Course Inventory Change Request

New Course Proposal

Date Submitted: 11/24/15 2:48 pm

Viewing: EDUC 5060: STEM Practices in Technology and Problem-Based Learning

Last edit: 11/24/15 2:58 pm

Changes proposed by: D00171154

Catalog Pages referencing this course

Elementary STEM Endorsement

Course Prefix: EDUC
Course Number: 5060

Effective Semester: Spring 2017
Department: Education (EDUC)
School: School of Education
Course Title: STEM Practices in Technology and Problem-Based Learning
Short Course Title: STEM Practices in Technology

Credits: 3

In Workflow
1. EDUC Chair
2. ED Dean
3. University Curriculum Committee Chair
4. Banner

Approval Path
1. 11/24/15 2:51 pm
   Chizu Matsubara (matsubara): Approved for EDUC Chair
2. 12/10/15 8:47 am
   Robyn Whipple (whipple): Approved for ED Dean
Workload Factors: 4.5
Primary Grade Type: Standard Letter
Secondary Grade Type:
Instructor Permission Required: Yes
Repeatable for Credit: No
Schedule Type: Lecture Hrs/Wk: 5
Catalog Prerequisites? No
Corequisites? No
Course/Lab Fee? No
Instruction Index Code: FED214
Catalog Description
The STEM Practices course will engage participants in developing meaningful understandings of problem-based approaches to teaching, learning, and the integrations of STEM practices across the curriculum using appropriate technology. Participants will demonstrate their skills through the development and creation of a problem-based, hands-on experience.
Course Rotation: Spring (odd)
Justification for course/change: School of Education received a grant to develop and teach a six-course cycle in STEM education for the new STEM Teaching Endorsement offered by the Utah State Office of Education. The grant will pay the tuition for 20 teachers to take all six courses. This course will become part of the STEM Strand for the new Masters in Education Program. Contact hours, 2 per week lecture, 3 per week practicum.
Library Resources Yes
Adequate:

Tech Resources: Yes

Comparable Courses: (use USHE course first)

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<th>Institution</th>
<th>Prefix/Number</th>
<th>Credit(s)</th>
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Course Learning Outcomes:

1. Demonstrate the ability to provide access for all students to STEM education, including traditionally underrepresented groups that consider students of diverse backgrounds and perspectives.
2. Create a safe and supportive learning environment for all students to engage and learn integrated STEM concepts and practices.
3. Use student achievement data and formative assessment to design authentic, innovative, problem-based learning experiences.
4. Incorporate the nature of science and the engineering design cycle in lesson planning as outlined in the eight Scientific and Engineering Practices of the Next General Science Standards.
5. Implement appropriate assessment and technological tools to enhance STEM teaching, learning, student achievement, and college career readiness.
6. Work with colleagues to develop and use effective methods for organization and management of a problem-based learning environment to engage students in STEM learning.
7. Improve teaching and learning through reflective practice.