Spring

This course is designed to provide students with advanced theoretical understanding and skills and techniques for social work practice with children and adolescents. Continued emphasis is given to developmental theories, family systems theories, ecological systems theory, and strengths-based perspective as they apply to intervention with children and adolescents in social work practice contexts. Prerequisites: successful completion of S W 5700, S W 5710, and S W 5720 or permission of the instructor.

G_HS_SW_2018_8

Change several sentences in the bulletin description for S W 5740.

1. a. current catalog copy

S W 5740 - Advanced Social Work Practice with Adults (3) When Offered: Spring

This course is the fourth required in the Individuals and Families concentration under the MSW degree. Building on content regarding advanced assessment and practice with families in context, this course provides students with theory, intervention techniques, and practice skills for advanced social work practice with adults across the life span. Attention to the vast differences among adults, and to the meanings and influence of diverse cultures, organizations, and institutions, will serve as the framework for this course.

Prerequisites: successful completion of S W 5700, S W 5710, and S W 5720 or permission of the instructor.

b. proposed catalog copy

S W 5740 - Advanced Social Work Practice with Adults (3) When Offered: Spring

Building on content regarding advanced assessment and practice with families in context, this course provides students with theories, intervention techniques, and practice skills for advanced social work practice with adults across the life span. Attention to the vast differences among adults and to the meanings and influence of diverse cultures, communities, and organizations will serve as the framework for this course.

Prerequisites: successful completion of S W 5700, S W 5710, and S W 5720 or permission of the instructor.

G_HS_SW_2018_9

Change several sentences in the bulletin description for S W 5810.

1. a. current catalog copy

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

S W 5810 - Advanced Community Social

Work Practice (3) When Offered: Fall

This advanced course focuses on the social work principles of empowerment and social change as they apply to communities. Students will develop advanced knowledge of the skills and strategies needed to engage effectively in community organizing, development and planning. Consistent with social work's focus on oppressed and disenfranchised populations, students will explore the concept of diversity, including race, ethnicity, gender, and class. Students will also gain advanced skills in the use of community-based participatory research and an understanding of the use of media and social media in community practice.

Prerequisites: Successful completion of the MSW foundation curriculum (S W 5005, S W 5010, S W 5020, S W 5030, S W 5040, S W 5200, S W 5210, S W 5220, S W 5230, and S W 5240) or permission of the MSW Program Director.

b. proposed catalog copy

S W 5810 - Advanced Community Social

Work Practice (3) When Offered: Fall

This advanced course focuses on the social work principles of empowerment and social change as they apply to communities. Students will develop advanced knowledge of the skills and strategies needed to engage effectively in community organizing, development and planning. Consistent with social work's focus on oppressed and disenfranchised populations, students will critically examine the concept of diversity and privilege and their impact on communities. Students will also gain advanced skills in the use of community-based participatory research and an understanding of the use of media and social media in community practice. Prerequisites: Successful completion of the MSW foundation curriculum (S W 5005, S W 5010, S W 5020, S W 5030, S W 5040, S W 5200, S W 5210, S W 5220, S W 5230, and S W 5240) or permission of the MSW Program Director.

G_CAS_BIO_2018_18

Change the POS for the MS in Biology, Cell and Molecular Biology concentration (207B) as follows: change the required hours for BIO 6615 from 3 to 6 and adjust the number of elective hours to account for that change.

PROPOSED 2019-2020

Biology - Cell and Molecular Biology Concentration, MS

 Return to: [Programs Offered](#)

Program Code: MA_207B

CIP Code: 26.0101

Program of Study for the Master of Science in Biology

Admission Requirements: Baccalaureate degree from an accredited college or university; complete application to the Graduate School; official general GRE exam scores; statement of interest and intent; commitment from a Biology faculty member to chair the applicant's thesis committee**.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

*The three required letters of recommendation should be written by persons familiar with the applicant's academic performance.

**Applicants are encouraged to contact the program director as early as possible regarding thesis research interests.

To be considered for admission, applicants must meet the criteria for admission to the Graduate School. In addition, applicants must receive a minimum GRE analytical writing score of 4 to be considered for normal admission and assistantships. Meeting these criteria does not guarantee admission.

Location: On Campus

Course Requirements for the Master of Science in Biology

Total Required (Minimum 30 Hours)

Required Courses (8 to 12 Hours)

-
- BIO 5000 - Bibliography and Research (4)
 - BIO 5999 - Thesis (4 or 8)

Concentration Requirements (18 to 22 Hours)

-
- BIO 6615 - Current Topics in Molecular Biology (~~3~~**3**+3=6)
 - ~~0-13~~**13** hours of graduate elective courses chosen in consultation with the major advisor

One of the Following Courses

-
- BIO 5650 - Bioinformatics (3)
 - BIO 5777 - Biostatistics (4)

Other Requirements for the MS in Biology

-
- **Thesis:** Required
 - **Proficiency:** Not required
 - **Candidacy:** Required; awarded upon approval of thesis committee and prospectus
 - **Comprehensive:** A written comprehensive examination and an oral defense of the thesis
 - **Product of Learning:** Not required

G_CAS_BIO_2018_19

Change the POS for the MS in Biology, Ecology and Evolutionary Biology concentration (207D) as follows: change the required hours for BIO 5250 from 3 to 6 and adjust the number of elective hours to account for that change.

PROPOSED 2019-2020

Biology - Ecology and Evolutionary Biology Concentration, MS

← Return to: Programs Offered Program

Code: MA_207D

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

CIP Code: 26.0101

Program of Study for the Master of Science in Biology

Admission Requirements: Baccalaureate degree from an accredited college or university; complete application to the Graduate School; official general GRE exam scores; statement of interest and intent; commitment from a Biology faculty member to chair the applicant's thesis committee**.

*The three required letters of recommendation should be written by persons familiar with the applicant's academic performance.

**Applicants are encouraged to contact the program director as early as possible regarding thesis research interests.

To be considered for admission, applicants must meet the criteria for admission to the Graduate School. In addition, applicants must receive a minimum GRE analytical writing score of 4 to be considered for normal admission and assistantships. Meeting these criteria does not guarantee admission.

Location: On Campus

Course Requirements for the Master of Science in Biology

Total Required (Minimum 30 Hours)

Required Courses (8 to 12 Hours)

-
- BIO 5000 - Bibliography and Research (4)
 - BIO 5999 - Thesis (4 or 8)

Concentration Requirements (18 to 22 Hours)

-
- BIO 5250 - Current Topics in Ecology and Evolutionary Biology (3+3=6~~3~~)
 - BIO 5777 - Biostatistics (4)
 - 8-12-12 hours of graduate elective courses chosen in consultation with the major advisor

Other Requirements for the MS in Biology

-
- **Thesis:** Required
 - **Proficiency:** Not required
 - **Candidacy:** Required; awarded upon approval of thesis committee and prospectus
 - **Comprehensive:** A written comprehensive examination and an oral defense of the thesis
 - **Product of Learning:** Not required

GU_FAA_ART_2018_54

In the Graduate and Undergraduate Bulletins create a new prefix (GCM) and change the current prefix from GRA to GCM.

Current Catalog Copy:

[Graduate/Undergraduate Dual Listed Courses](#)

GRA 4512 - Advanced Cross Media Production (3)

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

When Offered: Spring

This course is an advanced treatment of studies begun in the **GRA 3102** course, and incorporates new technologies applicable in the production of digital content for print production, the World Wide Web, mobile device platforms and other applicable new forms of graphic communication. Students will learn and be required to demonstrate ability to apply electronic document designs across a variety of graphic communication platforms. Lecture two hours, laboratory two hours.

Prerequisite: **GRA 3102** (ND Prerequisite: passing the math placement test or successful completion of **MAT 0010**)

[Dual-listed with GRA 5512.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

GRA 4522 - Advanced 3D Imaging and Animation (3)

When Offered: Spring

This course focuses on using advanced texturing techniques, complex shading networks, inverse kinematics and forward kinematics to develop realistic 3D images and animation. Lecture two hours, laboratory two hours.

Prerequisite: **GRA 3312**.

[Dual-listed with GRA 5522.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

GRA 4558 - Digital Printing Systems (3)

When Offered: Fall; Spring

This course allows students the opportunity to explore digital printing applications such as short-run color and variable data printing. Students will study digital workflows, file preparation, data management, preflighting, digital front-end systems, press operation and routine maintenance. Lecture two hours, laboratory two hours.

Prerequisites: **GRA 1022** and **GRA 2522**.

[Dual-listed with GRA 5558.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

GRA 4566 - Advanced Packaging Production (3)

When Offered: Spring

This course addresses advanced concepts and practices pertaining to the flexographic printing process. To include: advanced techniques such as multi-color spot and process color printing, quality control, corrugated board, image distortion, die calculations, and coatings. Lecture two hours, laboratory two hours.

Prerequisites: **GRA 3112** and **GRA 3882**.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

[Dual-listed with GRA 5566.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

GRA 4591 - Advanced Printing and Finishing (3)

When Offered: Fall; Spring

This course is designed to build on the basics covered in: Introduction to Graphic Communications, Introduction to Printing and Finishing, Introduction to Flexographic Printing and Packaging, and Electronic Imaging. Students will gain experience in advanced techniques in electronic prepress, halftones, duotones, process color, process stripping, process press work, and process control. Lecture two hours, laboratory two hours.

May be repeated for a total credit of six semester hours.

Prerequisites: **GRA 2012**, **GRA 3102**, **GRA 3112**, and **GRA 3772** or permission of the instructor. [Dual-listed with GRA 5591.] Dual-listed courses require senior standing.

GRA 4622 - Current Trends in Graphic Communications Seminar (1)

When Offered: Fall; Spring

This course is designed to emphasize current trends, technical movements and problems as they relate to the future of the printing industry. Classes will focus on group discussions related to these and other current issues. Students will be required to refer to academic experiences, internship experiences and library skills to participate in discussions. Laboratory two hours.

Prerequisite: senior standing.

[Dual-listed with GRA 5622.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

Undergraduate Courses:

GRA 1012 - Introduction to Graphic Communications (3)

When Offered: Fall; Spring

This course is a study of contemporary production practices of the graphic communications industry, examining the basics of digital imaging, page layout assembly, and workflow technologies such as computer-to-plate, print media, and finishing. The application of project based assignments and the study of materials, equipment, health and safety, concepts of text/image input, conversion, and output that are practiced in the graphic communications industry are included as topics. Lecture two hours, laboratory two hours.

GRA 2012 - Introduction to Printing and Finishing (3)

When Offered: Fall; Spring

This course is a continuation of **GRA 1012 - Introduction to Graphic Communications (3)**. Emphasis will be placed on theory and problem solving as well as broadening skills in the areas of print media, finishing technologies and production management. Further experiential learning of materials, equipment, production

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

workflow techniques, concepts of text/image input and output devices, finishing processes, and quality control as practiced in the graphic communications industry are included in the design of this study. Lecture two hours, laboratory two hours.

Prerequisites: [GRA 1012](#) and [GRA 1022](#).

GRA 2222 - Introduction to Packaging Production (3)

When Offered: Spring

This course is an introduction to the principles and practices of the flexographic printing and packaging industries. Students will become familiar with the basic flexographic workflow process involving the application of specific conventions acceptable to the flexographic industry. Emphasis is placed on the packaging workflow process; including prepress (design concepts and layouts, development of design files, preflighting, making and mounting plates), press setup, print production, and package conversion. Lecture two hours, laboratory two hours.

Prerequisite: [GRA 2012](#).

GRA 3102 - Cross Media Production (3)

When Offered: Fall; Spring

This course is a study of new technologies applicable in the production of digital content for print production or access from the World Wide Web. The study of Adobe Creative Cloud products in the application of project based assignments, including the study of materials, equipment, health and safety, concepts of text/image input, conversion and output devices that are practiced in the graphic communications industry.

Lecture two hours, laboratory two hours.

Prerequisite: [GRA 2522](#).

GRA 3112 - Substrates, Inks, and Toner (3)

When Offered: Fall

This course is designed to introduce students to substrates and inks used in printing and packaging production. Topics will include introduction to features and characteristics, manufacturing processes, printing and packaging production performance and quality control and color management solutions for substrates and inks used for producing printing and packaging products. Lecture two hours, laboratory two hours.

Prerequisite: [GRA 2012](#).

GRA 3312 - 3D Imaging and Animation (3)

When Offered: Fall

This course provides an introduction to 3D digital imaging for specific applications. Industry standard computer software will be used to explore fundamentals of modeling and texturing. Lecture two hours, laboratory two hours.

GRA 3500 - Independent Study (1-4)

When Offered: Fall; Spring

Approved Contract is required.

GRA 3512 - Web Development for Graphic Communications (3)

When Offered: Fall

This course provides students with the opportunity to develop basic web sites, manipulate images for web delivery. Additionally, students will create intermediate and advanced web sites that utilize complex interactivity. Lecture two hours, laboratory two hours.

GRA 3525 - Packaging Design and Production (3)

When Offered: Spring

This course is an introduction to packaging production covering materials, processes, and technology used in package development. Specific topics may include package structure layout and design, materials and manufacturing, printing processes, and converting/finishing processes for packaging. Emphasis will be placed on understanding the complete production process from design to finished package. Lecture two hours, laboratory two hours.

Prerequisite: **GRA 2522**.

GRA 3530-3549 - Selected Topics (1-4)

When Offered: On Demand

Courses in Graphic Arts that vary in content at the discretion of the instructor.

GRA 3622 - Graphic Communications Seminar (1)

When Offered: Fall; Spring

GEN ED: Junior Writing in the Discipline (WID)

This course involves the development of the mechanics of being a professional in the graphic arts industry.

Specific topics include resumes, cover letters, interviewing, presentation techniques and report writing.

Prerequisites: **R C 2001** or its equivalent and junior standing.

GRA 3772 - Job Estimating and Planning (3)

When Offered: Spring

The study of systems and techniques used for identification of printing production standards, cost estimating, production scheduling, production planning, material flow, teamwork, problem-solving techniques, and management's role in creating quality environments. Lecture two hours, laboratory two hours.

Prerequisite: **GRA 2012**.

GRA 3882 - Intermediate Packaging Production (3)

When Offered: Fall

This course presents intermediate-level concepts of flexographic technologies and technical processes applicable to the flexographic industry. Students enrolled in this course will learn design techniques specific to flexography, printing calculations, job assembly, proofing, print evaluation, and multiple spot color techniques.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

This will be achieved through project-based assignments that allow students to select anilox roll, substrates, inks, dies, and other printing materials. Lecture two hours, laboratory two hours.

Prerequisite: [GRA 2222](#).

GRA 3900 - Graphic Communications Internship I (3-6)

When Offered: On Demand

Field experience with commercial print, in-plant or digital media companies producing products from processes such as animation, digital printing, cross media publishing, prepress, flexography, gravure, offset lithography, screen printing, packaging, web page development, or finishing and fulfillment is integral to career preparation for the graphic communications industry.

Graded on an S/U basis.

Prerequisite: 16 hours of coursework in the major must be completed.

GRA 4112 - Technical Assistant (1)

When Offered: Fall; Spring

A supervised, meaningful, planned and evaluated laboratory assistant experience. Students enrolled in this course will act as instructional aides within various graphic arts and imaging technology courses.

Prerequisite: junior or senior standing.

GRA 4524 - Advanced Web Development for Graphic Communications (3)

When Offered: Spring

This course is a continuation of [GRA 3512](#), Web Development for Graphic Communications. Emphasis will be placed on creating multimedia Web pages, interactive Web forms, and mobile Web sites. This course will also integrate several different programs allowing students to create effective and attractive websites. By the end of this course, students should be able to design advanced web sites that utilize complex interactivity.

Lecture two hours, laboratory two hours.

Prerequisite: [GRA 3512](#).

GRA 4592 - Specialty Graphics Printing (3)

When Offered: On Demand

Advanced laboratory practice in screen printing, wide format printing on multiple substrates that include foam core, vinyl, plastic and adhesives. Lecture one hour, laboratory four hours.

[Dual-listed with GRA 5592]. Dual-listed courses require senior standing; juniors may enroll with permission of the coordinator.

GRA 4722 - Package Prototyping Studio (3)

When Offered: On Demand

This is an advanced portfolio development studio course with emphasis on design projects in packaging and

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

delivering professional oral presentations. Students will build on skills learned in previous courses to design complete packaging projects based on research, creativity, structural design, and prototyping. Lecture two hours, laboratory two hours.

Prerequisite: **GRA 4566** .

GRA 4900 - Graphic Communications Internship II (1-6)

When Offered: On Demand

GEN ED: Capstone Experience

A continuation of industry field experience with print or digital graphics media companies such as commercial printing, animation, prepress, flexography, gravure, offset lithography, screen printing, packaging, or finishing and fulfillment. This course satisfies the senior capstone requirement for the BS in Graphic Arts and Imaging Technology majors.

May be repeated for credit when content does not duplicate. Graded on an S/U basis.

Prerequisite: 30 hours of coursework in the major must be completed.

(Hours requirement for one credit hour is 160 hours, with 80 hours required for each additional.)

PROPOSED CATALOG COPY:

Graduate/Undergraduate Dual Listed Courses

GCM 4512 - Advanced Cross Media Production (3)

When Offered: Spring

This course is an advanced treatment of studies begun in the **GCM 3102** course, and incorporates new technologies applicable in the production of digital content for print production, the World Wide Web, mobile device platforms and other applicable new forms of graphic communication. Students will learn and be required to demonstrate ability to apply electronic document designs across a variety of graphic communication platforms. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 3102** (ND Prerequisite: passing the math placement test or successful completion of **MAT 0010**)

[Dual-listed with GCM 5512.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

GCM 4522 - Advanced 3D Imaging and Animation (3)

When Offered: Spring

This course focuses on using advanced texturing techniques, complex shading networks, inverse kinematics and forward kinematics to develop realistic 3D images and animation. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 3312**.

[Dual-listed with GCM 5522.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

GCM 4558 - Digital Printing Systems (3)

When Offered: Fall; Spring

This course allows students the opportunity to explore digital printing applications such as short-run color and variable data printing. Students will study digital workflows, file preparation, data management, preflighting, digital front-end systems, press operation and routine maintenance. Lecture two hours, laboratory two hours.

Prerequisites: **GCM 1022** and **GCM 2522**.

[Dual-listed with GCM 5558.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

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Effective Fall 2019 unless otherwise noted.

GCM 4566 - Advanced Packaging Production (3)

When Offered: Spring

This course addresses advanced concepts and practices pertaining to the flexographic printing process. To include: advanced techniques such as multi-color spot and process color printing, quality control, corrugated board, image distortion, die calculations, and coatings. Lecture two hours, laboratory two hours.

Prerequisites: **GCM 3112** and **GCM 3882** .
[Dual-listed with GCM 5566.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

GCM 4591 - Advanced Printing and Finishing (3)

When Offered: Fall; Spring

This course is designed to build on the basics covered in: Introduction to Graphic Communications, Introduction to Printing and Finishing, Introduction to Flexographic Printing and Packaging, and Electronic Imaging. Students will gain experience in advanced techniques in electronic prepress, halftones, duotones, process color, process stripping, process press work, and process control. Lecture two hours, laboratory two hours.

May be repeated for a total credit of six semester hours.

Prerequisites: **GCM 2012**, **GCM 3102**, **GCM 3112**, and **GCM 3772** or permission of the instructor.
[Dual-listed with GCM 5591.] Dual-listed courses require senior standing.

GCM 4622 - Current Trends in Graphic Communications Seminar (1)

When Offered: Fall; Spring

This course is designed to emphasize current trends, technical movements and problems as they relate to the future of the printing industry. Classes will focus on group discussions related to these and other current issues. Students will be required to refer to academic experiences, internship experiences and library skills to participate in discussions. Laboratory two hours.

Prerequisite: senior standing.
[Dual-listed with GCM 5622.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

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Effective Fall 2019 unless otherwise noted.

Undergraduate Courses:

GCM 1012 - Introduction to Graphic Communications (3)

When Offered: Fall; Spring

This course is a study of contemporary production practices of the graphic communications industry, examining the basics of digital imaging, page layout assembly, and workflow technologies such as computer-to-plate, print media, and finishing. The application of project based assignments and the study of materials, equipment, health and safety, concepts of text/image input, conversion, and output that are practiced in the graphic communications industry are included as topics. Lecture two hours, laboratory two hours.

GCM 2012 - Introduction to Printing and Finishing (3)

When Offered: Fall; Spring

This course is a continuation of **GCM 1012 - Introduction to Graphic Communications (3)**. Emphasis will be placed on theory and problem solving as well as broadening skills in the areas of print media, finishing technologies and production management. Further experiential learning of materials, equipment, production workflow techniques, concepts of text/image input and output devices, finishing processes, and quality control as practiced in the graphic communications industry are included in the design of this study. Lecture two hours, laboratory two hours.

Prerequisites: **GCM 1012** and **GCM 1022**.

GCM 2222 - Introduction to Packaging Production (3)

When Offered: Spring

This course is an introduction to the principles and practices of the flexographic printing and packaging industries. Students will become familiar with the basic flexographic workflow process involving the application of specific conventions acceptable to the flexographic industry. Emphasis is placed on the packaging workflow process; including prepress (design concepts and layouts, development of design files, preflighting, making and mounting plates), press setup, print production, and package conversion. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 2012**.

GCM 3102 - Cross Media Production (3)

When Offered: Fall; Spring

This course is a study of new technologies applicable in the production of digital content for print production or access from the World Wide Web. The study of Adobe Creative Cloud products in the application of project based assignments, including the study of materials, equipment, health and safety, concepts of text/image input, conversion and output devices that are practiced in the graphic communications industry. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 2522**.

GCM 3112 - Substrates, Inks, and Toner (3)

When Offered: Fall

This course is designed to introduce students to substrates and inks used in printing and packaging production. Topics will include introduction to features and characteristics, manufacturing processes, printing and packaging production performance and quality control and color management solutions for substrates and inks used for producing printing and packaging products. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 2012**.

GCM 3312 - 3D Imaging and Animation (3)

When Offered: Fall

This course provides an introduction to 3D digital imaging for specific applications. Industry standard computer software will be used to explore fundamentals of modeling and texturing. Lecture two hours, laboratory two hours.

GCM 3500 - Independent Study (1-4)

When Offered: Fall;

Spring Approved

Contract is required.

GCM 3512 - Web Development for Graphic Communications (3)

When Offered: Fall

This course provides students with the opportunity to develop basic web sites, manipulate images for web delivery. Additionally, students will create intermediate and advanced web sites that utilize complex interactivity. Lecture two hours, laboratory two hours.

GCM 3525 - Packaging Design and

Production (3) When Offered: Spring

This course is an introduction to packaging production covering materials, processes, and technology used in package development. Specific topics may include package structure layout and design, materials and manufacturing, printing processes, and converting/finishing processes for packaging. Emphasis will be placed on understanding the complete production process from design to finished package. Lecture two hours, laboratory two hours. Prerequisite: **GCM 2522**.

GCM 3530-3549 - Selected Topics (1-4)

When Offered: On Demand

Courses in Graphic Arts that vary in content at the discretion of the instructor.

GCM 3622 - Graphic Communications Seminar (1)

When Offered: Fall; Spring

GEN ED: Junior Writing in the Discipline (WID)

This course involves the development of the mechanics of being a professional in the graphic arts industry. Specific topics include resumes, cover letters, interviewing, presentation techniques and report writing.

Prerequisites: **R C 2001** or its equivalent and junior standing.

GCM 3772 - Job Estimating and Planning (3)

When Offered: Spring

The study of systems and techniques used for identification of printing production standards, cost estimating, production scheduling, production planning, material flow, teamwork, problem-solving techniques, and management's role in creating quality environments. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 2012**.

GCM 3882 - Intermediate Packaging Production (3)

When Offered: Fall

This course presents intermediate-level concepts of flexographic technologies and technical processes applicable to the flexographic industry. Students enrolled in this course will learn design techniques specific to flexography, printing calculations, job assembly, proofing, print evaluation, and multiple spot color techniques. This will be achieved through project-based assignments that allow students to select anilox roll, substrates, inks, dies, and other printing materials. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 2222**.

GCM 3900 - Graphic Communications Internship I (3-6)

When Offered: On Demand

Field experience with commercial print, in-plant or digital media companies producing products from processes such as animation, digital printing, cross media publishing, prepress, flexography, gravure, offset lithography, screen printing, packaging, web page development, or finishing and fulfillment is integral to career preparation for the graphic communications industry.

Graded on an S/U basis.

Prerequisite: 16 hours of coursework in the major must be completed.

GCM 4112 - Technical Assistant (1)

When Offered: Fall; Spring

A supervised, meaningful, planned and evaluated laboratory assistant experience. Students enrolled in this course will act as instructional aides within various graphic arts and imaging technology courses.

Prerequisite: junior or senior standing.

GCM 4524 - Advanced Web Development for Graphic

Communications (3) When Offered: Spring

This course is a continuation of **GCM 3512**, Web Development for Graphic Communications. Emphasis will be placed on creating multimedia Web pages, interactive Web forms, and mobile Web sites. This course will also integrate several different programs allowing students to create effective and attractive websites. By the end of this course, students should be able to design advanced web sites that utilize complex interactivity. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 3512**.

GCM 4592 - Specialty Graphics

Printing (3) When Offered: On

Demand

Advanced laboratory practice in screen printing, wide format printing on multiple substrates that include foam core, vinyl, plastic and adhesives. Lecture one hour, laboratory four hours.

[Dual-listed with GCM 5592]. Dual-listed courses require senior standing; juniors may enroll with permission of the coordinator.

GCM 4722 - Package Prototyping Studio (3)

When Offered: On Demand

This is an advanced portfolio development studio course with emphasis on design projects in packaging and delivering professional oral presentations. Students will build on skills learned in previous courses to design complete packaging projects based on research, creativity, structural design, and prototyping. Lecture two hours, laboratory two hours.

Prerequisite: **GCM 4566** .

GCM 4900 - Graphic Communications Internship II (1-6)

When Offered: On Demand

GEN ED: Capstone Experience

A continuation of industry field experience with print or digital graphics media companies such as commercial printing, animation, prepress, flexography, gravure, offset lithography, screen printing, packaging, or finishing and fulfillment. This course satisfies the senior capstone requirement for the BS in Graphic Arts and Imaging Technology majors.

May be repeated for credit when content does not duplicate. Graded on an S/U

basis. Prerequisite: 30 hours of coursework in the major must be completed.

(Hours requirement for one credit hour is 160 hours, with 80 hours required for each additional.)

GU_FAA_STBE_2018_03

Add a new course TEC 4633/TEC 5633 – Photovoltaics II to the Undergraduate and Graduate Bulletins.

TEC 4633 - Photovoltaics II (3)

When offered: Fall; Spring

Battery-based photovoltaic (PV) systems are used in a wide variety of applications including off-grid homes, small stand-alone lighting systems, back-up power systems at remote telecommunications sites, village micro-grid systems, and PV-powered RVs and boats. This course focuses on components utilized in battery-based systems, including PV panels/arrays, batteries, charge controllers, generators, inverters, and inverterchargers; and examines how they are integrated and configured for different applications. This design-based course focuses on detailed system sizing calculations, equipment selection criteria, and strategies for all types of battery-based PV systems. Lecture two hours, laboratory two hours.

Prerequisites: TEC 3609

[Dual-listed with TEC 5633.] Dual-listed courses require senior standing.

TEC 5633 - Photovoltaics II (3)

When offered: Fall; Spring

Battery-based photovoltaic (PV) systems are used in a wide variety of applications including off-grid homes, small stand-alone lighting systems, back-up power systems at remote telecommunications sites, village micro-grid systems, and PV-powered RVs and boats. This course focuses on components utilized in battery-based systems, including PV panels/arrays, batteries, charge controllers, generators, inverters, and inverterchargers; and examines how

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

they are integrated and configured for different applications. This design-based course focuses on detailed system sizing calculations, equipment selection criteria, and strategies for all types of battery-based PV systems. Content mastery and applied practice at the graduate level is expected. Lecture two hours, laboratory two hours.

[Dual-listed with TEC 4633.]

GU_FAA_STBE_2018_04

Add a new course TEC 4614/TEC 5614 – EV Design to the Undergraduate and Graduate Bulletins.

TEC 4613 EV Design (3)

When offered: Fall; Spring

This course focuses on electric vehicle design and the function of all the systems within the vehicle. Topics will include current and historical electric vehicle design, electronics, electric vehicle propulsion technology, and electric vehicle safety. The class will use project based experiences as well as lecture style teaching. Engineering problem solving methods will be used to define a problem in a transportation system, develop a solution to the problem and fabricate a final product. Lecture two hours, laboratory two hours.

Prerequisites: TEC 2024, TEC 3604.

[Dual-listed with TEC 5613.] Dual-listed courses require senior standing.

TEC 5613 EV Design (3)

When offered: Fall; Spring

This course focuses on electric vehicle design and the function of all the systems within the vehicle. Topics will include current and historical electric vehicle design, electronics, electric vehicle propulsion technology, and electric vehicle safety. The class will use project based experiences as well as lecture style teaching. Engineering problem solving methods will be used to define a problem in a transportation system, develop a solution to the problem and fabricate a final product. Content mastery and applied practice at the graduate level is expected. Lecture two hours, laboratory two hours.

[Dual-listed with TEC 4613.]

GU_FAA_STBE_2018_05

Change the title of TEC 4700/TEC 5700 – Biofuels in Undergraduate and Graduate Bulletins.

TEC 4700 - Biofuels Technology (3)

When Offered: Fall; Spring

An examination of evolving biofuel technologies such as biodiesel, alcohol, cellulose products, and methane which are being developed to displace depleting fossil fuels (diesel,

gasoline, natural gas, and coal). This course will introduce students to the basic concepts, tools, techniques, and materials needed to assess, design, and construct biofuels technology systems. Coursework will include multimedia presentations, lectures, discussions, films, field trips, homework, guest-speakers, and laboratory activities. Topics include: internal combustion engine technology, biodiesel chemistry and physical properties, combined heat-power systems, materials compatibility, by-products, closed-loop designs, energy balance, life cycle assessment, ASTM specifications, fuel analysis, feedstocks, biofuels and agriculture, biofuels in developing countries, ethanol, cellulosic ethanol, biogas and landfill gas, and eco-industrial models. Lecture two hours, laboratory two hours.

Prerequisite: **TEC 2029** and **TEC 2601**.

[Dual-listed with TEC 5700.] Dual-listed courses require senior standing.

TEC 5700 - Biofuels Technology (3)

When Offered: Fall, Spring

An examination of evolving biofuel technologies such as biodiesel, alcohol, cellulose products, and methane which are being developed to displace depleting fossil fuels (diesel, gasoline, natural gas, and coal). This course will introduce students to the basic concepts, tools, techniques, and materials needed to assess, design, and construct biofuels technology systems. Coursework will include multimedia presentations, lectures, discussions, films, field trips, homework, guest-speakers, and laboratory activities. Topics include: internal combustion engine technology, biodiesel chemistry and physical properties, combined heat-power systems, materials compatibility, by-products, closed-loop designs, energy balance, life cycle assessment, ASTM specifications, fuel analysis, feedstocks, biofuels and agriculture, biofuels in developing countries, ethanol, cellulosic ethanol, biogas and landfill gas, and eco-industrial models. Content mastery and applied practice at the graduate level is expected.

Lecture two hours, laboratory two hours. [Dual-listed with TEC 4700.]

Proposed:

TEC 4700 - Bioenergy Technology (3)

When Offered: Fall; Spring

An examination of evolving bioenergy conversion technologies (anaerobic digestion, pyrolysis, biodiesel, alcohol) which are being developed to displace non-renewable fuels (diesel, gasoline, natural gas, and coal). This course will introduce students to the concepts, tools, techniques, and materials needed to assess, design, and construct bioenergy technology systems. Coursework will include multimedia presentations, lectures, discussions, films, field trips, homework, guest-speakers, and laboratory activities. Topics include: biogas and digester design, waste to energy, chemistry of biomass, C & N cycles, bioenergy feedstocks, pyrolysis products- biochar, py-oil, and syn-gas, biodiesel chemistry and physical properties, closed-loop designs, energy balance, life cycle assessment, fuel specifications and analysis, bioenergy and agriculture, and eco-industrial models. Lecture two hours, laboratory two hours.

Prerequisites: TEC 2029 and TEC 2601.

[Dual-listed with TEC 5700.] Dual-listed courses require senior standing.

TEC 5700 - Bioenergy Technology (3)

When Offered: Fall, Spring

An examination of evolving bioenergy conversion technologies (anaerobic digestion, pyrolysis, biodiesel, alcohol) which are being developed to displace non-renewable fuels (diesel, gasoline, natural gas, and coal). This course will introduce students to the concepts, tools, techniques, and materials needed to assess, design, and construct bioenergy technology systems. Coursework will include multimedia presentations, lectures, discussions, films, field trips, homework, guest-speakers, and laboratory activities. Topics include: biogas and digester design, waste to energy, chemistry of biomass, C & N cycles, bioenergy feedstocks, pyrolysis products- biochar, py-oil, and syn-gas, biodiesel chemistry and physical properties, closed-loop designs, energy balance, life cycle assessment, fuel specifications and analysis, bioenergy and agriculture, and eco-industrial models. Lecture two hours, laboratory two hours. Content mastery and applied practice at the graduate level is expected.

Lecture two hours, laboratory two hours. [Dual-listed with TEC 4700.]

GU_FAA_STBE_2018_06

Change the course description for TEC 4618/TEC 5618 – Sustainable Building Design and Construction in the Undergraduate and Graduate Bulletins.

TEC 4618 - Sustainable Building Design and Construction (3)

When Offered: Fall; Spring

This course introduces students to the concepts and best practices related to sustainable building design and construction. Course topics include green building certification programs, sustainable building design software, high performance construction practices, resource efficient material selection, sustainable site planning, water efficiency, indoor air quality, and passive solar design. The course also explores a variety of unconventional building techniques and building materials such as straw bale, adobe, cob, and geodesics. Other topics discussed include sustainable community design, low impact development, composting, recycling, and grey water systems.

Prerequisites: **TEC 3748**.

[Dual-listed with TEC 5618.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

TEC 5618 - Sustainable Building Design and Construction (3)

When Offered: Fall, Spring

This course introduces students to the concepts and best practices related to sustainable building design and construction. Course topics include green building certification programs, sustainable building design software, high performance construction practices, resource efficient material selection, sustainable site planning, water efficiency, indoor air quality, and passive solar design. The course also explores a variety of unconventional building techniques and building materials such as straw bale, adobe, cob, and geodesics. Other topics discussed include sustainable community design, low impact development, composting, recycling, and grey water systems.

[Dual-listed with TEC 4618.]

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

Proposed

TEC 4618 - Sustainable Building Design and Construction (3)

When Offered: Fall; Spring

This course emphasizes concepts and best practices related to sustainable building design and construction. Provides exposure to green building certification programs, high performance construction assemblies, resource efficient material selection, sustainable site planning, water efficiency, energy efficiency, indoor environmental quality, building commissioning, and facility operations. Reinforces application of passive design strategies and analysis of sustainable construction practices.

Prerequisites: [TEC 3748](#).

[Dual-listed with TEC 5618.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

TEC 5618 - Sustainable Building Design and Construction (3)

When Offered: Fall, Spring

This course emphasizes concepts and best practices related to sustainable building design and construction. Provides exposure to green building certification programs, high performance construction assemblies, resource efficient material selection, sustainable site planning, water efficiency, energy efficiency, indoor environmental quality, building commissioning, and facility operations. Reinforces application of passive design strategies and analysis of sustainable construction practices.

[Dual-listed with TEC 4618.]

GU_FAA_STBE_2018_07

Change the course description and prerequisites for TEC 4758/TEC 5758 – Planning and Scheduling in the Undergraduate and Graduate Bulletins.

Current

TEC 4758 - Planning and Scheduling (3)

When Offered: Fall; Spring

This course introduces students to the complex process of planning for construction projects. The course covers project planning and scheduling, determining and leveling project resources, estimating, budgeting, and cost control for construction projects. Special attention will be given to the use of specialized scheduling software for construction management activities.

Prerequisites: [TEC 3718](#), [TEC 3728](#), [TEC 3738](#), and [TEC 3748](#).

[Dual-listed with TEC 5758.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

TEC 5758 - Planning and Scheduling (3)

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

When Offered: Fall, Spring

This course introduces students to the complex process of planning for construction projects. The course covers project planning and scheduling, determining and leveling project resources, estimating, budgeting, and cost control for construction projects. Special attention will be given to the use of specialized scheduling software for construction management activities.

[Dual-listed with TEC 4758.]

Proposed

TEC 4758 - Planning and Scheduling (3)

When Offered: Fall; Spring

This course emphasizes the complex process of planning and scheduling for construction projects. The course covers project management basics, determining project resources, planning, scheduling, and cost control. Special attention will be given to the use of building information modeling (BIM) and specialized scheduling software for construction management activities. Lecture two hours, laboratory two hours.

Prerequisites: TEC 3718, TEC 3739, and TEC 3748.

[Dual-listed with TEC 5758.] Dual-listed courses require senior standing; juniors may enroll with permission of the department.

TEC 5758 - Planning and Scheduling (3)

When Offered: Fall, Spring

This course emphasizes the complex process of planning and scheduling for construction projects. The course covers project management basics, determining project resources, planning, scheduling, and cost control. Special attention will be given to the use of building information modeling (BIM) and specialized scheduling software for construction management activities. Lecture two hours, laboratory two hours.

[Dual-listed with TEC 4758.]

Add a dual-degree graduate program in Engineering Physics and Technology/Appropriate Technology.

2019-2020 Graduate Bulletin
Appalachian State University

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Dual Degrees: MS in Technology – Appropriate Technology Concentration, and MS in Engineering Physics – Systems and Laboratory Automation Concentration

Program Code: MS_599B and MS_113B CIP
Code: 15.0612 and 40.0801

Program of Study for the Master of Science in Technology and the Master of Science in Engineering Physics

Admission Requirements: Baccalaureate degree in physics or any science or related area such as mathematics, computer science, or engineering from an accredited college or university; [complete application to the Graduate School](#); official general GRE exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Location: On Campus

Course Requirements for the Dual Master of Science in Technology/Appropriate Technology Concentration and the Master of Science in Engineering Physics/Systems and Laboratory Automation Concentration

Total Required (Minimum 54-57 Hours)

MS in Technology Required Courses (18-21 Hours)

- TEC 5139 – Technology & Culture (3)

Choose One (3-6 Hours)

- TEC 5809 – Research and Development in Technical Areas (3)
- TEC 5999 – Thesis (3-6)

Concentration Courses (12 Hours)

12 hours of Appropriate Technology concentration approved courses

MS in Engineering Physics Required Courses (18 Hours)

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

- PHY 5330 – Digital Electronics (4)
- PHY 5400 – Professional Skills (1)
- PHY5730 – Analog Systems (4)
- PHY 5740 – Sensors and Transducers (4)

Electives (5 Hours)

5 hours of graduate electives with approval from Engineering Physics graduate program director

Shared Courses (18 Hours)

- PHY 5011 – Applied Physics Colloquium (0) (all students must enroll at least one time)
- PHY 5405 – Graduate Seminar (1)
- PHY 5450 – Programmable Logic Controllers (4)
- PHY 5735 – Microcontrollers (4)
- TEC 5670 – Seminar (0) (all students must enroll at least two times)
- TEC 5000 – Research in Technology (3)
- TEC 5900 – Internship (3)

Choose One (3 Hours)

- TEC 5129 – Project Management (3)
- TEC 5149 – Entrepreneurship in Technology and Science (3)

Other Requirements for the Dual MS in Technology and MS in Engineering Physics

- **Thesis:** Optional. For Engineering Physics, physics thesis hours would count as an approved elective
- **Proficiency:** Not required
- **Candidacy:** Required for thesis option; awarded upon approval of thesis committee and prospectus
- **Comprehensive:** Required in both programs; see the program directors for information on content and timing
- **Product of Learning:** Not required

G_CAS-FAA_P&A-STBE_2018_2

Add a dual-degree graduate program in Engineering Physics and Technology/Renewable Energy Engineering.

2019-2020 Graduate Bulletin
Appalachian State University

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Dual Degrees: MS in Technology – Renewable Energy Engineering Concentration, and MS in Engineering Physics – Systems and Laboratory Automation Concentration

Program Code: MS_599F and MS_113B
CIP Code: 15.0612 and 40.0801

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

Program of Study for the Master of Science in Technology and the Master of Science in Engineering Physics

Admission Requirements: Baccalaureate degree in physics or any science or related area such as mathematics, computer science, or engineering from an accredited college or university; [complete application to the Graduate School](#); official general GRE exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#). Meeting this condition does not guarantee admission.

Location: On Campus

Course Requirements for the Dual Master of Science in Technology/Renewable Energy Concentration and the Master of Science in Engineering Physics/Systems and Laboratory Automation Concentration

Total Required (Minimum 54-57 Hours)

MS in Technology Required Courses (18-21 Hours)

- TEC 5139 – Technology & Culture (3)
- TEC 5120 – Theory and Practice of Engineering Thermodynamics (3)
- TEC 5220 – Theory and Practice of Thermal Fluid Systems (3)

Choose One (3-6 Hours)

- TEC 5809 – Research and Development in Technical Areas (3)
- TEC 5999 – Thesis (3-6)

Electives (6 Hours)

Six hours of Appropriate Technology approved courses

MS in Engineering Physics Required Courses (18 Hours)

- PHY 5330 – Digital Electronics (4)
- PHY 5400 – Professional Skills (1)
- PHY5730 – Analog Systems (4)

Choose One (3 Hours)

- PHY 5550 – Directed Research in Applied Physics (1+1+1=3)
- PHY5900 – Internship (1+1+1 = 3)

Electives (6 Hours)

Six hours of graduate electives with approval from Engineering Physics graduate program director

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Shared Courses (18 Hours)

- PHY 5011 – Applied Physics Colloquium (0) (all students must enroll at least one time)
- PHY 5450 – Programmable Logic Controllers (4)
- PHY 5405 – Graduate Seminar (1)
- PHY 5740 – Sensors and Transducers (4)
- TEC 5670 – Seminar (0) (all students must enroll at least two times)
- TEC 5000 – Research in Technology (3)
- TEC 5620 – Renewable Energy Engineering (3)
- TEC 5270 – Advanced Computer Modeling of Renewable Energy (3)

Other Requirements for the Dual MS in Technology and MS in Engineering Physics

- **Thesis:** Optional. For Engineering Physics, physics thesis hours would count as an approved elective
- **Proficiency:** Not required
- **Candidacy:** Required for thesis option; awarded upon approval of thesis committee and prospectus
- **Comprehensive:** Required in both programs; see the program directors for information on content and timing
- **Product of Learning:** Not required

G_COE_EDL_2018_01

Delete EDL 7030 - Concepts and Constructs in Curriculum & Instruction (3) (On Demand)

G_COE_EDL_2018_02

Add EDL 7035 - Curriculum History, Theory and Practice in Educational Organizations (3) (On Demand)

EDL 7035 - Curriculum History, Theory and Practice in Educational Organizations (3) (On Demand)
Educational leaders will gain knowledge of curriculum history, curriculum ideologies, and contemporary philosophies. Modernist epistemologies impacting curriculum will be explored. Participants will learn strategies for facilitating curricular change.

G_COE_EDL_2018_03

Change EDL 7065 - Writing for the Professional Educator (3) (On-Demand) Update (in a limited manner) the description of an existing course in the doctoral program core.

1. a. current catalog copy

EDL 7065 - Writing for the Professional Educator (3) (On-Demand)

This course is designed for professional educators seeking to gain knowledge and skill in using writing effectively as a major component of leadership and management in educational settings. Topics include understanding the writing process in professional settings, tailoring messages for audience and purpose, using different forms of writing in the profession, applying technology tools for writing, and understanding the relationship between writing and speaking in developing communication effectiveness as a leader.

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

b. proposed catalog copy

EDL 7065 - Writing for the Professional Educator (3) (On-Demand)

Professional educators will gain knowledge and skill in using writing effectively as a major component of leadership and management in educational settings. Topics include understanding the writing process in professional settings, tailoring messages for audience and purpose, and using different forms of writing in the profession.

G_COE_EDL_04

Change the core requirements in all concentrations within the Doctoral Program to include the new course, EDL 7035 - Curriculum History, Theory and Practice in Educational Organizations rather than the deleted course, EDL 7030 - Concepts and Constructs in Curriculum & Instruction.

Course Requirements for the Doctor of Education in Educational Leadership

Total Required (Minimum 60 Hours)

Required Courses (36 Hours)

- EDL 7011 - Multi-Disciplinary Seminar on Emerging Issues I (3)
 - EDL 7012 - Multi-Disciplinary Seminar on Emerging Issues II (3)
 - EDL 7020 - Organizational and Systems Theory (3)
 - EDL 7025 - Leadership in Organizations (3)
 - EDL 7035 – Curriculum History, Theory and Practice in Educational Organizations (3)
 - EDL 7040 - Educational Organizations and Technology (3)
 - EDL 7065 - Writing for the Professional Educator (3)
 - EDL 7160 - Qualitative Research Methods (3)
 - EDL 7165 - Applied Quantitative Methods in Education I (3)
 - One Elective approved by the Director of the Doctoral Program
- Select Two of the Courses Below With Advice and Approval of an Advisor
- EDL 7175 - Applied Quantitative Methods in Education II (3)
 - EDL 7180 - Advanced Qualitative Research in Education (3)
 - EDL 7530-7549 - Selected Topics (1-4) (3)

Dissertation (6 Hours)

MOTION 10: Chairperson Hoepfl recommended this group be voted on together. There was a motion from the Curriculum Subcommittee to approve the proposal. A vote was taken. **Motion passed.**

G_COE_CI_2018_39

Change name of CI 5050 from Supervision of Instruction to Cultivating, Supporting, and Sustaining Excellence in Teaching

CI 5050 Cultivating, Supporting, and Sustaining Excellence in Teaching

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

(3)

When Offered: Spring

A study of the nature and function of supervision, recent trends, teacher involvement in policy formation, the organization and techniques used in supervision.

G_COE_CI_2018_40

Change name of CI 5055 from Connecting Learners and Subject Matter to Designing Student-Centered Curriculum and Instruction.

1. a. current catalog copy

CI5055 Connecting Learners and Subject Matter (3)

When Offered: Fall, Spring

This course connects the examination of curriculum foundations and models of the school learner and educational goals with and intense study of research-based, exemplary instructional strategies focused on learning and achievement. Primary focus on: 1) organizing, implementing, and evaluating school curriculum; 2) implementing, reflecting on, and evaluating instructional planning; and 3) integrating technology for meaningful learning.

b. proposed catalog copy

CI 5055 Designing Student-Centered Curriculum and Instruction (3)

When Offered: On-Demand

This course connects the examination of curriculum foundations and models of the school learner and educational goals with and intense study of research-based, exemplary instructional strategies focused on learning and achievement. Primary focus on: 1) organizing, implementing, and evaluating school curriculum; 2) implementing, reflecting on, and evaluating instructional planning; and 3) integrating technology for meaningful learning.

G_COE_CI_2018_41

Change description of CI 5581 Advanced Curriculum Design

1. a. List the current catalog copy (attach separate sheet if more space needed.)

CI 5581 Advanced Curriculum Design (3)

When Offered: On-Demand

The physiological and psychological basis of learning. Curriculum development for various exceptionalities and the rationale and development to meet their needs.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

- b. List the proposed catalog copy (attach separate sheet if more space needed.)

CI 5581 Advanced Curriculum
Design (3)

When Offered: On-Demand

In this course, students will apply knowledge and skills related to curriculum theory, models and frameworks, policy, and best practice to examine, critique, and respond to contemporary curriculum and instruction leadership challenges.

G_COE_CI_2018_43

We are requesting the addition of a 12-hour Graduate Certificate program titled "Teaching Emergent Bilingual Populations in Content Areas."

Course Requirements for the Graduate Certificate in Teaching Emergent Bilingual Populations in Content Areas
Total Required (Minimum 12 hours)
Required Courses (12 hours)
<ul style="list-style-type: none">• CI 5310: New Media and Emerging Literacies• CI 5320: Teaching Mathematics to Emergent Bilinguals Learners• CI 5330: Teaching Emergent Bilinguals in Science• CI 5340: Culturally Sustaining Pedagogies for Emergent Bilingual Learners

G_RCOE_CI_2018_44

Add course, CI 5320: Teaching Mathematics to Emergent Bilingual Learners.

CI 5320: Teaching Mathematics to Emergent Bilinguals Learners (3) When offered:

Summer

The purpose of this course is to prepare preservice and inservice teachers, and other teaching professionals, to teach mathematics to students learning English as an additional language, as well as children who are multilingual, immigrants, or refugees. The course is designed to prepare teachers to teach K-8 students with linguistically and culturally diverse backgrounds. The term emergent bilingual (EB) is used broadly to incorporate children who are formally identified as English learners along with children who can speak and/or comprehend more than one language. The course will help teachers understand the needs of emergent bilingual students, learn to use students' language and culture as a resource in mathematics classrooms, and implement research-based instructional strategies that are effective in teaching mathematics to these learners.

G_RCOE_CI_2018_45

Add course: CI: 5330: Teaching Emergent Bilinguals in Science.

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

CI 5330: Teaching Emergent Bilinguals in Science (3) When offered:

Spring

Proposed description for catalogue:

This course is designed to increase practitioners' knowledge of the academic language demands of science learning in grades K-8. Practitioners will analyze science texts in order to learn about scientific genres and discourse structures. The course will consider research-based approaches supported by theory and practice related to the intersections between science and language learning. The ultimate goal of the course is for practitioners to develop curriculum that focuses on the development of science academic language with emergent bilingual students.

G_COE_CI_2018_46

Add course, CI 5340: Culturally Sustaining Pedagogies for Emergent Bilingual Learners.

CI 5340: Culturally Sustaining Pedagogies (3) When offered: Fall

Proposed description for catalogue:

The purpose of this course is to prepare educators to recognize, value, and build upon students' *funds of knowledge*. Using culturally sustaining pedagogy as a guiding framework, the course will introduce participants to theories, research, and practices that foster linguistic and cultural maintenance as a way of promoting academic success for all students. Participants will examine and critique schooling practices that position minoritized students from deficit perspectives, and will work alongside students, families, schools and/or community organizations to develop culturally sustaining curriculum projects that build on students' funds of knowledge. *Fieldwork required.*

G_COE_RESE_2018_1

476B: Special Education - Emotional/Behavioral Disorders Concentration, MA

1. Change the Special Education - Emotional/Behavioral Disorders Concentration, MA -- Change name to Special Education, MA and POS.
2. Change admission requirements to reflect alternative admission criteria.
3. Change requirement for Product of Learning.

Current Catalog Copy

Special Education - Emotional/Behavioral Disorders Concentration, MA

Program

Code:

MA_476B

CIP Code:

13.1001

Program of Study for the Master of Arts in Special Education

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Advanced Licensure: Requirements for this concentration were designed, and have been approved by the appropriate bodies at the state level, to meet the advanced competencies as mandated in the North Carolina Excellent Schools Act for Master-level (M-level) teacher education programs ONLY for students with A-level license from North Carolina or equivalent. Graduates seeking M-level license must have A-level license at the time of application for M-level license.

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete the application to the Graduate School](#); official general GRE or MAT exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#).

Meeting this condition does not guarantee admission.

Location: On Campus and Off Campus; Off-Campus cohorts begin periodically, and follow a part-time extended format.

Course Requirements for the Master of Arts in Special Education

Total Required (Minimum 36 Hours)

Required Courses (12 Hours)

[R E 5525 - Product of Learning \(1-3\)](#) (3) OR

[SPE 5525 - Product of Learning \(1-3\)](#) (3)

[SPE 5584 - Special Education Law and Leadership](#) (3)

[SPE 5610 - Classroom Management for Effective Instruction](#) (3) Choose One From the Following Research Courses

[SPE 5030 - Research Informing Practice in](#)

[Special Education](#) (3) [R E 5040 - Teacher as Researcher](#) (3)

[SPE 5040 - Teacher as Researcher](#) (3)

Concentration Requirements (6 Hours)

[SPE 5210 - Psychoeducational Approaches to Emotional/Behavioral Disorders](#) (3) [SPE 5646 - Advanced Studies in Emotional and Behavioral Disorders](#) (3)

Electives (18 Hours)

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Up to 9 elective hours may be chosen in consultation with the advisor from related areas such as Reading, Curriculum and Instruction, Psychology, Communication Sciences & Disorders, and Child Development.

Recommended Courses:

[C I 5045 - Advanced Topics in Diversity \(3\)](#)

or

[SPE 5045 - Advanced Topics in Diversity \(3\)](#)

[R E 5010 - Literacy Instruction and Assessment for Students with Autism Spectrum Disorders \(3\)](#) [SPE 5120 - Effective Educational Practices for Students with Autism Spectrum Disorders \(3\)](#)

[SPE 5130 - Autism Spectrum Disorders:](#)

[Contemporary Issues \(3\)](#) [SPE 5140 - Social](#)

[Communication in Autism Spectrum Disorders \(3\)](#)

[SPE 5205 - Inclusion \(3\)](#)

[SPE 5595 - Individual Differences \(3\)](#)

[SPE 5630 - Collaboration and Advocacy \(3\)](#)

[SPE 5640 - Educational and Career Planning \(3\)](#)

Other Requirements for the MA in Special Education

Thesis: Not

required

Proficiency:

Not required

Candidacy:

Not required

Comprehensiv

e: Not required

Product of Learning: Professional Portfolio

Proposed Catalog Copy

Special Education, MA

Program

Code:

MA_476

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

A CIP

Code:

13.1001

Program of Study for the Master of Arts in Special Education

Advanced Licensure: Requirements for this concentration were designed, and have been approved by the appropriate bodies at the state level, to meet the advanced competencies as mandated in the North Carolina Excellent Schools Act for Master-level (M- level) teacher education programs ONLY for students with A-level license from North Carolina or equivalent. Graduates seeking M-level license must have **A-level** license at the time of application for M-level license.

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete the application to the Graduate School](#); official general GRE or MAT exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#).

Meeting this condition does not guarantee admission.

Location: On Campus and Off Campus; Off-Campus cohorts begin periodically, and follow a part-time extended format.

Course Requirements for the Master of Arts in Special Education

Total Required (Minimum 36 Hours)

Required Courses (21 Hours)

RE/SPE 5525 - Product of Learning (3)

[SPE 5584 - Special Education Law and Leadership \(3\)](#)

[SPE 5610 - Classroom Management for Effective Instruction \(3\)](#)

Choose One From the Following Research Courses (3 Hours)

[SPE 5030 - Research Informing Practice in](#)

[Special Education \(3\)](#) **[R E 5040 - Teacher as](#)**

[Researcher \(3\)](#)

[SPE 5040 - Teacher as Researcher \(3\)](#)

Choose one course from each disability area (9 Hours)

Emotional/Behavioral Disorders:

[SPE 5210 - Psychoeducational Approaches to Emotional/Behavioral Disorders \(3\)](#)

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

SPE 5646 - Advanced Studies in Emotional and Behavioral Disorders (3)

Learning Disabilities:

SPE 5220 – Characteristics, Assessment, and Identification of Individuals with Specific Learning Disabilities (3)

SPE 5636 – Advanced Studies in Specific Learning Disabilities (3)

Intellectual Disabilities

SPE 5230 – Assessment and Instruction of Individuals with Intellectual Disabilities (3)

SPE 5626 – Advanced Studies in Intellectual Disabilities (3)

Electives (15 Hours)

Elective hours must be chosen in consultation with the advisor from related areas such as Reading, Curriculum and Instruction, Psychology, Communication Sciences & Disorders, and Child Development.

Recommended Courses:

SPE/CI 5045 - Advanced Topics in Diversity (3)

RE 5010 - Literacy Instruction and Assessment for Students with Autism Spectrum Disorders (3)

SPE 5120 - Effective Educational Practices for Students with Autism (3)

SPE 5130 - Autism: Contemporary Issues (3)

SPE 5140 - Social Communication in Autism (3)

SPE 5205 - Inclusion (3)

SPE 5595 - Individual Differences (3)

SPE 5630 - Collaboration and Advocacy (3)

SPE 5640 - Transition Planning and Assessment: Pathways to Independence for Students with Disabilities (3)

Other Requirements for the MA in Special Education

Thesis: Not required

Proficiency: Not required

Candidacy: Not required

Comprehensive: Not required

Product of Learning: RE/SPE 5525 required

G_COE_RESE_2018_2

476B: Special Education - Emotional/Behavioral Disorders Concentration, MA

1. Delete the Special Education - Emotional/Behavioral Disorders Concentration, MA.

G_COE_RESE_2018_3

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

476C Special Education - Intellectual Disabilities Concentration, MA

Delete 476C: Special Education – Intellectual Disabilities Concentration, MA.

G_COE_RESE_2018_4

Delete 476D: Special Education - Learning Disabilities Concentration, MA.

G_COE_RESE_2018_5

SPE 5646 - Advanced Studies in Emotional and Behavioral Disorders (3)

1. Update "When Offered" to On Demand

2. Change/Update description.

Proposed Copy

SPE 5646 - Advanced Studies in Emotional and Behavioral Disorders (3)

When Offered: On Demand

An advanced course designed to examine educational literature concerning teaching students with emotional and behavioral disorders. Relationships between theory, philosophy, research findings, and current practice are analyzed critically.

G_COE_RESE_2018_6

SPE 5640 - Educational and Career Planning (3) 1. Change/Update course title SPE 5640 - Educational and Career Planning (3) to SPE 5640 - Transition Planning and Assessment: Pathways to Independence for Students with Disabilities (3).

SPE 5640 - Transition Planning and Assessment: Pathways to Independence for Students with Disabilities (3)

When Offered: On Demand

In this course, current research and literature related to secondary special education and transition issues are identified, reviewed and analyzed. Longitudinal planning is explored through topics including drop-out prevention, career development theory, person-centered transition planning, assessment, and best practices.

G_COE_RESE_2018_7

SPE 5230 - Assessment and Instruction of Individuals with Intellectual Disabilities (3) 1. Update "When Offered" to Fall, Spring 2. Edit the description for errors.

SPE 5230 - Assessment and Instruction of Individuals with Intellectual Disabilities (3)

When Offered: Fall, Spring

This course identifies, reviews, and analyzes current research and literature related to the study of intellectual disabilities. The course also provides in-depth study in ecological assessment and individualized curriculum development for individuals with intellectual disabilities, and it also provides in-depth study and examination of the social construction of intellectual disabilities in society.

G_COE_RESE_2018_8

SPE 5620 - Managing Curriculum for Mentally Retarded Students in Special and Regular Settings (3) . Change course name SPE 5620 - Managing Curriculum for Mentally Retarded Students in Special and Regular Settings (3) to SPE 5620 - Managing Curriculum for Students with Intellectual Disabilities in

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Special and Regular Settings (3) 2. Update course description.

SPE 5620 - Managing Curriculum for Students with Intellectual Disabilities in Special and Regular Settings

(3)

When Offered: On Demand

The in-depth study of curriculum design and management for students with mild and moderate intellectual disabilities in special and regular classroom settings, from preschool through secondary levels.

G_COE_RESE_2018_9

**SPE 5636 - Advanced Studies in Specific Learning Disabilities (3) 1. Update "When Offered" to Fall, Spring
Change/Update description.**

SPE 5636 - Advanced Studies in Specific Learning Disabilities (3)

When Offered: Fall, Spring

This course is designed to identify, review and analyze current research and literature related to the study of learning disabilities. This course provides in-depth study in assessment, curriculum, and the planning, implementation, and evaluation of instruction for students with learning disabilities.

G_COE_RESE_2018_10

SPE 5140 - Social Communication in Autism Spectrum Disorders (3) 1. Change course name SPE 5140 Social Communication in Autism Spectrum Disorders (3) to SPE 5140 - Social Communication in Autism (3) Update course description.

SPE 5140 - Social Communication in Autism (3)

When Offered: On Demand,

The purpose of this course is to develop familiarity with a variety of topics related to Autism including issues related to diagnosis, etiologies, intervention, theories, and characteristics of Autism across the lifespan. This course has been designed to ensure that students demonstrate required knowledge and skills acquisitions necessary to deliver effective instruction for students with autism.

G_COE_RESE_2018_11

SPE 5120 Effective Educational Practices for Students with Autism Spectrum Disorders 1. Change course name from SPE 5120 Effective Educational Practices for Students with Autism Spectrum Disorders (3) to SPE 5120 Effective Educational Practices for Students with Autism (3) 2. Update course description.

SPE 5120 - Effective Educational Practices for Students with Autism (3)

When Offered: Fall, Spring

In this course, current research and literature related to autism and research based practices in classrooms, homes, community settings are identified, reviewed and analyzed. Other topics include use of technology and current recommended instructional practices.

G_COE_RESE_2018_12

Change course name SPE 5130 - Autism Spectrum Disorders: Contemporary Issues (3) to SPE 5130 – Autism: Contemporary Issues (3) 2. Update course description - see below 3. Change when offered to On Demand.

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

SPE 5130 - Autism: Contemporary Issues (3)

When Offered: On Demand

Issues concerning the prevalence, assessment, and identification of students with autism are identified reviewed and analyzed. Litigation and laws related to educational issues are explored.

G_COE_RESE_2018_13

R E 5010 - Literacy Instruction and Assessment for Students with Autism Spectrum Disorders 1.

Change course name R E 5010 - Literacy Instruction and Assessment for Students with Autism Spectrum Disorders (3) to R E 5010 - Literacy Instruction and Assessment for Students with Autism (3)
2. Change course description to reflect name change.

R E 5010 - Literacy Instruction and Assessment for Students with Autism (3)

When Offered: Fall, Spring

This course will address issues, strategies, technologies, materials and methods of successful literacy instruction and assessment of students with autism. Inclusive and self-contained settings will be addressed through examples and experiences with students on the autism spectrum.

G_COE_RESE_2018_14

Reading Education - Classroom/Clinical Concentration MA_477E 1. Change language and remove

"specific equivalent graduate courses" for Social and Philosophical Foundations Education Requirement to "equivalent graduate course approved by the advisor." 2. Deleted the requirement for Admission to Candidacy. 3. Deleted the requirement for Comprehensive Exam.

CURRENT Catalog Copy:

Program of Study for the Master of Arts in Reading Education, General With A Concentration in Classroom/Clinical

Advanced Licensure: Requirements for this concentration were designed, and have been approved by the appropriate bodies at the state level, to meet the advanced competencies as mandated in the North Carolina Excellent Schools Act for Master-level (M-level) teacher education programs ONLY for students with A-level license from North Carolina or equivalent. Graduates seeking M- level license must have A-level license at the time of application for M-level license.

Admission Requirements: Baccalaureate degree from an accredited college or university; [complete application to the Graduate School](#); official general GRE or MAT exam scores.

To be considered for admission, applicants must meet the [criteria for admission to the Graduate School](#). In addition, the program faculty will give preference to applicants who meet or exceed the following: GPA of 3.0 cumulative or in the last 60 hours of undergraduate work and official GRE scores or official MAT scores. Meeting this condition does not guarantee admission.

Location: On Campus and Off Campus; Off-Campus applications are accepted on a rolling basis; please contact the Office of Distance Education for locations ([distance.appstate.edu](#)).

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.
Classroom/Clinical

Total Required (Minimum 36 W/ Thesis or 39 Hours)

Required Courses (6 Hours)

Research Course (3 Hours)

Choose one:

- [C I 5040 - Teacher as Researcher \(3\)](#)
- [R E 5040 - Teacher as Researcher \(3\)](#)
- [RES 5040 - Teacher as Researcher \(3\)](#)
- [SPE 5040 - Teacher as Researcher \(3\)](#)
- [RES 5000 - Research Methods \(3\)](#)
- [RES 5560 - Classroom Assessment \(3\)](#)
- [SPE 5030 - Research Informing Practice in Special Education \(3\)](#)

Social/Anthropological/Philosophical Foundations Course (3 Hours)

Courses currently acceptable for “FDN equivalent” courses are: [R E 5111](#), [R E 5120](#), [R E 5200](#), [R E 5210](#), [R E 6575](#); choose the appropriate course with approval of the program director.

Choose one:

- [FDN 5840 - Social and Philosophical Foundations of Education \(3\)](#)
- Equivalent graduate course approved by the advisor (3)

Concentration Requirements (21 Hours)

- [R E 5100 - Teaching Beginning Readers and Writers \(3\)](#)
- [R E 5130 - Teaching the Language Arts \(3\)](#)
- [R E 5140 - Advanced Study of Children's Literature \(3\)](#)
- [R E 5715 - Reading Assessment and Correction \(3\)](#)
- [R E 5725 - Practicum in the Clinical Teaching of Reading \(3\)](#)
- [R E 5730 - Reading and Writing Instruction for Intermediate and Advanced Learners \(3\)](#)
- [R E 5740 - Seminar in the Clinical Teaching of Reading \(3\)](#) Thesis

Option (9-12 Hours)

Choose one:

With Thesis (9 Hours)

- [R E 5999 - Thesis \(1-4\)](#)
- 6 hours of graduate electives chosen with the graduate advisor’s approval, see the Reading Education, Classroom/Clinical concentration check sheet for a list of suggested electives

Without Thesis (12 Hours)

- [R E 5525 - Product of Learning \(1-3\)](#)
- 9 hours of graduate electives chosen with the graduate advisor’s approval, see the Reading Education, Classroom/Clinical concentration check sheet for a list of suggested electives

Other Requirements for the MA in Reading Education, General (Classroom/Clinical Concentration)

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

- **Thesis:** Optional
- **Proficiency:** None required
- **Candidacy:** Required; see the program director for specific timeline and requirements for admission to candidacy
- **Comprehensive:** Required
- **Product of Learning:** [R E 5525](#) is required unless the thesis option is selected.

PROPOSED Catalog Copy :

Advanced Licensure: Requirements for this concentration were designed, and have been approved by the appropriate bodies at the state level, to meet the advanced competencies as mandated in the North Carolina Excellent Schools Act for Master-level (M-level) teacher education programs ONLY for students with A-level license from North Carolina or equivalent. Graduates seeking M-level license must have A-level license at the time of application for M-level license.

Admission Requirements: Baccalaureate degree from an accredited college or university; **complete application to the Graduate School**; official general GRE or MAT exam scores.

Location: On Campus and Off Campus; Off-Campus applications are accepted on a rolling basis; please contact the Office of Distance Education for locations (distance.appstate.edu).

Course Requirements for the Master of Arts in Reading Education, General with a Concentration in Classroom/Clinical

Total Required (Minimum 36 W/ Thesis or 39 Hours)

Required Courses (6 Hours)

Research Course (3 Hours)

Choose one:

[C I 5040 - Teacher as Researcher \(3\)](#)

[R E 5040 - Teacher as Researcher \(3\)](#)

[RES 5040 - Teacher as Researcher \(3\)](#)

[SPE 5040 - Teacher as Researcher \(3\)](#)

[RES 5000 - Research Methods \(3\)](#)

[RES 5560 - Classroom Assessment \(3\)](#)

[SPE 5030 - Research Informing Practice in Special Education \(3\)](#)

Social/Anthropological/Philosophical Foundations Course (3 Hours)

[FDN 5840 - Social and Philosophical Foundations of Education \(3\)](#)

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

Or equivalent graduate course approved by the advisor (3) **Concentration**

Requirements (21 Hours)

[R E 5100 - Teaching Beginning Readers and Writers \(3\)](#)

[R E 5130 - Teaching the Language Arts \(3\)](#)

[R E 5140 - Advanced Study of Children's Literature \(3\)](#)

[R E 5715 - Reading Assessment and Correction \(3\)](#)

[R E 5725 - Practicum in the Clinical Teaching of Reading \(3\)](#)

[R E 5730 - Reading and Writing Instruction for Intermediate and Advanced Learners \(3\)](#)

[R E 5740 - Seminar in the Clinical Teaching of Reading](#)

(3) Thesis Option (9-12 Hours)

Choose one:

With Thesis (9 Hours)

[R E 5999 - Thesis \(1-4\)](#)

6 hours of graduate electives chosen with the graduate advisor's approval.

Without Thesis (12 Hours)

[R E 5525 - Product of Learning \(1-3\)](#)

9 hours of graduate electives chosen with the graduate advisor's approval.

Other Requirements for the MA in Reading Education, General (Classroom/Clinical Concentration)

Thesis: Optional

Proficiency: None required

Candidacy: None required

Comprehensive: None required

Product of Learning: [R E 5525](#) is required unless the thesis option is selected.

G_COB_MSADA_2018_02

Create a new course **MBA5650 Web Analytics, Data Privacy and Security (3 hours)**.

MBA5650 - Web Analytics, Data Privacy and Security (3)

When Offered: Fall

This course covers Internet technologies and tools that allow for the collection of consumer data including social networks, perform clickstream analysis, and conduct search engine optimization. In

Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

in addition, concepts surrounding the privacy of data will be introduced, as well as how to effectively manage the security of information through log and event investigations. Other topics include but not limited to the ethical/moral implications that have emerged from areas like data profiling and relevant issues with data governance as it pertains to compliance and law.

Prerequisites: Admission to MSADA, MBA, or Business Analytics Certificate Program; or Approval of MSADA Program Director

G_COB_MSADA_2018_03

Modify the MSADA Program of study (core only):

1. Remove: CIS5830 Security, Privacy and Ethical Issues in Analytics; and, MBA5230 Fundamentals of Business Analytics
2. Add MBA5660 Web Analytics, Data Privacy and Security;
3. Add ECO5720 Applied Econometrics;
4. Add CS5245 Data Programming

Program Code:

MS_304 CIP

Code: 11.0802

Program of Study for the Master of Science in Applied Data Analytics

Admission Requirements: Baccalaureate degree from an accredited college or university; complete application to the Graduate School; official general GMAT or GRE exam scores; evidence of knowledge in statistics, ~~financial accounting, economics, and domain specific knowledge for the concentration corporate finance, marketing, and organizational behavior~~ through course work, work experience or completion of the accelerated prerequisite program before taking graduate course work in those subjects. To be considered for admission, applicants must meet the criteria for admission to the Graduate School. Meeting these criteria does not guarantee acceptance.

Location: On Campus

Course Requirements for the Master of Science in Applied Data Analytics

Total Required (Minimum 36 Hours)

Required Courses (27 Hours)

Core Courses (21 Hours)

CIS 5450 - Project Management and Visualization (3) **CIS 5630 - Data Management (3)**

~~CIS 5830 - Security, Privacy and Ethical Issues in Analytics (3)~~ **ECO 5720 - Applied Econometrics (3)**

CIS 5750 - Web Analytics (3)

~~CIS 5830 - Security, Privacy and Ethical Issues in Analytics (3)~~ **ECO 5720 - Applied Econometrics (3)**

ECO 5740 - Forecasting and Time Series Models (3)

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Provost approved 3/28/19

Effective Fall 2019 unless otherwise noted.

[MBA 5200 - Problem Analysis and Quantitative](#)

[Methods \(3\)](#) ~~MBA 5230 – Fundamentals of Business~~

[Analytics \(3\)](#)

[CS 5245 – Data Programming \(3\)](#)

[MBA 5820 - Executive Skills \(0\)](#) Full-time and part-time students must enroll for three semesters; dual-degree students must enroll for two semesters.

Thesis or Non-Thesis Option (6 Hours)

[CIS 5860 - Applied Analytics Project \(1-6\)](#)(6)

[MBA 5999 - Thesis \(1-6\)](#)(6)

NOTE: The above revision applies to core and hence to all concentrations. Based on recommendation from Graduate School, the concentration information is not included here

G_COB_2019_01

Correct the MS in Applied Data Analytics listing in the graduate bulletin under the umbrella of the Department of Computer Information Systems & Supply Chain Management to the college of business level, similar to the Master of Business Administration; it is not, nor has it ever been, housed in the CIS & SCM department.

~~Department of Computer Information Systems and Supply Chain Management~~ **Master of Science in Applied Data Analytics Program**

[Go to information for this department.](#) (revise link to new page)

Programs

Master of Science

- [Applied Data Analytics - Healthcare Concentration, MS](#)
- [Applied Data Analytics - Interdisciplinary Analytics Concentration, MS](#)
- [Applied Data Analytics - Marketing Concentration, MS](#)
- [Applied Data Analytics - Supply Chain Analytics Concentration, MS](#)
- [Applied Data Analytics - Sustainability Analytics Concentration, MS](#)

Department of Computer Information Systems

[Go to information for this department.](#) (revise link to new page)

Graduate Certificate

- [Business Analytics Graduate Certificate](#)

Courses

Computer Information Systems

- [CIS 5100 - Management Information System \(3\)](#)
- [CIS 5250 - Issues in E-Business \(3\)](#)
- [CIS 5280 - Systems Management \(3\)](#)
- [CIS 5300 - Managing Information Technology \(3\)](#)

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Effective Fall 2019 unless otherwise noted.

- [CIS 5350 - Advanced Database Concepts \(3\)](#)
- [CIS 5450 - Project Management and Visualization \(3\)](#)
- [CIS 5500 - Independent Study \(1-4\)](#)
- [CIS 5530-5549 - Selected Topics \(1-4\)](#)
- [CIS 5580 - Data Communications and Networking \(3\)](#)
- [CIS 5585 - Advanced Data Communications and Networking \(4\)](#)
- [CIS 5610 - Global Information Technologies \(3\)](#)
- [CIS 5620 - IS Strategy, Policy, and Governance \(3\)](#)
- [CIS 5630 - Data Management \(3\)](#)
- [CIS 5680 - Developing Software Solutions \(3\)](#)
- [CIS 5710 - e-Business Systems \(3\)](#)
- [CIS 5720 - Advanced Internet Technologies \(3\)](#)
- [CIS 5750 - Web Analytics \(3\)](#)
- [CIS 5830 - Security, Privacy and Ethical Issues in Analytics \(3\)](#)

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Effective Fall 2019 unless otherwise noted.

- [CIS 5840 - Advanced Security \(3\)](#)
- [CIS 5860 - Applied Analytics Project \(1-6\)](#)
- [CIS 5989 - Graduate Research \(1-9\)](#)

Production Operations Management

- [POM 5500 - Independent Study \(1-4\)](#)
- [POM 5530-5549 - Selected Topics \(1-4\)](#)

Supply Chain Management

- [SCM 5500 - Independent Study \(1-4\)](#)
- [SCM 5530-5549 - Selected Topics \(1-4\)](#)
- [SCM 5900 - Internship \(1-6\)](#)
- [SCM 5989 - Graduate Research \(1-9\)](#)

Department of Economics

[Go to information for this department.](#)

Courses

Economics

- [ECO 5150 - Business Economics \(3\)](#)
- [ECO 5500 - Independent Study \(1-4\)](#)
- [ECO 5530-5549 - Selected Topics \(1-4\)](#)
- [ECO 5621 - Environmental Economics and Policy \(3\)](#)
- [ECO 5640 - International Macroeconomics \(3\)](#)
- [ECO 5660 - Benefit-Cost Analysis \(3\)](#)
- [ECO 5740 - Forecasting and Time Series Models \(3\)](#)
- [ECO 5989 - Graduate Research \(1-9\)](#)

Department of Finance, Banking, and Insurance

[Go to information for this department.](#)

Courses

Finance, Banking & Insurance

- [FIN 5020 - Applied Financial Analysis \(3\)](#)
- [FIN 5500 - Independent Study \(1-4\)](#)
- [FIN 5530-5549 - Selected Topics \(1-4\)](#)
- [FIN 5989 - Graduate Research \(1-9\)](#)

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

Department of Management

Provost approved 3/28/19
Effective Fall 2019 unless otherwise noted.

CoCourses

Management

- [MGT 5040 - Employment Law \(3\)](#)
- [MGT 5045 - Introduction to Human Resources and Professional Issues \(3\)](#)
- [MGT 5055 - Leadership, Groups, and Teams \(3\)](#)
- [MGT 5065 - Organizational Development \(3\)](#)
- [MGT 5150 - Behavioral Applications in Business \(3\)](#)
- [MGT 5160 - Strategic Human Resource Management \(3\)](#)
- [MGT 5450 - New Venture Management \(3\)](#)
- [MGT 5500 - Independent Study \(1-4\)](#)
- [MGT 5530-5549 - Selected Topics \(1-4\)](#)
- [MGT 5570 - Compensation \(3\)](#)
- [MGT 5620 - Managing the Global Workforce \(3\)](#)
- [MGT 5630 - Employee and Labor Relations \(3\)](#)
- [MGT 5660 - Staffing \(3\)](#)
- [MGT 5661 - Performance Management \(3\)](#)
- [MGT 5671 - Training and Development \(3\)](#)
- [MGT 5672 - Advanced Organizational Psychology \(3\)](#)
- [MGT 5700 - Contemporary Issues in Management and Leadership \(3\)](#)
- [MGT 5730 - Small Business Institute \(3\)](#)
- [MGT 5770 - Business Ethics \(3\)](#)
- [MGT 5900 - Internship \(6\)](#)
- [MGT 5989 - Graduate Research \(1-9\)](#)

Department of Marketing

[Go to information for this department.](#)

CoCourses

Marketing

- [MKT 5045 - Marketing Research and Information Systems \(3\)](#)
- [MKT 5050 - Marketing Analytics \(3\)](#)
- [MKT 5500 - Independent Study \(1-4\)](#)
- [MKT 5530-5549 - Selected Topics \(1-4\)](#)
- [MKT 5550 - International Marketing \(3\)](#)

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Effective Fall 2019 unless otherwise noted.

- [MKT 5610 - Consumer Behavior \(3\)](#)
- [MKT 5989 - Graduate Research \(1-9\)](#)