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SEP 30 2011

FORMAT 1

Submit original with signatures of 4 copies electronic copies to Faculty Council (2011-2012)

student learning. This course is intended for graduate students in the sciences who have an interest in improving their teaching skills. The course format will be a mixture of discussion, workshops and seminars. If the course is over-enrolled, priority will be given to teaching assistants who are assigned to teach lower-level courses.

17. PREVIOUS HISTORY

Has the course been offered as special topics or trial course previously?
Yes/No

Yes

If yes, give semester, year, course #, etc.:

BIOL/GEOS/CHEM/PHYS 693: Spring 2010 and Spring 2011
This course was co-taught by 6 instructors when it was first offered in Spring 2010. In Spring 2011 instructors Kind and Fowell revised the course based on the trial off...

18. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

This course will have minimal impact on budget and facilities. Instructors Kind and Fowell have included this as a regular part of their respective workloads. Few materials are required, and a room is required for only one evening per week, for 2 hours. Virtually any room that will accommodate group discussions for up to 20 students can be used.

19. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

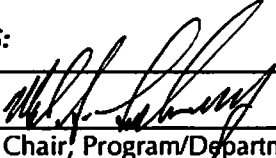
No Yes


The articles we are using are available through the library's website. We are sure of this, based on the Spring 2011 trial course.

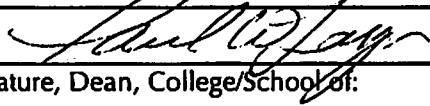
20. IMPACTS ON PROGRAMS/DEPTS

What programs/departments will be affected by this proposed action?

APPROVALS:

 Date 29 Sep 2011
Signature, Chair, Program/Department of: Biology + Wildlife

 Date 5 Oct 2011
Signature, Chair, College/School Curriculum Council for: CNSM

 Date Oct 5, 2011
Signature, Dean, College/School of: CNSM

 Date 

Signature of Provost (if applicable)

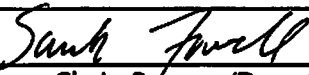
Offerings above the level of approved programs must be approved in advance by the Provost.

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE




 Date 

Signature, Chair, UAF Faculty Senate Curriculum Review Committee

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

 Date 9/28/11
Signature, Chair, Program/Department of: Geology + geophysics

 Date 
Signature, Chair, College/School Curriculum Council for: 

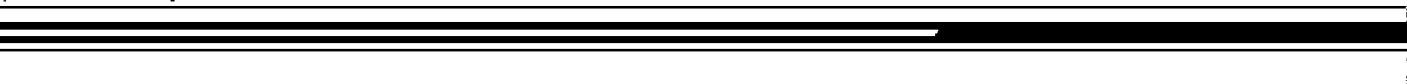
 Date 
Signature, Dean, College/School of: 

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

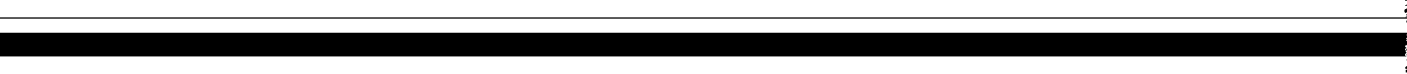
 (William Simpson) Date 29 Sep 2011
Signature, Chair, Program/Department of: 











**Biology 679 / Chemistry 679 / Geosciences 679
Scientific Teaching**

Instructors:

Denise Kind PhD, Biology and Wildlife Email: dmkind@alaska.edu Office: 309 Bunnell Office phone: 474-6298 Office hours: By appointment	Sarah Fowell PhD, Geology and Geophysics Email: sjfowell@alaska.edu Office: 326 REIC Office phone: 474-7810 Office hours: M 11:30-1:30, W 1:00-3:00
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Meeting Time and Location: 308 Bunnell, Monday, 6:00-8:00 pm

Course Materials:

W.H. Freeman and Company.

See the syllabus for additional reading assignments and instructions.

3. Construct and maintain a *learner-centered classroom*.

4. Draft a *teaching philosophy* that reflects understanding of current educational research and how students learn. Such philosophies are a standard part of a college or university faculty application.

assessment tools is crucial for positions that involve aspects of teaching and curriculum design.

Course Goals

- to help students and instructors improve their ability to teach both course content and the

- analytical skills undergraduates need to carry out inquiry-based science
- to familiarize students with the best teaching practices, as established by research

**Schedule for BIOL 679 / CHEM 679 / GEOS 679:
Scientific Teaching**

Date	Topic	Due at start of class
Jan. 23	How People Learn; What Active Learning Is (and Isn't)	<ul style="list-style-type: none">• Armbruster et al. 2009• Knight & Wood 2005• McConnell et al. 2003
Jan. 30	Bloom's Taxonomy – How to help students develop	<ul style="list-style-type: none">• Handelsman et al., Ch 1 & 3

Mar. 26	Writing a Teaching Philosophy – what a teaching philosophy is and how to write a great one	<ul style="list-style-type: none">• O’Neal et al. 2007• sample teaching philosophies• Revised teachable unit + activity
Apr. 2	Group Work I – Brainstorming, jigsaw exercises <i>Peer evaluation of teaching philosophies</i>	<ul style="list-style-type: none">• McConnell et al. 2005• Shimazoe & Aldrich 2010• Felder & Brent 2001• Draft of teaching philosophy

Klymkowsky, M., and K. Garvin-Doxas. 2008. Recognizing student misconceptions through Ed's Tools and the Biology Concept Inventory. *PLOS Biology* 6(1):14-17.

Musante, S. 2009. You're teaching, but how do you know they're learning? *BioScience* 79(7):557.

Roediger III, H., and J. Karpicke. 2006. The power of testing memory: basic research and implications for educational practice. *Perspectives on Psychological Science* 3:181-210.

Smith, M., W. Wood and J. Knight. 2008. The genetics concept assessment: A new concept inventory for gauging