Washington State University
MAJOR CURRICULAR CHANGE FORM -- COURSE
(Submit original signed form and ten copies to the Registrar’s Office, zip 1035.)

Future Effective Date: 08/16/2013

☐ New course  ☐ Temporary course  ☐ Drop service course
☐ Variable credit  1-3  ☑ Repeat credit (cumulative maximum 9 hours)
☐ Increase credit (former credit ________)
☐ Number (former number ________)
☐ Crosslisting (between WSU departments)
   (Must have both departmental signatures)
☐ Conjoint listing (400/500)
☐ Request to meet Writing in the Major [M] requirement (Must have All-University Writing Committee Approval)
☐ Request to meet GER in ________ (Must have GenEd Committee Approval)
☐ Professional course (Pharmacy & Vet Med only)
☐ Other (please list request) ________________________________________________________________________

T&L

course prefix 585

Focused Reading and Conference in Math/Science Education
course no.
title

1-3

credit lecture hrs lab hrs studio hrs prerequisite

per week per week per week

Description (20 words or less)
This course is designed to foster ongoing scholarship for individuals interested in mathematics and/or science educational research.

Instructor: David Slavit
Contact: Debra Barnett
Campus Zip Code: 9600

Phone number: (360) 546-9653  Email: dslavit@wsu.edu
Phone number: (360) 546-9660  Email: debarnett@vancouver.wsu.edu

- Please attach rationale for your request, a current and complete syllabus, and explain how this impacts other units in Pullman and other branches (if applicable).
- Secure all required signatures and provide 10 copies to the Registrar’s Office.

Chair/date  Dean/date  General Education Com/date

Chair (if crosslisted/interdisciplinary)*

Dean (if crosslisted/interdisciplinary) *

Graduate Studies Com/date

All-University Writing Com/date

Academic Affairs Com/date

Senate/date

*If the proposed change impacts or involves collaboration with other units, use the additional signature lines provided or each impacted unit and college.
Course Rationale

T & L 585: Focused Reading and Conference in Math/Science Education

This course is designed to foster ongoing scholarship for individuals interested in mathematics and/or science education. Individual and collective professional growth will be supported through the formation of a community of learners committed to analyzing research literature, engaging in critical discourse, and collaborating to examine current innovations in mathematics and science education research pertaining to specific topics related to students’ current academic focus.

The course will facilitate this growth by having students:

1. Consider issues in the field of mathematics and/or science education research in order to understand major theoretical and empirical arguments that inform research and practitioner communities.
2. Develop skills to analyze elements of a research study: problem statement, research questions, supporting literature, conceptual framework, methodology, analysis, and implications.
3. Identify and synthesize critical issues in research.

Support will be provided for individual students who are currently starting or conducting ongoing research underway. The course will also develop ideas for future research or consider potential research areas and questions.

The course has no anticipated impacts on other units in Pullman. The course will be available to students at all campuses who are interested in mathematics and/or science educational research. The course will be taught on a rotating basis by faculty on the Pullman, Spokane, Tri-Cities and Vancouver campuses to ensure equitability in faculty load.
T&L 585  Focused Reading and Conference in Math/Science Education (1-3 cr)
Instructor: Kristin Lesseig
Office: VUCB 345
Email: kristin.lesseig@vancouver.wsu.edu
Phone: 360-546-9496
Office hours by appointment

Overview

This course is designed to foster ongoing scholarship for individuals within the Mathematics and Science doctoral program. Individual and collective professional growth will be supported through the formation of a community of learners committed to analyzing research literature, engaging in critical discourse, and collaborating to examine current innovations in mathematics and science education research pertaining to specific topics related to students’ current academic focus.

Course Goals

1. Consider issues in the field of mathematics and/or science education research in order to understand major theoretical and empirical arguments that inform research and practitioner communities.
2. Develop skills to analyze elements of a research study: problem statement, research questions, supporting literature, conceptual framework, methodology, analysis, and implications.
3. Identify and synthesize critical issues in research.
4. Support individual students in current research underway, developing ideas for future research, or considering potential research.

Assignments:

Individual focus statement (25 points):
A primary goal of this course is to support individual development and success in the mathematics and/or science education graduate program. To this end, at the beginning of the term, students will identify a primary research interest and discuss how participation in this course will support this focus. This focus may be a content topic (e.g. identity, equity, curriculum) or research methodology (e.g. discourse analysis, ethnography) as it pertains to mathematics and/or science education.
Leading class discussions (25 points):
In consultation with the instructor, each student will suggest common course readings in his/her identified focus area and guide class discussions of these readings during assigned week(s).

Weekly reading journal (125 points):
Central to this course, and an essential skill of any scholar, is an ability to understand arguments and unpack the central ideas authors are communicating whether or not they resonate with your own beliefs, experiences, or insights. As such your full participation in this course demands that you think critically about ideas presented in weekly readings. You are expected to complete the assigned readings prior to class and identify specific questions, quotes and examples from readings for the group to discuss. Notes and reflections from weekly readings will be recorded in an electronic journal to be submitted at three different times during the semester.

Individual project (75 points):
Course projects will be identified in the individual focus statement at the beginning of the term and will be due at end of course. Projects may include an initial literature review, a research proposal, or a summary of next steps based on reflection and further insights gained through course readings and discussions.

Grading will be assigned on the following scale:

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<thead>
<tr>
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**Course Schedule**

**Weeks 1-2**
Course introduction; establishing reading expectations. Initial readings (3-4 articles) from instructor generated list in key topic areas.

**Weeks 3-4**
Individual focus statement presentations. Reading and discussion of additional research articles building from initial instructor list as identified by group.

**Weeks 5-8**
Reading and discussion of 2-3 research articles per week selected according to individual student focus project.

**Week 9**
Midterm reflection – updates on progress toward individual project.
Weeks 10-13
Round 2 of readings and discussion of 2-3 research articles selected according to individual student focus project.

Week 14-15
Presentations of progress toward individual projects; synthesis of course readings

Week 16
Course summary and next steps.

Required Texts
None. Instructor will provide access to initial readings and additional articles as the group identifies them.

Potential Readings
Weekly readings will be chosen to further both depth and breadth of knowledge in a particular area of mathematics and/or science teaching and learning. As discussed above, these readings will be determined based on identified focus areas or current issues in math and science education and will remain flexible to accommodate the collective group interests. The instructor will provide an initial list of potential readings (see example below) with the expectation that additional readings will emerge as the course progresses.

Learning in math/science communities


**Teacher Knowledge**


**Equity**


**Disability Accommodation:** Reasonable accommodations are available for students with a documented disability. All accommodations must be approved through your WSU Disability Services office. If you have a disability and need accommodations, we recommend that you begin the process as soon as possible. All accommodations must be approved through Disability Services. For more information, contact a Disability Specialist on your home campus.

- **Spokane** http://students/current/StudentAffairs/disability/index.html
- **Pullman** http://accesscenter.wsu.edu
- **Tri-Cities:** http://www.tricity.wsu.edu/disability/index.html
- **Vancouver:** http://studentaffairs.vancouver.wsu.edu/student-resource-center/disability-services

**Academic Integrity:** Academic integrity is the cornerstone of the university and will be strongly enforced in this course. Any student found in violation of the academic integrity policy will be given an “F” for the course and will be referred to the Office of Student Conduct. Read [http://academicintegrity.wsu.edu/](http://academicintegrity.wsu.edu/).

For additional information about WSU’s Academic Integrity policy, procedures, and definitions, please check online at [http://www.conduct.wsu.edu/default.asp?PageID=338](http://www.conduct.wsu.edu/default.asp) and [http://www.conduct.wsu.edu/](http://www.conduct.wsu.edu/).

Note: Plagiarism is a violation of academic integrity. Students sometimes do not realize what constitutes plagiarism. Please read the information at [http://www.wssulibs.wsu.edu/plagiarism/what.html](http://www.wssulibs.wsu.edu/plagiarism/what.html) and associated links.
**Emergency Notification System:** WSU has made an emergency notification system available for faculty, students and staff. Please register at myWSU with emergency contact information (cell, email, text, etc). You may have been prompted to complete emergency contact information when registering for classes on RONet.

In the event of a **Building Evacuation**, a map at each classroom entrance shows the evacuation point for each building. Please refer to it.

Finally, in case of **class cancellation campus-wide**, please check local media, the appropriate WSU web page and/or [http://www.flashalert.net/](http://www.flashalert.net/). Individual class cancellations may be made at the discretion of the instructor. Each individual is expected to make the best decision for their personal circumstances, taking safety into account.

**Audio, video, digital, commercial note-taking and other recording during class:**

Copyright (insert year) (insert Faculty Name) as to this syllabus, all lectures, and course-related written materials. During this course students are prohibited from making audio, video, digital, or other recordings during class, or selling notes to or being paid for taking notes by any person or commercial firm without the express written permission of the faculty member teaching this course.
WASHINGTON STATE UNIVERSITY  
College of Education  
Course Syllabus

T&L 585     Focused Reading and Conference in Math/Science Education (1-3 cr)  
Instructor: Kristin Lesseig  
Office: VUCB 345  
Email: kristin.lesseig@vancouver.wsu.edu  
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Learning in math/science communities

Teacher Knowledge
Abell, S. K. (2008). Twenty Years Later: Does pedagogical content knowledge remain a
Berliner, D. C. (1986). In pursuit of the expert pedagogue. *Educational Researcher,
15*(7), 5-13.
knowledge: The construct and its implications for science education* (Vol. 6).
Springer.
Netherlands: Springer.
pedagogical content knowledge for science teaching. *Examining pedagogical content knowledge*, 95–132.
*Educational Researcher, 15*(2), 4-14.
pedagogical content knowledge. *Journal of Research in Science Teaching, 35*(6),
673–695.

*Equity*
teaching approach: The case of railside school. *Teachers College Record,
110*(608), 645-649.


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