Division of Academic and Student Affairs
Office of Undergraduate Courses & Curricula
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Council on Undergraduate Education 2016-2017

April 7, 2017
Talley Student Union 4140
1:30pm-3:00pm

Call to Order 1:30pm

- Welcome and Instructions, Chair Peggy Domingue
- Remarks from Associate Vice Provost, Dr. Barbara Kirby
- Approval of CUE March 24, 2017 Minutes

New Business

- Course and Curricular Business

Consent Agenda			
Action	**GEP**	**Type**	**Notes**
BIO 120 The Dinosaurian World	NS	Drop	Replaced by BIO 230
LOG/MA 335 Symbolic Logic	MATH	Revisions	Revising instructor and requisites

Courses New to GEP				
Presenter	**Reviewers**	**GEP Category Under review**	**GEP Action**	**Notes**
Outing	Nowel, Allen, Ozturk	HUM, IP	NS 420 Naval Leadership and Ethics	New to GEP, *Major changes: SLO, requisites
Outing	Parker, Ashwell, Sills	IP, GK, VPA	MUS 200 Understanding Music: Global Perspectives	New to IP and up for review in GK and VPA (*Major Changes: SLO, description)

Courses for GEP Category - Review				
Presenter	**Reviewers**	**GEP Category Under Review**	**GEP Action**	**Notes**
Outing	Knowles, Ash, Lee	GK, VPA	MUS 320 Music of the 20th Century	*Major Changes: SLO, description, and requisites.

Special Topics				
Presenter	**Reviewers**	**GEP Category Under Review**	**GEP Action**	**Notes**
Keene	Gilmartin, Levine, Joines	IP	IPGE 295 Integrating STEM Education	1st Offering

**Changes to course approved by UCCC.*
SLO= Student Learning Outcomes

Notes:

- All linked course actions are viewable in CIM.
- To view actions, please click on the hyperlink. You may need to use your Unity ID to log in.
- If you experience issues logging in, please go to https://next-catalog.ncsu.edu/courseadmin/ and type the course prefix and number into the search bar.

NC STATE UNIVERSITY

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Council on Undergraduate Education 2016-2017

March 24, 2017
Talley Student Union 4140
Call to Order: 1:33 PM

Members Present: Chair Peggy Domingue, Chris Ashwell, Karen Keene, Alice Lee (Proxy), Hatice Ozturk, Erin Sills, David Gilmartin, Kim Outing, James Knowles, Tania Allen, Adam Skrzecz, Cynthia Levine, Andy Nowel, Frederick Parker, Ingrid Schmidt
Members Absent: Tim Petty, Ghada Rabah, Jeff Joines, Sarah Ash

Ex-Officio Members Present: Li Marcus, Lexi Hergeth, Dr. Barbara Kirby, Erin Dixon, Stephany Dunstan
Guests: Genia Sklute, David Tarpy, Jane Lubischer

WELCOME AND INTRODUCTIONS

- *Remarks from Chair Chair Peggy Domingue* - Welcomed the committee and proxy and introduced the guests.
- *Remarks from Dr. Barbara Kirby, Associate Vice Provost*- Announced the US Diversity task force is meeting to try to agree on requirements in the next week or two. The chair of the USD taskforce hopes to share corequisite information as well as the Global Knowledge attribute is also being reviewed. The taskforce will most likely continue conversations but working toward wrapping up.
- Approval of the Minutes from January 20, 2017. – *Approved Unanimously*
    - Discussion: Motion to approve the past minutes by member Tania Allen. Member commented that the proxy from the last meeting was not listed. Minutes have been updated.

NEW BUSINESS

New to GEP

- **HON 313 Reading Machines**: (IP) - *Approved Unanimously*
  Discussion: Presented by member Kim Outing. Member asked if there would be specific dialog and comparative analysis to address the engineering perspective and if there will be guest speakers. Guest Genia Sklute said there will be hands on activities as well as other approaches. Member asked how explicit the engineering perspective will be, guest responded she will clarify with the instructor. Member commented there is not a deep dive into engineering however there are many disciplines and reminded the committee the IP category has multiple methods of delivery. Member suggested replacing the engineering perspective with technology perspective.

- **HON 340 Religion and Freedom**: (IP) -*Approved Unanimously*
  Discussion: Presented by member Kim Outing. Members complimented the course on the coverage of literature and religion disciplines.

- **BIO 230 The Science of Studying Dinosaurs**: (IP, NS) -*Approved Unanimously*
  Discussion: Presented by member Alice Lee. Member asked why this has not been offered before, guest Jane Lubischer responded that another course was similar but this is the new, updated course. Member commented that the readings were not listed, guest responded that readings will be provided in Moodle and members reviewed the list provided in the syllabus. Member complimented how the disciplines are clearly shown and the contrasts.

- **FLF 212 French: Language, Culture, and Technology**: (GK, IP) -*Approved Unanimously*
  Discussion: Presented by member James Knowles.

- **SW 290 The Development of Social Welfare and Social Work in the U.S.:** (USD, IP) –*Approved Unanimously*
  Discussion: Presented by member David Gilmartin. Member asked if this was a history of social work or if it is a history of specific fields in social work. Presenter commented that certain components, such as communicating and work with a social worker, are social work based and the lectures focus on the history discipline.

GEP Review

- **ENT 203 An Introduction to the Honey Bee and Beekeeping**: (NS) – *Approved Unanimously*
  Discussion: Presented by member Frederick Parker. Member commented that there is a miss numbering in the syllabus, updates had been made to fix the formatting.

- **MUS 210 Introduction to Popular Music: 1950s-1970s**: (USD, VPA) –*Approved Unanimously*
  MUS 211 Introduction to Popular Music: 1980s-present: (USD, VPA) –*Approved Unanimously*
  Discussion: Presented by member Kim Outing after moving to combine the two MUS actions. Member commented that in the additional comments the title should be changed from "Rock Music" to "Popular Music". Members asked about the Additional Comment that the course is adding USD, XNOV members clarified this was from the last review.

Honors Special Topics

- **HON 293 001 Monstrosity, Madness, and Marginality**: (HUM) – *Approved Unanimously*
  Discussion: Presented by member Kim Outing. Member commented that specific examples of measurements would be helpful and that the measurements were all vague. Member asked if the committee could require this as opposed to "encouraging" the example. Members discussed why the example is not required but why specifics would be helpful. Chair commented that this is part of the Honors Packet, meaning these courses are currently being taught and comments will be provided to the instructors to make adjustments before the second offerings.

- **HON 295 001 Fraud, Corruption, and Business**: (SS) – *Approved Unanimously*
  Discussion: Presented by member Kim Outing. Members commented about bringing a bit more detail for the second offering. Members also complimented the course Member asked for examples of the prompts students will be asked for the second offering

- **HON 296 001 Big History: Cosmos, Earth, Life, and Humanity**: (IP) – *All Approved Unanimously*
  HON 296 002 Hip Hop and Civic Engagement: (IP, *USD*)
  HON 296 003 Philosophy of Research: (IP)
  HON 296 004 Science, Psi, Sasquatch, and Spirits: (IP)
  HON 296 005 The Nile Project: History, Music, and Culture: (IP)
  HON 296 006 Living in Genetically Engineered World: (IP)
  Discussion: Presented by member Kim Outing. Presenter HON 296 002 Member commented that there looks like an emphasis on USD. Members commented that the USD information is provided in the syllabus but the numbering would not allow for IP and USD. Members discussed Honors is restructuring the HON GEP shells and if this course may need to be offered with a different number. Member commented HON 296 006 would benefit from specifying what kinds of material students will be assessed on. Members moved to add USD to HON 296 002. Members approve all the HON 296 courses for IP and the addition of USD attribute to HON 296 002.

- **HON 299 001 Music in the Celtic World**: (VPA) – *Approved Unanimously*
  Discussion: Presented by member Kim Outing.

Discussion: No further discussion.

Meeting adjourned at 2:13 PM

Respectfully submitted by Lexi Hergeth

GEP Interdisciplinary Perspectives Special Topic Shell Offering (IPGE 295)

This form is to be used for submitting a Special Topics shell offering for the Interdisciplinary Perspectives GEP category to the Council on Undergraduate Education (CUE)

Course action proposals for a GEP shell offering must provide documentation to show how the course is designed to enable a student to achieve the particular GEP category objectives.

The ***GEP Interdisciplinary Perspectives objectives*** will provide instruction and guidance that help students to:

1. Distinguish between the distinct approaches of two or more disciplines.
2. Identify and apply authentic connections between two or more disciplines.
3. Explore and synthesize the approaches or views of the two or more disciplines.

IPGE 295		
Department(s)/Program	STEM Education College of Education	**New GEP Special Topics Offering** ✔
Special Topic Title: (30 character limit)	Integrating STEM and Education: An overview	**Review for 2nd Offering** ☐
Term to be Offered	Fall 2017	
Instructor Name/Title	Karen Keene, Associate Professor	

SECTION 1: GEP CRITERIA

Instructions:

- At least one of the Instructor's student learning outcomes must be listed under each GEP category objective.
- Achievement of the outcomes must allow students to meet the GEP category objectives.
- Outcomes must illustrate what students will do in order to demonstrate they have achieved the outcome.
- At least one means of evaluation must be listed under each outcome and provide data to allow the instructor to judge how well students have achieved outcomes.
- Student learning outcomes that are relevant to the GEP category objectives must be applied to all course sections.
- For assistance with writing outcomes and list of active verbs using ***Bloom's Taxonomy*** [Click Here]

List the Instructor's student learning outcomes for the course that are relevant to GEP *Interdisciplinary Perspectives Objective 1*:
Obj. 1) Distinguish between the distinct approaches of two or more disciplines.

Students will be describe the difference in the view of the STEM Disciplines as a part of the "hard sciences" and as a part of the U.S. Educational System in grades K-16.

Measure(s) for above Outcome:

Describe the assessments that will be used to determine if students have achieved the outcome. Including a relevant example assignment/question/prompt is encouraged for clarity.

Students will write a paper as the midterm evaluation. The prompt for the paper will be as follows: Choose a content area in one of the STEM disciplines. Research and then write a paper comparing and contrasting the perspectives of STEM as a hard science and STEM as something taught in schools.

List the Instructor's student learning outcome(s) for the course that are relevant to GEP *Interdisciplinary Perspectives Objective 2*:
Obj. 2) Identify and apply authentic connections between two or more disciplines.

Students will identify and discuss what is similar and different between learning science and learning science education.

Measure(s) for above Outcome:

Describe the assessments that will be used to determine if students have achieved the outcome. Including a relevant example assignment/question/prompt is encouraged for clarity.

Students will be given a midterm and one question will be like this:
Consider a 5th grade student learning about the scientific method. Explain the connections between that scientific idea and the way that should teach that idea. Repeat for a 9th grader.

List the Instructor's student learning outcome(s) for the course that are relevant to GEP *Interdisciplinary Perspectives Objective 3*:

Obj. 3) Explore and synthesize the approaches or views of the two or more disciplines.

STEM has become one of the biggest buzz words in the United States today. Billions of dollars are spent on funding research in STEM. Some of that research is to develop new knowledge in what we know about science and some of that is about how can better educate students in the area. This connection has become very tightly woven and often there is no distinction made.
Students will be able to discuss the differences between the hard sciences and the teaching of the hard sciences and explain the differences.

Measure(s) for above Outcome:

Describe the assessments that will be used to determine if students have achieved the outcome. Including a relevant example assignment/question/prompt is encouraged for clarity.

Students will read two grant proposals- one to research science, mathematics, or engineering and one research science, math, or engineering education. The will complete a project in groups presenting the differences with a poster or powerpoint and write a paper to go with it.

To assist CUE in evaluating this course for Interdisciplinary Perspectives, please provide answers to the following questions:

A. Which disciplines will be synthesized, connected, and/or considered in this course?

Science,Mathematics, Engineering, and Technology (STEM) and Education

B. How will the instructor present the material so that these disciplines are addressed in a way that allows the students "to integrate the multiple parts of view into a cohesive understanding"?

SECTION 2: REQUISITES AND SCHEDULING

General guidelines:

- GEP Courses should have at least 25% of seats non-restricted (i.e. available to all students).
- GEP Courses should have no more than ONE pre-requisite.
- GEP Special Topics are approved as a one-term offering.
- The course syllabus for all sections must include the GEP ***Interdisciplinary Perspectives*** category designation and GEP student learning outcomes.

Special Topics Term Scheduling:

- List below the course scheduling detail:
  - Meeting time and day(s): Tuesday 3:00-5:45 p.m.
  - Seat count: 20
  - Room assigned or room preference including needed classroom technology/seat type: Poe 320
- If this course is to be piggy-backed with a department special topic, list the piggy-backed course prefix/number below. (EX: BIO 295 with NSGK 295) **EMS 296**

What percentage of the seats offered will be open to all students? __100_____ %

a. If seats are restricted, describe the restriction being applied. NA

b. Is this restriction listed in the course catalog description for the course?

List all course pre-requisites, co-requisites, and restrictive statements ***(ex: Jr standing; Chemistry majors only).*** ***If none, state none.***

Course is not available to MEd majors

List any discipline specific background or skills that a student is expected to have prior to taking this course. If none, state none.
(ex: ability to analyze historical text; prepare a lesson plan)

None

SECTION 3: ADDITIONAL INFORMATION

Complete the following 3 questions or attach a syllabus that includes this information.

1. **Title and author of any required text or publications.**

Syllabus Attached

2. **Major topics to be covered and required readings including laboratory and studio topics.**

3. **List any required field trips, out of class activities, and/or guest speakers.**

SIGNATURE PAGE FOR IPGE 295

RECOMMENDED BY:

Kathy Gundle 3/28/17

HEAD, DEPARTMENT/PROGRAM — DATE

**For GEP Special Topics Submission Form, follow the standard workflow for approval of a special topic offering in your College which may or may not include review by the College CCC.*

ENDORSED BY:

Karen Keene 3/29/17

CHAIR, COLLEGE COURSES & CURRICULA COMMITTEE — DATE

3.29.17

COLLEGE DEAN — DATE

APPROVED BY:

CHAIR, COUNCIL ON UNDERGRADUATE EDUCATION — DATE

DEAN, DIVISION OF ACADEMIC AND STUDENT AFFAIRS (DASA) — DATE

APPROVED EFFECTIVE DATE _____

LEAD & SERVE

LEARN | EDUCATE | APPLY | DEMONSTRATE |
| SCHOLARLY | ETHICAL | REFLECTIVE | VALUE DIVERSITY | EXPERIENCED

LEAD and SERVE constitute the conceptual framework for all programs for professional educators at NC State. They are the touchstones that assure that our students graduate with the following:

1. LEAD: four forms of knowledge; general pedagogy, content-specific pedagogical strategies, content or discipline knowledge as well as knowledge of the context of education, including foundations, historical perspectives and school settings.

2. SERVE: elements that show the range of skills and dispositions developed in our candidates; scholarly, ethical, reflective, valuing diversity and experienced in practical application of knowledge.

Course Information

Course Prefix and Title: EMS 296 Special Topics in Mathematics Education/IPGE295 Special Topics

Rational for Integrating STEM and STEM Education special topics: STEM Education has become one of the biggest buzz words in the United States today. Billions of dollars are spent on funding research in STEM. Some of that research is to develop new knowledge in what we know about science and some of that is about how can better educate students in the area. This connection has become very tightly woven and often there is no distinction made. Additionally, there is a huge shortage of Math and Science teachers. Often students may find it something to consider to add teaching to their major. This course will do both- provide a real understanding of teaching, learning, and research about STEM and STEM Education, and offer some opportunities to consider teaching as a career.

Course Catalog Description: Individual or group study of particular areas of education at the freshman and sophomore levels. Specific topics will vary from semester to semester.

Course Prerequisites/Co-requisites: None

Course Credit: 3 hours

Meeting time: Tuesdays 3:00-5:45 PM

Class location: 320 Poe Hall

Instructors Information

Name: Dr. Karen Allen Keene

Email:	Karen_keene@ncsu.edu
Office location:	502K Poe Hall
Office Hours:	TH 10:00-11:00 or by appointment

Required Course Materials

PCAST Report on STEM Education (2010) (free)

The Structure of Scientific Revolutions 2nd Edition (1963) by Thomas Kuhn (10.00)

On Teaching Science: Principles and Strategies That Every Educator Should Know (13.00)

Other reading to be found on Moodle

Course Objectives

1. Students will describe the difference in the approaches to learning as students participate in the STEM Disciplines as "hard sciences" and as a part of the STEM disciplines in the U.S. Educational System in grades K-16.
2. Students will identify and discuss what is similar and different between learning science and learning science education.
3. Students will discuss the differences between the hard sciences and the teaching of the hard sciences and explain the differences.
4. Students will present science or math lessons at elementary, middle school, and high school levels.
5. Students will describe and support/not support advocacy positions in STEM Education.

Teaching strategies: Class discussions, group work, reflections, electronic communication, inquiry activities

Attendance Policy: Attendance and participation in class is mandatory. If you will miss class for any reason, you must notify the instructor before class to discuss the reason for an excused absence and be prepared to complete all in-class work and homework assignments. An unexcused absence will result in a loss of 2 points from the final grade. For questions about excused and unexcused absences, consult the university's website: Attendance Regulation (REG02.20.3).

Major Course Assignments and Grading Emphasis

Assignments	Final Course Grading Emphasis
Classwork and weekly assignments: Assignments will include presentations, evidence of in-depth treatment of reading, reflections, and homework problems. Each assignment will be given a point value and all totaled to get the number of points for this section.	30%
Grant analysis project: Students will work either individually or in pairs to analyze two grant proposals-one in science and one in science education. They will compare and contrast methods, products, and contributions to society.	20%
Midterm Exam: Students will complete an in-	20%

class essay midterm exam covering Science and Mathematics content, issues of equity, and lesson planning.	
Final Project: Students will find a topic that is in an area of interest and write a research paper and prepare a presentation on the comparison between how that topic is viewed in hard science and in the teaching of the hard science. Earlier deadlines to help students develop this will be included.	30%

List of topics:

Week 1-3	Introduction to STEM Education: Issues of Equity, Issues of K-12 articulation of topics, Issues of teaching at Elementary, Middle School, High School
Week 4-6	Introduction to Science (used as both math and science) and Engineering Big Ideas, History of Science
Week 7-9	Policy in STEM and STEM Education
Week 10-12	Teaching of STEM Topics
Week 13-15	Comparing and contrasting STEM and STEM Education

Students will be graded on all work. Final evaluation will be determined on the scale below.

Evaluation:

98-100	A+
93-97	A
90-92	A-
88-89	B+
83-87	B
80-82	B-
78-79	C+
73-77	C
70-72	C-
68-69	D+
63-67	D
60-62	D-
< 60	F

Instructor's Policies on Incomplete Grades and Late Assignments. Late work will be accepted up to 3 days after the due date with a 10% relative point deduction each day. Late work will NOT be accepted after the third day.

The Utilization Implication of the Honor Pledge: Honor Pledge follows:
"I have neither given nor received unauthorized aid on this test or assignment." The syllabus may specify that the Honor Pledge be signed on each test or assignment or that it is the understanding and expectation of faculty that the student's signature on any test or assignment means that the student neither gave nor received unauthorized aid.

IMPORTANT INFORMATION

A complete list of reminders for students at the beginning of the semester can be found at

http://www.ncsu.edu/registrar/guides/reminders.html

Students are bound by the academic integrity policy as stated in the code of student conduct. Therefore, students are required to uphold the university pledge of honor and exercise honesty in completing any assignment. See the website for a full explanation:
http://www.ncsu.edu/policies/student_services/student_discipline/POL11.35.1.php

The Unlawful Harassment Policy Statement provides that harassment based on race, color, religion, creed, sex, national origin, age, disability, veteran status or sexual orientation is a form of discrimination and will not be tolerated. For more information see http://www.ncsu.edu/policies/campus_environ/non-discrimination/REG04.25.4.php

Persons with Disabilities Statement: Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disability Services Office at Suite 2221, Student Health Center, Campus Box 7509, 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation (REG02.20.01)
http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.1.php

Online Hosting Statement: Students may be required to disclose personally identifiable information to other students in the course, via electronic tools like email or web-postings, where relevant to the course. Examples include online discussions of class topics, and posting of student coursework. All students are expected to respect the privacy of each other by not sharing or using such information outside the course.

Help for taking and passing PRAXIS I and II is available in the College of Education Learning Technology Resource Center located in room 400 of Poe Hall. PRAXIS registration information, study guides, etc. are found at www.ets.org/praxis Information on CED Teacher Education is found at http://ced.ncsu.edu/teachered

The Conceptual Framework may be found in its entirety at
http://ced.ncsu.edu/about/conceptual_framework.htm

Class Evaluations. Online class evaluations will be available for students to complete during the last two weeks of class. Students will receive an email message directing them to a website where they can login using their Unity ID and complete evaluations. All evaluations are confidential; instructors will never know how any one student responded to any one question, and students will never know the ratings for any particular instructor.

Evaluation Website: https://classeval.ncsu.edu

Student help desk: classeval@ncsu.edu

More information about classeval: http://www2.acs.ncsu.edu/UPA/classeval/index.htm