

UNIVERSITY CURRICULUM COMMITTEE AGENDA
2:00 p.m., Friday, December 9, 2016
106 Administration, Provost Conference Room

Note: If you are unable to attend or will be sending a substitute, please notify [Carole Makela](mailto:Carole.Makela@colostate.edu) (1-5141) or [Curriculum Catalog@colostate.edu](mailto:Curriculum_Catalog@colostate.edu) (1-2429) prior to the meeting.

MINUTES – Minutes of December 2, 2016

ANNOUNCEMENTS

1. Note that **“WARNING: THIS FORM MAY TIME OUT. PLEASE SAVE YOUR WORK OFTEN”** has been added to the CIM course and program proposal forms to lessen calls on ‘lost work’.
2. Keep an eye out for CIM course and program proposals that are inactive and/or unintentional (started, but could not find when looking to complete, so started another one), so that they can be ‘shredded’. When a proposal is shredded, a pdf copy will be sent to the department, if they want one and if there is information that may be of use in the future.
3. We are working on ideas to better provide alerts to departments when course changes may cause the need for program proposals and MCM updates to be initiated.
4. FC (12/6/16) approved UCC minutes of October 21 and 28 and November 4. The Masters of Addiction Counseling (Plan C) in Psychology and the Graduate Bulletin item on specializations were approved.
5. UCC minutes of 11/11 and 12/2 are on the Executive agenda (12/13 – last meeting this semester). EC next meeting is 1/17/17.
6. A curriculum training session will be offered at the Annual Professional Development Institute (PDI). Registration is now open at: <http://tilt.colostate.edu/proDev/pdi/>.
Title: “Curriculum: from Department to Degree Audit (and everything in between)”
Date: Tuesday, January 10, 2017
Time: 8:30-9:30 am
Room: 376-78 Lory Student Center
Presenters: Katie Risheill, Andrea Russo, Shelly Ellerby
Description: Providing an opportunity to campus to learn about the University Curriculum process from input into CIM/CAT through approval. This will also inform on the cycle of the General Catalog as well as when and how approved changes are implemented in the Degree Audit.
Goals and Target Audience: Department staff and advisors who wish to expand their knowledge on the entire curricular process for programs and courses and how these changes are implemented on campus, after approved through the University Curriculum Committee.
7. Next UCC meeting: January 20, 2017, usual time and place. Have a great Winter Break! ***

CONSENT AGENDA

See listing after New Business.

CIM Considerations

CIM Forms
CIM Processes
CIM Help Bubble

PENDING CoSRGE

New Program Proposals:

- [Ph.D. in Anthropology](#)
- [Graduate Certificate in Agritourism Management](#)
- [Graduate Certificate in Facilitating Adult Learning](#)
- [Graduate Certificate in Nutrition for Health Promotion](#)
- [Master of Music, Music Education, Composition Emphasis](#)

OTHER BUSINESS

1. **Discussion Item: UCC Committee Responsibilities and Operating Procedures**

[UCC Committee Responsibilities – Faculty Manual Section C:](#)

k. University Curriculum Committee (last revised June 22, 2006)

The University Curriculum Committee shall consist of one (1) faculty representative from each college and the Libraries, one (1) undergraduate student, one (1) graduate student, and the Provost or his or her designee (ex officio). The duties of this standing committee shall be:

1. To receive or initiate recommendations pertaining to each and every course and program offered for academic credit by any unit of the University.
2. To evaluate all proposals for new undergraduate courses and programs as well as changes in existing courses and programs for correlation with other departments before consideration and approval by the Faculty Council.
3. To evaluate all proposals for new graduate courses and programs as well as changes in existing courses and programs for correlation with other departments. Review of graduate programs is conducted after the Committee on Scholarship, Research, and Graduate Education has recommended approval prior to their submission to the Faculty Council for approval.
4. To develop necessary administrative procedures for informing interested colleges concerning courses under consideration.
5. To evaluate proposals for the establishment of new departments, and the change of academic name, change in college affiliation, dissolution, division, or merger of existing departments.
6. To recommend policies to the Faculty Council related to the operations of the Division of Continuing Education which impact curricula.

[UCC Operating Procedures](#)

OLD BUSINESS

New Courses

Effective Term

College of Health and Human Sciences

SOWK 120	SOWK 120 Academic and Career Success 1(1-0-0) F, S Prerequisite: None. Registration Information: Undergraduate standing. This may be offered as a partial semester course. Credit not allowed for both SOWK 120 and 280A1. Description: Skills for general academic success, personal growth, self-management, and knowledge of campus/community resources. Examination of professional opportunities within the field of social work. Grade Mode: Traditional	Fall 2017
Reason for Request:	To enhance academic success for students entering the social work major, and to offer students the opportunity to gain knowledge and skills that will aid their preparation for a career in social work. Sections may be offered in partial semester (8-weeks) or full semester (16 weeks).	

College of Liberal Arts

ART 521	ART 521 Art and Environment – Advanced Study 3(3-0-0) F, S, SS Prerequisite: None. Registration Information: Graduate standing in the Art and Art History Department. Required field trips. Credit not allowed for both ART 521 and ART680A1. Description: Interdisciplinary studio/seminar course investigating art's relationship to the environment through readings, field trips, presentations and studio practice. Grade Mode: Traditional. Offering Term: As Needed.	Fall 2017
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Reason for Request: This course has been taught as an experimental course twice and enrollment numbers indicate that there is interest in making the course permanent. The course fills a gap in offerings by blending seminar-type discussion of issues with studio practice in an interdisciplinary studio setting.

College of Natural Sciences

<p>BZ 565/ MIP 565</p> <p>Reason for Request:</p>	<p>BZ 565/MIP 565 Next Generation Sequencing Platform/Libraries 1(0-2-0) F</p> <p>Prerequisite: CM 505.</p> <p>Registration Information: This is a partial semester course. Credit not allowed for both BZ 565/MIP565 and CM 581A2.</p> <p>Description: Theoretical and experimental aspects of next generation sequencing experiments with a focus on the Illumina platform. Students will create and sequence metagenomic and 16S rDNA libraries from soil samples and unknown bacterial cultures.</p> <p>Grade Mode: Traditional</p> <p>Over the last decade, next generation sequencing (NGS) has become a widely used approach to understand and characterize biological processes. However, due to the rapid rise of this technology most faculty, even within the life sciences, have little hands-on experience. This makes it challenging for them to provide adequate training for graduate students. This course addresses this gap by providing training in both the experimental design and practical aspects of creating a library for NGS. The course will be of value to both life scientists and biomedical engineers engaged in research involving NGS approaches. Furthermore the course will also be open to Statistics, Mathematics and Computer Science graduate students who routinely analyze and model data generated through NGS.</p>	<p>Fall 2017</p>
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Major Changes to Courses	Effective Term
College of Veterinary Medicine and Biomedical Sciences	

<p>VM 745</p> <p>Reason for Request:</p>	<p>VM 745 Clinical Sciences I 5(5-0-0) S</p> <p>Prerequisite: None.</p> <p>Restriction: Must be a: Graduate, Professional.</p> <p>Registration Information: Admission to professional curriculum in veterinary medicine the Doctorate of Veterinary Medicine Program. All courses must be taken in prescribed sequence in the PVM DVM program. This is a partial semester course.</p> <p>Description: Diagnostic approaches to common medical problems of the gastrointestinal tract (including dentistry), liver / pancreas, cardiovascular, urinary, and endocrine systems in small animal, food animal, and equine species are covered. digestive hepatic systems. A clinical reasoning process for approaching clinical problems is reviewed and reinforced.</p> <p>Grade Mode: Traditional.</p> <p>Current description of the body systems the course covers is incorrect.</p>	<p>Spring 2017</p>
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New Graduate Certificates

<p>Warner College of Natural Resources Department of Fish/Wildlife/Conservation Biology Graduate Certificate in Conservation Actions with Lands, Animals, and People</p> <p>Reason for Request:</p>	<p>All courses in the Certificate have been approved at the 500 level for Online delivery through the curriculum review process at CSU and all content has been taught over time. The goal is to facilitate opportunities for persons who have baccalaureate degrees to fill gaps in timing, content, and outcomes of education. Types of audiences include persons who may eventually seek graduate degrees, established professionals in natural resources fields needing relevant continuing education, educated persons seeking career changes, and for persons outside of natural resources who desire and will benefit from courses that help with holistic understanding and actions toward their role in society and with land, animals, and people. A certificate helps to provide a thoughtfully managed and integrated link to education beyond the random selection of courses.</p>	<p>Effective Fall 2017</p> <p>Link to CIM</p>
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Additional coursework may be required due to prerequisites.

Code	Title	Credits
Select a minimum of 3 courses:		9
<u>FW 556</u>	Leopold's Ethic for Wildlife and Land	
<u>FW 557</u>	Wildlife Habitat Management on Private Land	
<u>FW 576</u>	Wildlife Policy, Administration, and Law	
<u>NR 501</u>	Leadership and Public Communications	
<u>NR 515</u>	Natural Resources Policy and Biodiversity	
<u>NR 535</u>	Action for Sustainable Behavior	
Program Total Credits		9

*This certificate may have courses in common with other graduate certificates. A student may earn more than one certificate, but a given course may be counted only in one certificate.



NEW BUSINESS

<i>New Courses</i>	<i>Effective Term</i>
College of Agricultural Sciences	
<p><u>AGED 440</u> AGED 440 Managing Experiences in Ag Ed Laboratories 1(0-3-0) F</p> <p>Prerequisite: AGED 420. Registration Information: None. Description: Theory, management and pedagogy of delivering safety instruction and experiential curriculum in secondary agricultural education laboratory settings. Grade Mode: Traditional.</p> <p>Reason for Request: Teaching in the laboratory is a common practice for secondary agriculture instructors in Colorado. Teaching and managing in these facilities can be a challenging and overwhelming for many young teachers. This course is designed to aid student who are pursuing degrees in agricultural education to safely deliver curriculum and effectively manage a secondary school agriculture laboratory, including agriculture mechanics shops, school land laboratory (school farms), school gardens, and school science laboratories.</p>	Fall 2017
<p><u>AGED 510</u> AGED 510 American Agricultural Values and Ideology 3(3-0-0) S</p> <p>Prerequisite: None. Registration Information: Senior standing. Written consent of instructor. Sections may be offered: Online. Description: Explore how people have conceptualized agriculture in the United States. How agricultural ideologies have shaped our agricultural values, and how differing agricultural ideologies impact the work in agriculture today and in the future. Grade Mode: Traditional. Offering Year: Even</p> <p>Reason for Request: The American Agricultural Values and Ideology course will fill a void in our college at the graduate level. The issue of agricultural values and ideologies affects the work of Extension specialists and other outreach specialists in agriculture. This course will explain how values and ideologies impact the current and future work in agriculture.</p>	Fall 2017

AGED 525	AGED 525 Agricultural and Extension Teaching 3(3-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: None.</p> <p>Registration Information: Graduate standing. Sections may be offered: Online.</p> <p>Description: Use research on effective teaching methods to define and deliver educational programs, courses and presentations in formal and non-formal educational settings in agriculture. Apply organization and instructional methods to evaluate, plan, deliver and assess effective educational programs.</p> <p>Grade Mode: Traditional.</p> <p>Offering Term: Fall</p> <p>This course is necessary to adequately train graduate students in the art of educational program delivery. This course is a required course for the Master of Agricultural Extension Education program as extension personnel are required to facilitate educational programs. This course will also be a foundational course for graduate students in the College of Agricultural Sciences who need or desire methods and models of effective teaching for future academic work.</p>	
AGED 587	AGED 587 Internship in Extension Var [1-2] F, S, SS	Fall 2017
Reason for Request:	<p>Prerequisite: AGED 547.</p> <p>Registration Information: Graduate standing. Sections may be offered: Online.</p> <p>Description: First-hand experiences in extension programming.</p> <p>Grade Mode: Traditional.</p> <p>The Internship in Extension course is a valuable course that will ensure that students in the Extension Education degree will receive first-hand experience in Extension settings.</p>	
AGED 600	AGED 600 Evaluation and Applied Research in Extension 3(3-0-0) S	Spring 2018
Reason for Request:	<p>Prerequisite: None.</p> <p>Registration Information: Sections may be offered: Online.</p> <p>Restriction: Must be a: Graduate, Professional.</p> <p>Description: Train extension and other outreach specialists in the basics of program evaluation and research methods. Work with real world scenarios and/or their own field experiences to learn how to strategically design evaluation plans and effectively analyze the data collected. Emphasizing how to improve programming with the collected data.</p> <p>Grade Mode: Traditional.</p> <p>Offering Term: Odd</p> <p>The Evaluation and Applied Research in Extension course is a unique that serves both Extension specialists and professionals in outreach positions. The course focuses on quantitative and qualitative research as well as evaluation of programming. The emphasis of the course is analyzing and improving programs and not producing research papers. An applied research methods like Evaluation and Applied Research in Extension will help prepare Extension and outreach specialists to work effectively in the field.</p>	
AGRI 575	AGRI 575 Livestock-Wildlife Conflict & Law 3(3-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: AGRI 300 or AGRI 500 or AREC 342 or AREC 375 or NR 320 or NR 425 or POLS 361.</p> <p>Registration Information: Graduate standing. Offered as an online course only. Credit not allowed for both AGRI 575 and AGRI 581A2.</p> <p>Description: Investigation of the laws and policies surrounding livestock wildlife interaction and conflict at the federal, state, and international levels.</p> <p>Grade Mode: Traditional.</p> <p>This class has been successfully taught as an experimental course for the last two years. The course fulfills a need for this subject area that is not currently addressed in other courses and provides students with knowledge and skills necessary to address issues regarding a variety of livestock-wildlife conflicts.</p>	
College of Engineering		
CIVE 511	CIVE 511 Coastal Engineering 3(3-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: CIVE 401.</p> <p>Registration Information: Bachelor's degree required. Credit not allowed for both CIVE 511 and CIVE 580A6.</p> <p>Description: Coastal processes (waves, tides, storm surge, currents, coastal morphology, deltas) and their effects on infrastructure design and eco-protection.</p> <p>Grade Mode: Traditional.</p> <p>Offering Year: Odd.</p>	

Reason for Request: This course will broaden the scope of our offerings in hydraulic engineering which will enhance our graduate programs in water.

[ECE 517/BIOM 517](#)

ECE 517/BIOM 517 Advanced Optical Imaging 3(3-0-0) F

Fall 2017

Prerequisite: ECE 342; MATH 340 or MATH 345.

Registration Information: Credit allowed for only one of the following: BIOM 517, BIOM 581B7, ECE 517 or ECE 581B7.

Description: Engineering design principles of advanced optical imaging techniques and image formation theory.

Grade Mode: Traditional.

Offering Year: Even.

Reason for Request:

The development of imaging technologies is a rapidly growing field. The course will train students to understand the fundamentals and design principles of optical imaging systems and their use in applications ranging from materials science to molecular biology. The course will also provide advanced optical imaging topics which are not addressed in other courses at CSU. This course was run successfully as an experimental course in Fall 2016 and the department would like to make the course a permanent offering for ECE and BIOM graduate and undergraduate students.

[ECE 518/BIOM 518](#)

ECE 518/BIOM 518 Biophotonics 3(3-0-0) F

Fall 2017

Prerequisite: ECE 342 or ECE 457 or MATH 340 or MATH 345.

Registration Information: Credit allowed for only one of the following: BIOM 518, BIOM 581A9, ECE 518 or ECE 581A9.

Description: Engineering design principles of optical instrumentation for medical diagnostics. Light propagation and imaging in biological tissues.

Grade Mode: Traditional.

Offering Year: Odd.

Reason for Request:

There is no course at CSU that treats light propagation in biological tissues and methods of biological imaging with diffuse light. These methods exploit the properties of multiple light scattering to measure tissue properties; these methods can be used to medical diagnostics that are not possible with other methods. The course will serve students in both graduate and undergraduate programs at CSU, particularly in biomedical engineering and the ECE department.

College of Health and Human Sciences

[EDHE 658](#)

EDHE 658 Higher Education Enrollment Management 3(3-0-0) S

Spring 2018

Prerequisite: None.

Registration Information: None.

Restriction: Must be a: Graduate, Professional.

Description: Holistic understanding of enrollment management beginning with understanding factors shaping students' college choice options and decisions. Exploration of theory, policy and practice of marketing, admissions, financial aid, tuition setting, and retention as critical areas of enrollment management.

Grade Mode: Traditional.

Reason for Request:

Changing demographics, concerns about affordability, disparities in access to higher education all paint a challenging environment for postsecondary education. Enrollment management is charged with understanding and articulating policies, practices, and trade-offs germane to achieving an institution's objectives around access, enrollment, and retention.

This course will help prepare graduate students to assume roles in and related to enrollment management. No such course is currently offered on campus.

College of Liberal Arts

ANTH 225	ANTH 225 Anthropology of Music and the Arts 3(3-0-0) F	Fall 2017
	Prerequisite: None. Registration Information: None. Description: Explores music and the arts (visual and performing) from the perspective of cultural anthropology. What is art and how is the category differently constructed cross-culturally? Why and how do people make, consume, and identify with expressive culture? How can art and music help us to develop a deeper understanding of how human beings make meaning? Read a variety of ethnographic texts that illuminate these and related questions. Grade Mode: Traditional. Offering Year: Odd.	
Reason for Request:	This course will allow the anthropology department to reach out to more students in their first and second years who are interested in the expressive dimensions of cultural life. At the moment we have a similar course in the system that is no longer being offered, and that was at the 300 level. We have very few offerings at the 200 level.	

ANTH 379	ANTH 379 Evolutionary Medicine and Human Health 3(3-0-0) F	Fall 2017
	Prerequisite: ANTH 120 OR BZ 101. Registration Information: Sophomore standing. Description: Evolutionary medicine refers to the application of evolutionary theory to the study of human health, disease, and modern medicine. This theoretical perspective provides a deeper lens with which to investigate health, moves us beyond mechanistic explanations of disease, and constructs an anthropological framework for interpreting the evolution of human physiological diversity. Grade Mode: Traditional	
Reason for Request:	This course supports the Anthropology department by strengthening the Biological Anthropology concentration and by expanding course offerings in Medical Anthropology. The learning objectives of these anthropological subfields include analyzing evolutionary theory and comparing and contrasting the roles of biology and culture in human adaptation. This course aligns with these objectives by investigating human health from an evolutionary perspective and by evaluating the relationship between modern human lifestyles and disease.	

ART 421	ART 421 Art and Environment 3(3-0-0) As Needed	Fall 2017
	Prerequisite: ART 136; ART 160; ART 170; 6 credits of 200-level art courses. Registration Information: Required field trips. Credit allowed for one of the following: ART 380A1, ART 421 or ART 496A. Description: Interdisciplinary studio/seminar course investigating art's relationship to the environment through readings, field trips, presentations and studio practice. Grade Mode: Traditional	
Reason for Request:	This course has been taught as an experimental course twice and enrollment numbers indicate that there is interest in making the course permanent. The course fills a gap in offerings by blending seminar-type discussion of issues with studio practice in an interdisciplinary studio setting.	

ART 425	ART 425 Integrated Visual Studies 4(4-0-0) S	Fall 2017
	Prerequisite: None. Registration Information: Written consent of advisor. Senior standing. 21 credits of upper-division coursework in the Major in Integrated Visual Studies. Description: Interdisciplinary and guided study linking systems of knowledge. Students are afforded the space to draw on their breadth of information and artistic mediums to create a capstone project that demonstrates an ability to communicate effectively across verbal, visual, and written forms. Develop skills as makers and thinkers, fostering critical awareness of how society reflects and produces visual meaning. Grade Mode: Traditional.	
	[Proposed new AUCC 4C: Capstone Experience for the: Bachelor of Arts, Integrated Visual Studies Concentration (proposal pending in CIM)]	

Reason for Request: Currently, the BA Capstone is a "shared" capstone with the BFA degree. The proposed course will provide a distinct capstone experience for the newly designed BA in Integrated Visual Studies. Through the completion of this class, students will learn how to articulate the interdisciplinary link between studio arts and their secondary field of study. Students will also make connections between visual art, contemporary culture, and community. Completion of course projects will necessitate that students advance their skills in research, writing, and public speaking.

[E 643](#) **E 643 Special Topics in Literary Craft 3(3-0-0) As Needed** Fall 2017

Prerequisite: None.

Restriction: Must be a Graduate, Professional.

Registration Information: Admission into MA English or MFA Creative Writing Programs.

Description: A seminar-based class combining creative and craft-based experiments with traditional literary critical approaches to various topics utilizing poetry, fiction, creative non-fiction, and other alternate hybrid genres.

Grade Mode: Traditional

Reason for Request: Recent student and faculty surveys have revealed both desire and programmatic need for courses that merge creative and critical literary studies. Such a course will help all English and Creative Writing students achieve a greater mastery in their given fields.

[HIST 505](#) **HIST 505 Historical Method – Digital History 3(3-0-0) F** Fall 2017

Prerequisite: None.

Registration Information: Graduate standing. Credit not allowed for both HIST 505 and HIST 580A1.

Description: Historiographical skills and methods; emphasis on theory and practice of digital history.

Grade Mode: Traditional.

Offering Year: Odd

Reason for Request: This course has been offered experimentally twice; the department is now regularizing the course. Historians who seek employment outside academia are increasingly required to have digital history skills and experience, particularly public historians who work in museums, for governments, or for non-profit or community organizations. This course provides such training and experience.

[MU 127](#) **MU 127 Aural Skills I 1(0-2-0) F** Fall 2017

Prerequisite: None.

Registration Information: Must have concurrent registration in MU 117.

Description: Introduction to aural skills, including melodic dictation (one- and two-part), diatonic harmonic dictation; rhythmic dictation in simple and compound meters; prepared singing and sight singing.

Grade Mode: Traditional

Reason for Request: Currently the School of Music, Theatre, and Dance offers aural skills as part of the written music theory course sequence (MU 117, 118, 217, 218). Separating aural skills material into a new course will improve pedagogy because it will be taught in smaller classes and allow for more one-on-one instruction. As students receive separate grades for written and aural work, they can advance in the curriculum in written theory while repeating aural skills courses if necessary (or vice versa), thus improving retention of undergraduates. In this way, the theory curriculum will allow for better degree progress across majors. Separating these courses will also improve assessment in both courses.

[MU 128](#) **MU 128 Aural Skills II 1(0-2-0) S** Fall 2017

Prerequisite: MU 127.

Registration Information: Must have concurrent registration in MU 118.

Description: Further introduction to aural skills, including melodic dictation (one- and two-part), diatonic harmonic dictation; rhythmic dictation in simple and compound meters; prepared singing and sight singing in new clefs.

Grade Mode: Traditional

Reason for Request: Currently the School of Music, Theatre, and Dance offers aural skills as part of the written music theory course sequence (MU 117, 118, 217, 218). Separating aural skills material into a new course will improve pedagogy because it will be taught in smaller classes and allow for more one-on-one instruction. As students receive separate grades for written and aural work, they can advance in the curriculum in written theory while repeating aural skills courses if necessary (or vice versa), thus improving retention of undergraduates. In this way, the theory curriculum will allow for better degree progress across majors. Separating these courses will also improve assessment in both courses.

MU 132	MU 132 Exploring World Music 3(3-0-0) F, S, SS	Fall 2017
Reason for Request:	<p>Prerequisite: None.</p> <p>Registration Information: Credit not allowed for both MU 132 and MU 380A4.</p> <p>Description: Global aspects of music and its meaning with connections to the environment, sound, and world cultures.</p> <p>Grade Mode: Traditional [proposed new AUCC 3E: Global & Cultural Awareness]</p> <p>Departmental and campus-wide student interest in 21st century global music topics, which is currently not offered.</p>	
MU 151A <i>Major course change</i>	MU151A Piano Class II: Music Education Piano Skills for Music Educators 1(0-2-0) F,S	Fall 2017
Reason for Request:	<p>Prerequisite: MU 150.</p> <p>Registration Information: Credit allowed for only one of the following: MU 151, MU 151A or MU 151B.</p> <p>Description: Intermediate Piano Skills Intermediate piano technique and appropriate sightreading skills for music educators.</p> <p>Grade Mode: Traditional S/U Sat/Unsat Only</p> <p>This course currently exists as MU 151: Piano Skills for Music Educators. However, there is no equivalent course offered for Performance or Composition Majors, or BA-Music students. This new course proposal is not really new. It is simply a renumbering to allow for MU 151A and MU 151B (and any potential other future second semester piano classes) as different subtopics.</p>	
MU 151B	MU 151B Piano Class II 1(0-2-0) S	Fall 2017
Reason for Request:	<p>Prerequisite: MU 150.</p> <p>Registration Information: Credit allowed for only one of the following: MU 151, MU 151A or MU 151B.</p> <p>Description: Intermediate Piano Skills</p> <p>Grade Mode: Traditional</p> <p>Currently there is no 2nd semester piano offering for B.M. performance and composition concentrations, or for B.A. students. This course will help students with piano skills necessary for success in their Music Theory III and IV courses.</p>	
MU 227	MU 227 Aural Skills III 1(0-1-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: MU 128.</p> <p>Registration Information: Must have concurrent registration in MU 217.</p> <p>Description: Intermediate aural skills, including dictation of chromatic melodies (one- and two-part), diatonic harmonic dictation with chromatic embellishments; rhythmic dictation in simple and compound meters; prepared singing and sight singing in new clefs.</p> <p>Grade Mode: Traditional</p> <p>Currently the School of Music, Theatre, and Dance offers aural skills as part of the written music theory course sequence (MU 117, 118, 217, 218). Separating aural skills material into a new course will improve pedagogy because it will be taught in smaller classes and allow for more one-on-one instruction. As students receive separate grades for written and aural work, they can advance in the curriculum in written theory while repeating aural skills courses if necessary (or vice versa), thus improving retention of undergraduates. In this way, the theory curriculum will allow for better degree progress across majors. Separating these courses will also improve assessment in both courses.</p>	
MU 228	MU 228 Aural Skills IV 1(0-1-0) S	Fall 2017
Reason for Request:	<p>Prerequisite: MU 227.</p> <p>Registration Information: Must have concurrent registration in MU 218.</p> <p>Description: Advanced aural skills for chromatic music; chromatic and atonal melodic dictation; modulating harmonic dictation and atonal pitch patterns; rhythmic dictation of techniques from music since 1900; prepared singing and sight singing of chromatic and atonal melodies.</p> <p>Grade Mode: Traditional</p>	

Reason for Request: Currently the School of Music, Theatre, and Dance offers aural skills as part of the written music theory course sequence (MU 117, 118, 217, 218). Separating aural skills material into a new course will improve pedagogy because it will be taught in smaller classes and allow for more one-on-one instruction. As students receive separate grades for written and aural work, they can advance in the curriculum in written theory while repeating aural skills courses if necessary (or vice versa), thus improving retention of undergraduates. In this way, the theory curriculum will allow for better degree progress across majors. Separating these courses will also improve assessment in both courses.

[MU 511](#) **MU 511 Advanced Arranging for Educational Ensembles 3(3-0-0) F** Fall 2017

Prerequisite: MU 318.

Registration Information: None.

Description: Arranging and scoring skills related to elementary, choral, wind band, orchestral, and jazz ensembles in K-12 music classrooms. Publishing concerns and intellectual property rights related to both composing and arranging for educational ensembles.

Grade Mode: Traditional

Offering Year: Odd.

Reason for Request: Currently, the School of Music, Theatre and Dance does not offer any coursework specifically related to composing/arranging for educational ensembles at the elementary and secondary levels. This new course is intended to address this need, as it is an essential discipline for the proposed Master of Music in Music Education (composition emphasis). Additionally, this course will have strong interest from upper division and graduate students in the music composition and music education degree programs.

[MU 512](#) **MU 512 Pedagogy of Musical Creativity 3(3-0-0) F** Fall 2017

Prerequisite: MU 317.

Registration Information: None.

Description: Theory and application of creative musical skills as applied in K-12 music classrooms. Includes pedagogy of improvisation and composition, pedagogy of music theory and aural skills, and the application of original creative works in music classrooms.

Grade Mode: Traditional

Reason for Request: This course will be required for the proposed Master of Music in Music Education - Composition Emphasis program. The course is intended to provide instruction in the development of curriculum for music composition, improvisation and analysis as no current course offering directly addresses this content. The course will further broaden and enrich the current graduate offerings in music education for all relevant degree programs.

Warner College of Natural Resources

[FW 558](#) **FW 558 Conservation Genetics of Wild Populations 3(2-0-1) S** Spring 2018

Prerequisite: BZ 350 or LIFE 201; LIFE 220 or LIFE 320; STAT 301 or STAT 307.

Registration Information: Graduate standing. Admission to a graduate program in Fish, Wildlife, and Conservation Biology. Must register for lecture and recitation. Written consent of instructor. Offered as an online course only.

Description: Examine the background, concepts, and tools required to determine how genetic data can be used to evaluate wild vertebrate species and communities of conservation concern.

Grade Mode: Traditional.

Reason for Request: We would like to offer a 500-level course that incorporates topics in conservation genetics for the Plan C Master's degree because this area is important for conservation biologists, wildlife managers, and other professionals who will be enrolled in the degree. Students in other FWCB advanced degree programs may also choose to enroll because a graduate-level course covering this topic is not currently available in the department. This course is an elective in the Plan C Master's degree and Department of FWCB will offer it as an online graduate course to make the degree accessible to a wide range of graduate students.

College of Natural Sciences

MSE 501	MSE 501 Materials Technology Transfer 1(1-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: MECH 331. Registration Information: Graduate standing. Description: The pathways towards commercialization of materials from research. Case studies, technology readiness levels, proposal writing, entrepreneurship, and intellectual property practices. Grade Mode: S/U Sat/Unsat Only</p> <p>This course will introduce newly admitted School of Advanced Materials Discovery graduate students to the concepts necessary for implementation of their basic research activities. This is part of the core curriculum for graduate students in the School of Advanced Materials Discovery. One key aspect of materials science and engineering is that materials are generally created for a specific purpose or application; as such, understanding materials intellectual property, innovation, and entrepreneurship within the context of materials science is a key programmatic element. This is a core principle of the School of Advanced Materials Discovery.</p>	
MSE 502A	MSE 502A Materials Science & Engineering Methods: Materials Structure and Scattering 1(1-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: MECH 331; MATH 345. Registration Information: Senior standing. Description: Introduction to (1) the atomic level arrangements of materials, (2) defects related to these structures, and (3) X-ray Diffraction, X-ray scattering, and electron diffraction methods. Grade Mode: Traditional.</p> <p>The theory of material structure at the atomic level and the techniques that are used to determine the structure of real materials are fundamental topics in modern materials science and engineering. Materials Science and Engineering students will be introduced to both the theory as well as the strengths and limitations of a host of techniques that can be used to deduce atomic structure. Students will thus have an appreciation of a number of the most widely used materials characterization tools. Other courses such as solid state physics and solid state chemistry do cover diffraction but only as a subtopic within a larger context and they do not address topics such as defects and surface roughness that are important considerations in materials science. Hence there is a need for a dedicated course that is tailored to meet the requirements of the new MSE program.</p>	
MSE 502B	MSE 502B Materials Science & Engineering Methods: Computational Materials Methods 1(1-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: MECH 331; MATH 340 or MATH 345. Registration Information: Senior standing. Description: Introduction to mathematical and computational methods that are used to model materials: Simulation/Modeling, Monte-Carlo, Monte-Carlo Potts, Density Functional Theory, and other approaches. Grade Mode: Traditional.</p> <p>Modern materials science and engineering is built upon complex, large data sets and theoretical models. As such, students in the field need to understand the general motivations and limitations behind numerical methods and computational algorithms that are now routine. This course will survey computational methods, starting with a survey of computer language and algorithms, as well as a survey-level introduction to the wide variety of simulation techniques used to solve material science courses. These topics will serve utility in advanced elective courses, independent research, and in future employment.</p>	
MSE 502C	MSE 502C Materials Science & Engineering Methods: Materials Microscopy 1(1-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: MECH 331; CHEM 431; MATH 340 or MATH 345. Registration Information: Senior standing. Description: Introduction to modern microscopy techniques for materials research using optical microscopy. Interferometry and confocal techniques, scanning electron, microscopy transmission electron microscopy, and scanning probe microscopy. Grade Mode: Traditional.</p>	

Reason for Request: Microscopy techniques provide a wide range of information about materials and hence are an important tool for materials research. Materials Science and Engineering students will be introduced to both the theory and the practical applications of optical, electron, and scanning microscopy techniques. A combination of lectures and hands-on opportunities will ensure that students will gain an appreciation of this important class of approaches to materials characterization. Other courses are offered that deal with microscopy but they are generally a small component of the course and cover only a specific application, for example, a biology course will focus on optical microscopy as it is used in that field. This course will cover a range of microscopy techniques and it will focus on the use of these tools for materials research. There is currently no such course available. This is an elective module in the MSE 502 series on the structure and properties of materials.

[MSE 502D](#) **MSE 502D Materials Science & Engineering Methods: Materials Spectroscopy** Fall 2017
1(1-0-0) S
Prerequisite: MECH 331; MATH 340 or MATH 345.
Registration Information: Senior standing.
Description: The investigation and measurement of spectra produced when matter interacts with or emits electromagnetic radiation, including an introduction to X-ray photoelectron spectroscopy, electron energy loss spectroscopy, Raman and infrared, and energy dispersive spectroscopy for materials research.
Grade Mode: Traditional.

Reason for Request: This is part of the core curriculum for graduate students in the MSE program. Spectroscopy in general is one of the most common methodologies scientists use to learn about the world. Within the context of materials research, spectroscopy provides a range of information about the structure and properties of materials. Materials Science and Engineering students will be introduced to both the theory and the practical applications of a host of spectroscopy techniques. Students will thus have an appreciation of the most widely used materials characterization tools. No other course is currently offered that directly addresses materials spectroscopy. This is an elective module in the MSE 502 series on the structure and properties of materials.

[MSE 502E](#) **MSE 502E Materials Science & Engineering Methods: Bulk Properties and Performance** Fall 2017
1(1-0-0) S
Prerequisite: MECH 331; MATH 340 or MATH 345.
Registration Information: Senior standing.
Description: Physical properties of materials and how they relate to the functionalization of materials, including their use in electronic, magnetic, optical, and other functional devices.
Grade Mode: Traditional.

Reason for Request: This is part of the core curriculum for graduate students in the MSE program. This module will provide an overview of the concepts of relationships between structure and thermal, optical, magnetic, electrical and mechanical properties of materials. Modern science and technology depends on materials with properties that can be tailored and controlled to meet specific application needs. Often, this requires an understanding of the chemistry and atomic structure and specifically the ability to tailor chemistry and structure to bring about those properties. Materials Science and Engineering students will be introduced to both the theory and the practical applications of a host of spectroscopy techniques. No other course is currently offered that directly addresses bulk properties of materials. This is an elective module in the MSE 502 series on the structure and properties of materials.

[MSE 502F](#) **MSE 502F Materials Science & Engineering Methods: Experimental Methods for Materials Research** Fall 2017
1(3-0-0) S
Prerequisite: MECH 331; MATH 340 or MATH 345.
Registration Information: Senior standing.
Description: Modern experimental design methods and techniques for materials research. Topics include vacuum systems, cryogenic experimentation, temperature characterization, data acquisition and digitization, device and circuitry design in the context of materials research.
Grade Mode: Traditional.

Reason for Request: This is part of the core curriculum for graduate students in the MSE program. This module will provide an overview of all aspects of experimental design in materials research. Often, materials research requires extreme conditions such as high and ultra high vacuum systems, device and electronic circuitry design, cryogenic and high temperature methodologies. Materials Science and Engineering students need to have an understanding of what design elements are critical and how they affect materials research. No other course is currently offered that directly addresses these fundamental concepts in materials research. This is an elective module in the MSE 502 series on the structure and properties of materials.

MSE 504A	MSE 504A Thermodynamics and Kinetics of Materials: Thermodynamics 3(3-0-0) F	Fall 2017
	Prerequisite: CBE 210 or CHEM 476 or MECH 331 or PH 361; MATH 340 or MATH 345. Registration Information: Senior standing. Description: The determination of whether and the means by which a given reaction can occur. Macroscopic and microscopic solid-state thermodynamics and kinetics along with experimental methodologies for characterizing them, with a focus on thermodynamic and statistical mechanical aspects of material structure-property relationships. Grade Mode: Traditional.	
Reason for Request:	This course is a core course for students in the MSE program. Kinetics and thermodynamics constitute the fundamental basis for materials synthesis approaches and for new materials discovery. This course discusses the types, mechanisms, and kinetics of solid-state phase transformations, which are presented with selected applications of solid-state transformations. Mechanisms of diffusion and techniques for diffusion calculations are discussed. In addition, fundamental thermodynamic concepts as applied to the analysis of phase equilibria and phase transformations in one-component and multi-component systems will also be discussed. This is a core course for the program as these are key concepts in materials design and discovery.	
<hr/>		
MSE 504B	MSE 504B Thermodynamics and Kinetics of Materials: Kinetics 3(3-0-0) S	Fall 2017
	Prerequisite: MSE 504A. Registration Information: Senior standing. Description: The determination of whether and the means by which a given reaction can occur. Macroscopic and microscopic solid-state thermodynamics and kinetics along with experimental methodologies for characterizing them, with a focus on the kinetic aspects of material structure-property relationships. Grade Mode: Traditional.	
Reason for Request:	This course is a core course for students in the MSE program and builds off of MSE504A. Kinetics and thermodynamics constitute the fundamental basis for materials synthesis approaches and for new materials discovery. This course provides a more advanced look at the types, mechanisms, and kinetics of solid-state phase transformations, mechanisms of diffusion and calculation-based approaches. Advanced thermodynamic concepts will also be presented. This is a core course for the program as these are key concepts in materials design and discovery.	
<hr/>		
MSE 651	MSE 651 Special Topics in Materials Science 3(0-0-3) As Needed	Fall 2017
	Prerequisite: MECH 331. Registration Information: Senior standing. Description: New or emerging topics in materials science and engineering. Grade Mode: Traditional.	
Reason for Request:	Often faculty and students wish to explore new or emerging topics in Materials Science and Engineering. This course will allow such topics to be delivered through a transcriptable course structure. Special topics courses are generally aimed at more advanced students in the program and will not affect how any of the other courses in the program are taught.	
<hr/>		
MSE 699	MSE 699 Thesis Var[1-6] F, S, SS	Fall 2017
	Prerequisite: None. Registration Information: Written consent of advisor. Restriction: Must be a: Graduate, Professional. Description: Thesis in materials science and engineering. Grade Mode: Instructor Option.	
Reason for Request:	This is part of the core curriculum for graduate students in the School of Advanced Materials Discovery.	
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MSE 784	MSE 784 Supervised College Teaching Var[1-5] F, S, SS	Fall 2017
	Prerequisite: None. Registration Information: Written consent of advisor. Restriction: Must be a: Graduate, Professional. Description: Supervised college teaching in materials science and engineering. Grade Mode: Instructor Option	

Reason for Request: The objective is for students to have hands on teaching experience in a supervised setting. Faculty and student will structure learning objectives by contract for specific course at time of registration.

MSE 793 **MSE 793 Professional Development Seminar 1(0-0-1) F, S** Fall 2017

Prerequisite: None.

Registration Information: None.

Restriction: Must be a: Graduate, Professional.

Description: A seminar series covering current research topics in materials development and discovery, and professional skills for careers in materials science.

Grade Mode: S/U Sat/Unsat Only

Reason for Request: The overall objective of the MSE program is to develop students to be science and engineering professionals who use their multidisciplinary problem solving skills to address global challenges in the field of materials science and engineering. The professional development course will help bring all concepts of the MSE program together and apply knowledge to real-world applications.

MSE 795 **MSE 795 Independent Study Var[1-5] F, S, SS** Fall 2017

Prerequisite: None.

Registration Information: Written consent of advisor.

Restriction: Must be a: Graduate, Professional.

Description: Advanced independent study of special topics in materials science and engineering.

Grade Mode: Instructor Option.

Reason for Request: Allow students to explore a special or specific interest in materials science

MSE 799 **MSE 799 Dissertation Var[1-18] F, S, SS** Fall 2017

Prerequisite: None.

Registration Information: Written consent of advisor.

Restriction: Must be a: Graduate, Professional.

Description: Dissertation in materials science and engineering.

Grade Mode: Instructor Option.

Reason for Request: Complete dissertation writing and research.

Major Changes to Courses

Effective Term

College of Agricultural Sciences

AGED 244 **AGED 244 Power, Structure, and Tech. Systems in Ag Ed ~~Agricultural Education~~** Fall 2017

~~31(21-10-0) F, S~~

Prerequisite: None.

Registration Information: Must register for lecture and laboratory.

Description: Development of competencies and theory related to agricultural power, structure, and technical systems utilized in school-based agricultural education programs.

Grade Mode: Traditional.

Reason for Request: This course has been taught as part of a trio of one credit courses (AGED 241 and AGED 320). Though originally proposed in this way to aide in advising and in transfer students, it has proven to be just the opposite. This 3 credit course will replace students taking a series of three one credit courses (AGED 241, 320, and 244). The content from all three courses will be merged into this one course. This one course will allow for easier advising and for a more seamless transfer of students from community colleges in the state.

College of Engineering

ATS 772 **ATS 772 Aerosol Physics, Chemistry, Clouds & Climate ~~Aerosol Chemistry~~** Fall 2017

~~32(32-0-0) F~~

Prerequisite: (CHEM 114 and MATH 161) and (PH 122 or PH 142).

Registration Information: None.

Restriction: Must be a: Graduate, Professional.

Description: The pPhysics and chemistry of atmospheric aerosols including composition, ~~surface properties,~~ size, and interaction with radiation and clouds, including the development of research-grade models of aerosols, clouds, and radiation. ~~sources, sinks.~~

Grade Mode: Traditional.

Reason for Request: We are requesting two changes:

(1) Change the title from "Aerosol Chemistry" to "Aerosol physics, chemistry, clouds & climate". This change is to better reflect the content of the course as some students had thought that the course was entirely focused on chemistry, which it is not.

(2) Change the number of credits from 2 to 3. The increase in credits and contact hours will permit the inclusion of a greater range of essential topics in this rapidly-expanding field of study.

College of Health and Human Sciences

[HDFS 410](#) **HDFS 410 Socioemotional Development in Childhood 3(3-0-0) F, S, SS** **Fall 2017**

Prerequisite: HDFS 310.

Registration Information: Completion of 60 credits. Sections may be offered: Online. ~~Credit allowed for only one of the following: HDFS 410, HDFS 351, HDFS 401.~~

Description: Socioemotional development in children and the influence of biology and socialization within diverse family, school and cultural contexts. Evidence-based practices for helping professionals who will serve children ages 3 - 8.

Grade Mode: Traditional

Reason for Request: We need to remove the following statement from Other Registration Information and Explanation: "Credit allowed for only one of the following: HDFS 410, HDFS 351, HDFS 401."

Some students have taken either 351 or 401, and it might be appropriate for them to take 410. In addition. If they take 410, it should count as an elective. The HDFS advisors will be working closely with students to ensure students do not attempt to take HDFS 410 after they have taken both HDFS 351 and HDFS 401 to avoid duplicate material. However if a student has only taken either HDFS 351 or HDFS 401, they would benefit from the new content and format of HDFS 410 and would be encouraged to take it if consistent with their interests.

College of Liberal Arts

[ANTH 370](#) **ANTH 370 ~~Primates Primate Behavior and Ecology~~ 3(3-0-0) ~~As Needed~~ S** **Fall 2017**

Prerequisite: ANTH 120 or BZ 101.

Registration Information: Sections may be offered: Online.

Description: Behavioral patterns, ecological relationships, and communication of nonhuman primates.

Grade Mode: ~~Traditional Student Option~~

Offering Year: ~~Every Even~~

[proposed new **AUCC 4A: Using Competencies** for the following:

[Major in Anthropology](#)

[Major in Anthropology, Archaeology Concentration](#)

[Major in Anthropology, Biological Anthropology Concentration](#)

[Major in Anthropology, Cultural Anthropology Concentration](#)

[Major in Anthropology, Geography Concentration](#)]

ANTH 370 should be designated as a 4A course in order to broaden student course offerings in this category.

[ART 492A](#) **ART 492A Seminar: Art History 3(3-0-0) ~~As Needed~~ F, S, SS** **Fall 2017**

Prerequisite: ART 212.

Registration Information: None.

Description: ~~Topical studies in Art History.~~

Grade Mode: ~~Traditional Instructor Option~~

[proposed new **AUCC 4A: Using Competencies & AUCC 4B: Building Upon Foundations and Perspectives** for the following:

[Bachelor of Arts, Art Education Concentration](#)

[Bachelor of Arts, Art History Concentration](#)

[Bachelor of Arts, Studio Concentration](#)

[Bachelor of Arts, Integrated Visual Studies Concentration](#) (proposal pending in CIM)]

Reason for Request: The seminar in Art History is not currently listed as fulfilling AUCC 4A, 4B criteria although the way the course is taught already fulfills the stipulations. Adding this designation to the course will help attract more students to the special topics courses we offer as seminars.

ART 496H	ART 496H Group Study: Art History 3-4(30-0-0) As Needed F, S, SS	Fall 2017
Reason for Request:	<p>Prerequisite: ART 212. Registration Information: Maximum of 9-8 credits allowed in course. Description: Topical studies in Art History. Grade Mode: Traditional Instructor Option [proposed new AUCC 4A: Using Competencies & AUCC 4B: Building Upon Foundations and Perspectives for the following: Bachelor of Arts, Art Education Concentration Bachelor of Arts, Art History Concentration Bachelor of Arts, Studio Concentration Bachelor of Arts, Integrated Visual Studies Concentration (proposal pending in CIM)]</p> <p>The Group Study in Art History is not currently listed as fulfilling AUCC 4A, 4B criteria although the way the course is taught already fulfills the stipulations. Adding this designation to the course will help attract more students to the special topics courses we offer as group studies.</p>	
E 607A	E 607A Teaching Writing: Composition and Rhetoric 3(3-0-0) F, S	Fall 2017
Reason for Request:	<p>Prerequisite: None. Registration Information: None. Restriction: Must be a: Graduate, Professional. Description: Addresses theoretical and applied understandings of reading and writing processes in the first-year college writing classroom; considers practical implications for professional practice in the teaching of writing; critically examines theory, disciplinary conventions, and policies in regard to writing pedagogy Grade Mode: S/U Sat/Unsat Only Traditional.</p> <p>This course has been treated as internship credit for the many years that it has been offered. However, it is increasingly taught as a regular graduate course with rigorous content and should be taught using traditional grading. The evolution of the course toward becoming a traditional graduate course reflects the increased seriousness around college-level teaching, particularly as it relates to pedagogies of writing. First-year composition has become increasingly research and theory-based, and this course reflects the professionalization of the field of writing instruction and the related need for GTAs to become sophisticated in their understanding of writing pedagogy since they are instructors of record in the first-year composition course.</p>	
ETST 205	ETST 205 Ethnicity and the Media 3(3-0-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: None. Registration Information: Sections may be offered: Online. Description: Ethnic representation across time as represented in auto/biography, fiction, poetry, and popular media. Grade Mode: Traditional [existing AUCC 3E: Global & Cultural Awareness and gtP: Human Behavior, Culture, or Social Frameworks (GT-SS3)]</p> <p>We are preparing to create an online minor and this will be one of our offered courses.</p>	
HIST 101	HIST 101 Western Civilization, Modern 3(3-0-0) F, S, SS	Fall 2017
Reason for Request:	<p>Prerequisite: None. Registration Information: Sections may be offered: Online. Description: Historical development of Western civilization from c. 1600C.E. to the contemporary era. Grade Mode: Traditional. [existing AUCC 3D: Historical Perspectives and gtP: History (GT-HI1)]</p> <p>This request is for an online version of HIST 101, a regularly offered face-to-face course. This online introductory course is an undergraduate survey in western history for students with no prior background in historical studies.</p>	

MU 118	MU 118 Music Theory II 34(3-20-0) S	Fall 2017
Reason for Request:	<p>Prerequisite: MU 117. None.</p> <p>Registration Information: Must register for lecture and laboratory. None.</p> <p>Description: Four-part diatonic writing; diatonic sequences modulation; diatonic sight singing, ear training, and related linear techniques; diatonic modulation keyboard harmony skills.</p> <p>Grade Mode: Traditional</p> <p>The curriculum for this course is being revised to remove the aural skills (ear-training) component from the current course with creation of a separate aural skills course. The primary rationale is that by separating aural skills from written music theory, a dedicated amount of instructional time will be devoted specifically to each set of skills. Hence, both assessment and instructional efficiency will be improved. Most comparable peer institutions utilize a similar curricular model for their undergraduate music theory and aural skills sequences. This change was initiated upon the recommendation of the music theory faculty and was approved by the music undergraduate curriculum committee.</p>	
MU 217	MU 217 Music Theory III 34(3-02-0) F	Fall 2017
Reason for Request:	<p>Prerequisite: MU 118.</p> <p>Registration Information: Must register for lecture and laboratory. None.</p> <p>Description: Introduction to chromatic harmony; analysis of small forms. Harmonic language of the 17th and 18th centuries; diatonic and chromatic sight singing, ear training, and keyboard harmony skills.</p> <p>Grade Mode: Traditional</p> <p>The curriculum for this course is being revised to remove the aural skills (ear-training) component from the current course with creation of a separate aural skills course. The primary rationale is that by separating aural skills from written music theory, a dedicated amount of instructional time will be devoted specifically to each set of skills. Hence, both assessment and instructional efficiency will be improved. Most comparable peer institutions utilize a similar curricular model for their undergraduate music theory and aural skills sequences. This change was initiated upon the recommendation of the music theory faculty and was approved by the music undergraduate curriculum committee.</p>	
MU 218	MU 218 Music Theory IV 34(3-02-0) S	Fall 2017
Reason for Request:	<p>Prerequisite: MU 217.</p> <p>Registration Information: Must register for lecture and laboratory. None.</p> <p>Description: Introduction to sonata form analysis; Introduction to post-tonal music analysis Late-18th and early 19th century harmonic and formal language; diatonic, chromatic, and modal sight singing, ear training, and keyboard harmony skills.</p> <p>Grade Mode: Traditional</p> <p>The curriculum for this course is being revised to remove the aural skills (ear-training) component from the current course with creation of a separate aural skills course. The primary rationale is that by separating aural skills from written music theory, a dedicated amount of instructional time will be devoted specifically to each set of skills. Hence, both assessment and instructional efficiency will be improved. Most comparable peer institutions utilize a similar curricular model for their undergraduate music theory and aural skills sequences. This change was initiated upon the recommendation of the music theory faculty and was approved by the music undergraduate curriculum committee.</p>	
WS 200	WS 200 Introduction to Women's Studies 3(3-0-0) F, S, SS	Fall 2017
Reason for Request:	<p>Prerequisite: None.</p> <p>Registration Information: Sections may be offered: Online.</p> <p>Description: Examination of gender roles in work, education, spirituality, relationships, health, institutions and organizations.</p> <p>Grade Mode: Traditional [proposed new AUCC 3C: Social/Behavioral Science]</p> <p>This course provides a gender option for the AUCC Category C requirement in the social sciences and behavioral sciences.</p>	

College of Health and Human Sciences

CON 265	<p>CON 265 <u>Plan Reading and Quantity Survey</u> Construction Estimating I 3(2-2-0) F, S Prerequisite: CON 131 and CON 151. Registration Information: Must register for lecture and laboratory. Required field trips. Description: Practice in construction document reading, interpretation and analysis for quantity surveying and material quantity organizing using industry-recognized methods including, but not limited to, a project manual-based work breakdown structure. Integration of construction materials and methods into construction systems that will be incorporated in projects. Grade Mode: Traditional.</p>	Fall 2017
Reason for Request:	<p>The title and objectives are being modified to better capture the course content. Construction estimating includes several steps, the first of which are plan reading and quantity survey. Students perceive "estimating" as the determination of cost of a construction project. This course focuses on plan reading and quantity survey and does not include the determination of costs. Construction labor, material, and equipment resources are allocated. Associated costs are applied in CON 365 Construction Estimating II (a course change proposal is in process to remove "II" from the title of CON 365). CON 265 is a prerequisite for CON 365.</p>	



New Graduate Certificates

College of Business
Department of Computer Information Systems
Graduate Certificate in Business Analytics and Accounting Systems

Effective Fall 2017
[Link to CIM](#)

Reason for Request: Demand for skills in business intelligence, data mining, and accounting technologies is on the rise. This certificate program will continue to advance the mission and purpose of the College of Business while serving the needs of business professionals across industries. The program will provide an enrichment opportunity for students pursuing graduate programs within the College as well as professional development options for individuals interested in learning and strengthening skills that are immediately applicable. All courses in the certificate are currently being taught within our existing CIS and accounting programs.

Additional coursework may be required due to prerequisites.

Code	Title	Credits
ACT 550	Accounting Information Technologies	3
CIS 570	Business Intelligence	3
CIS 575	Applied Data Mining and Analytics in Business	3
Program Total Credits:		9

*This certificate may have courses in common with other graduate certificates. A student may earn more than one certificate, but a given course may be counted only in one certificate.



**Warner College of Natural Resources
 Department of Human Dimensions of Natural Resources
 Graduate Certificate in Adventure Tourism**

Effective Fall 2017
[Link to CIM](#)

- Reason for Request:**
1. Tourism is one of the most rapidly growing sectors in the world, and adventure tourism is one of the fastest growing categories. Reports by the Adventure Travel Trade Association (ATTA) suggest that the global value of the adventure travel industry rose from \$89 to \$263 billion between 2010 and 2013
 2. Colorado is positioned as one of the top adventure travel and outdoor recreation destinations in the USA, with a robust tourism and outdoor recreation economy, and state-level leadership for tourism and outdoor recreation. A 2015 report of the U.S. adventure traveler market suggests that Colorado ranks first among states most recently visited by U.S. adventure travelers, and ranks first or second among states U.S. adventure travelers want to visit next
 3. This graduate certificate can help meet the industry-identified, growing need for competent adventure tourism managers in CO and beyond
 4. This graduate certificate would help establish strategic industry partnerships that will benefit and serve the graduate certificate and the department
 5. This graduate certificate would be one of a few graduate-level programs in the USA/North America, and help further distinguish the HDNR Department as an innovative leader in tourism education and training
 6. This graduate certificate capitalizes on the strengths, infrastructure, and resources of the HDNR tourism programs, and is aligned with the departmental mission
 7. This graduate certificate would add value to the existing Master of Tourism Management program by offering an additional area of tourism study and expertise to students. In addition, this graduate certificate would be academically synchronized with the undergraduate concentrations in Natural Resource Tourism and Global Tourism to promote matriculation from undergraduate programs to the graduate degree and certificate programs
 8. This graduate certificate can also be seen as a way to attract students from industry to the Master of Tourism Management program, with the graduate certificate envisioned as being both a stand-alone certificate, as well as being substitutable into the Master of Tourism Management program
 9. There are significant professional career opportunities associated with adventure tourism, due to its rapid growth in popularity in recent years

Additional coursework may be required due to prerequisites.

Code	Title	Credits
<u>NRRT 530</u>	Insight into the Adventure Tourism Industry	2
<u>NRRT 531</u>	Building an Adventure Tourism Enterprise	2
<u>NRRT 532</u>	Leading the Adventure Tourism Experience	2
<u>NRRT 533</u>	Adventure Tourism Policy and Planning	2
<u>NRRT 534</u>	Applications in the Outdoor Products Industry	2
<u>NRRT 655</u>	Tourism Marketing Concepts and Applications	2
Program Total Credits:		12

*This certificate may have courses in common with other graduate certificates. A student may earn more than one certificate, but a given course may be counted only in one certificate.



Major Changes to Existing Programs

College of Engineering
Dual Degree Program: Biomedical Engineering and
Electrical Engineering, Lasers and Optical Engineering Concentration

Effective Fall 2017
[Link to CIM](#)

Reason for Request: These revisions allow alignment with the ordering of 300-level ECE classes and clarification of ECE technical electives. Also designates BIOM 431 as a required course, now that it is no longer in experimental status.

Effective Fall 2017

FRESHMAN		AUCC	CREDITS
<u>BIOM 101</u>	Introduction to Biomedical Engineering		3
CO 150	College Composition (GT-CO2)	1A	3
Select one group from the following:		-	3-4
Group A:		-	-
CS 155	Introduction to Unix	-	-
CS 156	Introduction to C Programming I	-	-
CS 157	Introduction to C Programming II	-	-
Group B:		-	-
CS 160	Foundations in Programming	-	-
<u>CHEM 111</u>	<u>General Chemistry I (GT-SC2)</u>	<u>3A</u>	<u>4</u>
<u>CHEM 112</u>	<u>General Chemistry Lab I (GT-SC1)</u>	<u>3A</u>	<u>1</u>
<u>ECE 102</u>	Digital Circuit Logic		4
<u>ECE 103</u>	DC Circuit Analysis		3
<u>LIFE 102</u>	<u>Attributes of Living Systems (GT-SC1)</u>	<u>3A</u>	<u>4</u>
<u>MATH 160</u>	Calculus for Physical Scientists I (GT-MA1)	1B	4
<u>MATH 161</u>	Calculus for Physical Scientists II (GT-MA1)	1B	4
<u>PH 141</u>	Physics for Scientists and Engineers I (GT-SC1)	3A	5
Additional Requirements for Graduation ¹			0
Total Credits			<u>32</u>29-30
SOPHOMORE			
CHEM 111	General Chemistry I (GT-SC2)	3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	3A	1
CHEM 113	General Chemistry II	-	3
<u>CO 150</u>	<u>College Composition (GT-CO2)</u>	<u>1A</u>	<u>3</u>

<u>Select one group from the following:</u>		-	<u>3-4</u>
<u>Group A:</u>		-	-
<u>CS 155</u>	<u>Introduction to Unix</u>	-	-
<u>CS 156</u>	<u>Introduction to C Programming I</u>	-	-
<u>CS 157</u>	<u>Introduction to C Programming II</u>	-	-
<u>Group B:</u>		-	-
<u>CS 163 or 164</u>	<u>Java (CS1) No Prior Programming</u> <u>Java (CS1) Prior Programming</u>	-	-
<u>ECE 202</u>	Circuit Theory Applications		4
LIFE 102	Attributes of Living Systems (GT-SC1)	3A	4
<u>Select one course from the following:</u>		-	<u>3</u>
<u>ECE 303</u>	<u>Introduction to Communications Principles</u>	-	-
<u>STAT 303</u>	<u>Introduction to Communications Principles</u>	-	-
<u>MATH 261</u>	Calculus for Physical Scientists III		4
<u>Select one course from the following:</u>			4
<u>MATH 340</u>	Introduction to Ordinary Differential Equations		
<u>MATH 345</u>	Differential Equations		
MECH 337	Thermodynamics	-	4
<u>PH 142</u>	Physics for Scientists and Engineers II (GT-SC1)	3A	5
<u>PH 314</u>	<u>Introduction to Modern Physics</u>	-	<u>4</u>
Additional Requirements for Graduation ¹			0
Total Credits			<u>30-31</u>33
JUNIOR			
<u>BIOM 300</u>	<u>Problem-Based Learning Biomedical Engr Lab</u>	-	<u>4</u>
<u>BMS 300</u>	Principles of Human Physiology		4
CHEM 245	Fundamentals of Organic Chemistry	-	4
ECE 303/STAT 303	Introduction to Communications Principles	-	3
<u>CHEM 113</u>	<u>General Chemistry II</u>	-	<u>3</u>
<u>ECE 311</u>	Linear System Analysis I		3
<u>ECE 331</u>	<u>Electronics Principles I</u>	-	<u>4</u>
<u>ECE 332</u>	<u>Electronics Principles II</u>	-	<u>4</u>
<u>ECE 341</u>	Electromagnetic Fields and Devices I		3
<u>ECE 342</u>	Electromagnetic Fields and Devices II		3
<u>LIFE 210</u>	Introductory Eukaryotic Cell Biology		3
MECH 262	Engineering Mechanics	-	4

<u>PH 314</u>	Introduction to Modern Physics	-	4
<u>PH 353</u>	Optics and Waves	-	4
Additional Requirements for Graduation ¹			0
Total Credits			3135
SENIOR			
BIOM 300	Problem Based Learning Biomedical Engr Lab	-	4
ECE 331	Electronics Principles I	-	4
ECE 332	Electronics Principles II	-	4
<u>BIOM 431/ECE 431</u>	<u>Biomedical Signal and Image Processing</u>	-	<u>3</u>
<u>CHEM 245</u>	<u>Fundamentals of Organic Chemistry</u>	-	<u>4</u>
<u>ECE 404</u>	Experiments in Optical Electronics		2
<u>ECE 441</u>	Optical Electronics		3
<u>ECE 457</u>	Fourier Optics		3
<u>MECH 262</u>	<u>Engineering Mechanics</u>	-	<u>4</u>
<u>MECH 337</u>	<u>Thermodynamics</u>	-	<u>4</u>
<u>PH 353</u>	<u>Optics and Waves</u>	-	<u>4</u>
<u>ECON 202</u>	Principles of Microeconomics (GT-SS1)	3C	3
<u>Arts and Humanities</u>		3B	3
Global and Cultural Awareness		3E	3
Technical Elective (see list below)		-	3
Additional Requirements for Graduation ¹			0
Total Credits			3332
FIFTH YEAR			
<u>BIOM 486A</u>	Biomedical Design Practicum: Capstone Design I	4A,4B,4C	4
<u>BIOM 486B</u>	Biomedical Design Practicum: Capstone Design II	4A,4B,4C	4
Select one <u>course</u> from the following:			3
<u>CO 301B</u>	Writing in the Disciplines: Sciences (GT-CO3)	2	
<u>JTC 300</u>	Professional and Technical Communication (GT-CO3)	2	
<u>PH 451</u>	Introductory Quantum Mechanics I		3
<u>ECE, Lasers & Optics Concentration Technical Electives (See List)</u>	BIOM or ECE Electives²	-	<u>9</u>
<u>Arts and Humanities</u>		3B	3
<u>Historical Perspectives</u>		3D	3
<u>Global and Cultural Awareness</u>		<u>3E</u>	<u>3</u>
Additional Requirements for Graduation ¹			0

Total Credits

~~3229~~

Program Total Credits:

158-159

ECE, Lasers & Optics Concentration Technical Electives List

Code	Title	Credits
<u>BIOM 526/ECE 526</u>	Biological Physics	3
BIOM 470/MECH 470	Biomedical Engineering	3
<u>BIOM 570/MECH 570</u>	Bioengineering	3
<u>ECE 411</u>	Control Systems	4
<u>ECE 412</u>	Digital Control and Digital Filters	3
<u>ECE 444</u>	Antennas and Radiation	3
<u>ECE 450</u>	Digital System Design Laboratory	1
<u>ECE 451</u>	Digital System Design	3
<u>ECE 461</u>	Power Systems	3
<u>ECE 462</u>	Power Systems Laboratory	1
<u>ECE 471A</u>	Semiconductor Physics	1
<u>ECE 471B</u>	Semiconductor Junctions	1
<u>May select any course from the following:</u>		
<u>ECE 495A</u>	<u>Independent Study</u> ³	
<u>ECE 495B</u>	<u>Independent Study: Open Option Project</u> ³	
<u>ECE 495C</u>	<u>Independent Study: Vertically Integrated Projects</u> ³	
<u>ECE 503</u>	Ultrafast Optics	3
<u>ECE 504</u>	Physical Optics	3
<u>ECE 505</u>	Nanostructures: Fundamentals and Applications	3
<u>ECE 506</u>	Optical Interferometry and Laser Metrology	3
<u>ECE 507</u>	Plasma Physics and Applications	3
<u>ECE 520</u>	Optimization Methods-Control and Communication	3
ECE 525	Fiber Optic Communications	3
<u>ECE 546</u>	Laser Fundamentals and Devices	3
<u>ECE 571</u>	VLSI System Design	3
<u>ECE 572</u>	Semiconductor Transistors	1
<u>ECE 573</u>	Semiconductor Optoelectronics Laboratory	3
<u>ECE 574</u>	Optical Properties in Solids	3
<u>ECE 575</u>	Experiments in VLSI System Design I	1
ECE 58* Experimental Courses in Lasers/Optics Topics		
<u>MATH 419</u>	Introduction to Complex Variables	3

<u>PH 315</u>	Modern Physics Laboratory	2
<u>PH 425</u>	Advanced Physics Laboratory	2
<u>PH 452</u>	Introductory Quantum Mechanics II	3
<u>PH 462</u>	Statistical Physics	3

- ¹ Students are required to participate in the Professional Learning Institute (PLI) program as a requirement for graduation. The program consists of eleven PLI workshops distributed by focus areas as follows: Global and Cultural Diversity (2 workshops), Innovation (2 workshops), Leadership (2 workshops), Civic and Public Engagement (2 workshops), and Ethics (3 workshops). Each workshop is between 1-2 hours long and no outside preparation is required to attend any of the workshops. Attendance at the required workshops may be spread over the student's five-year program.
- ² Select 9 credits from courses from the Electrical Engineering, Lasers and Optics Concentration, Technical Elective list ~~with the BIOM or ECE subject code.~~
- ³ A total of 3 credits of Independent Study may apply toward degree requirements. This includes credit awarded for ECE 495A, ECE 495B, ECE 495C combined



University Curriculum Committee
 December 9, 2016
CONSENT AGENDA

Experimental Courses – 1st Offering

Course Title	Effective Term
ANEQ 581A4 Microbiome Analysis Methods	Spring 2017
MIP 681A2 Mycobacteria Research Library Seminar	Spring 2017
NR 580A7 Experimental Design and Analysis	Spring 2017
NRRT 580A2 Culinary Tourism	Spring 2017
VS 280A1 Research Seminar on Human-Animal Interactions	Spring 2017
WS 480A1 Indigenous Consciousness and Gender	Spring 2017

Minor Changes to Courses

Course Title	Requested Change	Effective Term
ECE 303/STAT 303 Introduction to Communications Principles	Prerequisite Courses: MATH 261 with a C or better ; MATH 340, may be taken concurrently or MATH 345, may be taken concurrently.	Spring 2018
ECE 508/ENGR 508 Introduction to Power System Markets	Offering Year: Every Odd	Fall 2017
ECE 566/ENGR 566 Grid Integration of Wind Energy Systems	Offering Year: Every Even Offering Term: F, S Prerequisite Courses: (ECE 461 and ECE 462) or ECE 565	Fall 2017
MECH 402 Mechanical Engineering Experimental Analysis	Offering Term: F, S Prerequisite Courses: (MECH 307) and (MECH 324) and (MECH 331) and (MECH 338)	Fall 2017
NRRT 521 Sustainable Ski Area Management	Offering Term: F , S, SS Prerequisite Courses: NRRT 520 or concurrent registration. Registration Information: This is a partial-semester course. Sections may be offered: Online. Offered every Spring term and every other Fall term.	Fall 2017
NRRT 522 Ski Area Operations and Human Resources	Offering Term: F , S, SS Prerequisite Courses: NRRT 520 or concurrent registration. Registration Information: This is a partial-semester course. Sections may be offered: Online. Offered every Spring term and every other Fall term.	Fall 2017

NRRT 523	Strategic Ski Area Marketing and Management	Offering Term: F , S, SS	Fall 2017
		Prerequisite Courses: NRRT 520 or concurrent registration.	
		Registration Information: This is a partial-semester course. Sections may be offered: Online. Offered every Spring term and every other Fall term.	
NRRT 524	Ski Area Finance and Investment	Offering Term: F , S, SS	Fall 2017
		Prerequisite Courses: NRRT 520 or concurrent registration.	
		Registration Information: This is a partial-semester course. Sections may be offered: Online. Offered every Spring term and every other Fall term.	
NRRT 525	Ski Area Planning and Development	Offering Term: F , S, SS	Fall 2017
		Prerequisite Courses: NRRT 520 or concurrent registration.	
		Registration Information: This is a partial-semester course. Sections may be offered: Online. Offered every Spring term and every other Fall term.	

