

**University of Alaska Fairbanks  
School of Education  
Course Syllabus ED F593 Spring 2012  
Dr. Kathy Berry Bertram**

***ED F593 Current Topics in the Natural Sciences for Educators  
Science for Alaska Lecture Series 2012***

**Number of Credits:** Variable with options to earn either 1, 2 or 3 units. Please note the difference in coursework corresponding to unit worth.

**Location:** Six Science for Alaska lectures and Educational Development Workshops will all be posted online and delivered at the Westmark Hotel Gold Room, 814 Nobel Street, in Fairbanks. Additional lectures and all coursework will be accessible online through Blackboard.

**Time:** Science for Alaska lectures offered in-person on Tuesdays, January 31, February 7, 14, 21, 28 and March 6, 2012. Educational Development Workshops begin at 6:30 p.m. and lectures follow at 7 p.m. The duration of one workshop, one lecture and the question and answer period will be approximately 2.5 hours. Depending on student location, you may or may not be attending the lectures in person. The lectures can be accessed online after the presentation. In addition, Science for Alaska lectures will be offered by DVD and viewable online. Supplementary lectures, for students earning 2 to 3 credits, range in length with an average running time of 50 minutes. All assignment requirements for ED 593 can be submitted through Blackboard.

**Instructor Contact Information:**

Dr. Kathy Berry Bertram  
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**Course Description:** *ED F593 Current Topics in the Natural Sciences for Educators* is sponsored by the Geophysical Institute at UAF and will be offered in conjunction with the 2012 Science for Alaska Lecture Series. This continuing education course for teachers is designed to promote communication between educators and practicing scientists to improve science teaching and to encourage youth to pursue careers in science. This annual lecture series features scientists from the University of Alaska, along with experts from state and federal agencies and industry. The course activities create opportunities for lesson plan creation and are all submitted online. The goal of the course is to foster new curriculum building and open the exchange of teaching tools and resources among educators.

**Student Resource Course Materials:** All course material is posted on Blackboard. Please activate your Blackboard account at <http://classes.uaf.edu/>.

**Prerequisite:** There are no prerequisites for this course.

**Course Goals:** The goal of *ED F593 Current Topics in the Natural Sciences for Educators* is to promote exchanges among educators and practicing scientists to improve science teaching and promote student interest in science subjects — ultimately increasing pursuance of careers in the sciences. With the help of educators and scientists, students can learn current applications of science that are taking place right here in Alaska. During the course, teachers will develop curriculum and share lesson plans that include topics from the lecture series. Lesson plans will also incorporate National Science Standards and assessment techniques.

**Student Learning Objectives:** Upon completion of this course, those enrolled should be able to:

- Understand current research in Natural and Earth Sciences
- Link cutting-edge scientific discoveries with Alaska-specific information
- Develop curriculum integrating topics from lecture series into classroom lectures
- Design and deliver lesson plans that focus on scientific knowledge that is both current and regionally specific
- Maintain and utilize working connections with university resources for classroom use and improvement
- Address Grade Level Expectations and other standardized requirements within their lesson plans
- Integrate new technology into classroom teaching activities
- Share skill worksheets and teaching concepts with coworkers
- Share prepared teaching modules with other science teachers in school or district
- Use earned university credits towards gaining salary advancement and meeting continued education/professional development criteria

**Instructional Methods:** Distance delivery over Blackboard, with the option of attending the Science for Alaska Lecture Series in person at the Westmark Hotel, Fairbanks.

**Disability Statement:** The University of Alaska Fairbanks and the College of Rural and Community Development are committed to equal opportunity for students with disabilities. Students who have special needs or disabilities are encouraged to contact the coordinator of Disability Services at the Center for Health & Counseling so that accommodations for this course can be provided (907-474-7043 or [fydso@uaf.edu](mailto:fydso@uaf.edu); for more information: <http://www.uaf.edu/chc/disability.html>).

**Student Support Services:** Need help? Computer help? Listed here are some useful resources:  
Off-Campus Library Services at 1-800-478-5348 or email [fyddl@uaf.edu](mailto:fyddl@uaf.edu), for more information go to [http://www.uaf.edu/library/instruction/ls101/other/Distance\\_Resources.html](http://www.uaf.edu/library/instruction/ls101/other/Distance_Resources.html)  
Office of Information Technology Help Desk at 1-800-478-4667/907-474-6564 (Blackboard)  
Rural Student Services (RSS) at 1-888-478-1452/907-474-7871 or email [fyrss@uaf.edu](mailto:fyrss@uaf.edu)  
UAF Student Support website at <http://www.uaf.edu/sssp/>.  
UAF U-Park Computer Lab at 907-474-5761

**Evaluation:** This course is Pass/Fail. To receive credit, each student must complete the assignments listed below. Many of the due dates allow for individual freedom to complete assignments. However, some assignments for students pursuing 2 or 3 credit hours are interconnected and are to be turned in together. All work is to be submitted via Blackboard and all course related email will be sent to your UAF account — make sure your account is activated.

**Assignments for Earning 1 Unit:**

#	Assignment	Details	Due Date
1	<b>Participant Biography</b>	Publish a short piece about yourself, your location, your teaching assignment(s), etc. on Blackboard so that other members of the class learn a bit about you. Photos and links are encouraged and sure to be appreciated by others, but are optional.	On or before February 13, 2012.
2	<b>Synopsis of Lectures and Educational Development Activities</b>  <i>There are six lectures – do assignment for every lecture</i>	After attending/viewing each lecture and the corresponding Educational Development Activities, post a synopsis of what you learned. This should be written in a format that is not only useful to you, but also organized in a manner that other professionals will understand.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	1/31, due 2/20 2/7, due 2/27 2/14, due 3/5 2/21, due 3/12 2/28, due 3/19 3/6, due 3/26
3	<b>Lesson Plan/Activity to Support Lectures</b>  <i>There are six lectures – do assignment for every lecture</i>	For each lecture, post a lesson plan/activity that supports/reinforces the topic/content. Make it detailed enough so that others can teach from your outline. Your lesson/activity can be one you have actually done or a new lesson you hope to do. Alignment to content and/or performance standards and/or assessments are not required, but your procedure should be clear enough for others to follow. Links to useful classroom resources would be appreciated.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	Follow above date schedule. Plan on posting your work within three weeks of each lecture. Arrangements for turning in late work will need to be discussed prior to due date.
4	<b>Peer Review of Lessons</b>  <i>There are six lectures – do assignment for every lecture</i>	Review and post comments to two others' lesson plans/activities for each lecture. You need not always post to the same person, as one goal from this class is to connect to a variety of teachers from around the state. You need not try a lesson in order to post a peer review.	No specific dates for each lesson's peer reviews, but all reviews are due for posting by May 4.

**Assignments for Earning 2 Units:**

<b>#</b>	<b>Assignment</b>	<b>Details</b>	<b>Due Date</b>
1	<b>Participant Biography</b>	On Blackboard publish a short piece about yourself, your location, your teaching assignment(s), etc. so that other members of the class learn a bit about you. Photos and links are encouraged and sure to be appreciated by others, but are optional.	On or before February 13, 2011.
2	<b>Synopsis of Lectures and Educational Development Activities</b>  <i>There are six lectures – do assignment for every lecture</i>	After attending/viewing each lecture and the corresponding Educational Development Activities, post a synopsis of what you learned. This should be written in a format that is not only useful to you, but also organized in a manner that other professionals will understand.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	1/31, due 2/20 2/7, due 2/27 2/14, due 3/5 2/21, due 3/12 2/28, due 3/19 3/6, due 3/26
3	<b>Lesson Plan/Activity to Support Lectures</b>  <i>There are six lectures – do assignment for every lecture</i>	For each lecture, post a lesson plan/activity that supports/reinforces the topic/content. Make it detailed enough so that others can teach from your outline. Your lesson/activity can be one you have actually done or a new lesson you hope to do. Alignment to content and/or performance standards and/or assessments are not required, but your procedure should be clear enough for others to follow. Links to useful classroom resources would be appreciated.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	Follow above date schedule. Plan on posting your work within three weeks of each lecture. Arrangements for turning in late work will need to be discussed prior to due date.
4	<b>Peer Review of Lessons</b>  <i>There are six lectures – do assignment for every lecture</i>	Review and post comments to two others' lesson plans/activities for each lecture. You need not always post to the same person, as one goal from this class is to connect to a variety of teachers from around the state. You need not try a lesson in order to post a peer review.	No specific dates for each lesson's peer reviews, but all reviews are due for posting by May 4.
5	<b>Supplementary Reading for Lecture Topics</b>  <i>You should have six lesson plans – do this for each one</i>	Using bibliographies from lecture series (provided by the Geophysical Institute's Mather Library), select two sources to read or view, summarize, and integrate into the lesson plan you designed for Assignment #3  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	Due with submission of each lesson plan for Assignment #3
6	<b>Supplementary Research for Lesson Plan/Activity</b>  <i>You should have six lesson plans – do this assignment for each one</i>	Using resources available to you, find two additional sources or multimedia examples that can be integrated into your existing lesson plan for each of the six topics. Items that will lend themselves to hands-on activities or non-lecture teaching are preferred.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	Due with submission of each lesson plan for Assignment #3

7	<b>Synopsis of Mentor Lectures</b>  <i>There are 17 short lectures – do assignment for every lecture</i>	After viewing each lecture, post a synopsis of what you learned. This should be written in a format that is not only useful to you, but also organized in a manner that other professionals will understand.	Please complete this throughout the course in a timely manner.
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1	<b>Participant Biography</b>	On Blackboard publish a short piece about yourself, your location, your teaching assignment(s), etc. so that other members of the class learn a bit about you. Photos and links are encouraged and sure to be appreciated by others, but are optional.	On or before February 13, 2011.
2	<b>Synopsis of Lectures and Educational Development Activities</b>  <i>There are six lectures – do assignment for every lecture</i>	After attending/viewing each lecture and the corresponding Educational Development Activities, post a synopsis of what you learned. This should be written in a format that is not only useful to you, but also organized in a manner that other professionals will understand.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	1/31, due 2/20 2/7, due 2/27 2/14, due 3/5 2/21, due 3/12 2/28, due 3/19 3/6, due 3/26
3	<b>Lesson Plan/Activity to Support Lectures</b>  <i>There are six lectures – do assignment for every lecture</i>	For each lecture, post a lesson plan/activity that supports/reinforces the topic/content. Make it detailed enough so that others can teach from your outline. Your lesson/activity can be one you have actually done or a new lesson you hope to do. Alignment to content and/or performance standards and/or assessments are not required, but your procedure should be clear enough for others to follow. Links to useful classroom resources would be appreciated.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	Follow above date schedule. Plan on posting your work within three weeks of each lecture. Arrangements for turning in late work will need to be discussed prior to due date.
4	<b>Peer Review of Lessons</b>  <i>There are six lectures – do assignment for every lecture</i>	Review and post comments to two others' lesson plans/activities for each lecture. You need not always post to the same person, as one goal from this class is to connect to a variety of teachers from around the state. You need not try a lesson in order to post a peer review.	No specific dates for each lesson's peer reviews, but all reviews are due for posting by May 4.
5	<b>Supplementary Reading for Lecture Topics</b>  <i>You should have six lesson plans – do this for each one</i>	Using bibliographies from lecture series (provided by the Geophysical Institute's Mather Library), select two sources to read or view, summarize, and integrate into the lesson plan you designed for Assignment #3  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	Due with submission of each lesson plan for Assignment #3
6	<b>Supplementary Research for Lesson Plan/Activity</b>  <i>You should have six lesson plans – do this assignment for each one</i>	Using resources available to you, find two additional sources or multimedia examples that can be integrated into your existing lesson plan for each of the six topics. Items that will lend themselves to hands-on activities or non-lecture teaching are preferred.  <i>Please post your work within three weeks of the lecture to aid in timely exchange of information among others in the course.</i>	Due with submission of each lesson plan for Assignment #3
7	<b>Synopsis of Mentor Lectures</b>	After viewing each lecture, post a synopsis of what you learned. This should be written in a format that is not only useful to you, but also organized in a manner that other professionals will	Please complete this throughout the course in a

	<i>There are 17 short lectures – do assignment for every lecture</i>	understand.	timely manner.
<b>8</b>	<b>Supervised Scholarly Activity #1</b>  <i>You should have six lesson plans – do this assignment for each one</i>	Deliver the six lectures you designed for Assignment #3 and write your feedback in six short write-up papers that address: 1) what you thought worked or did not work in your classroom, 2) student responses or reactions, 3) whether you will use the lesson plan again in the future, and 4) whether you will be altering it in any way and why?	On or before May 4.
<b>9</b>	<b>Supervised Scholarly Activity #2</b>	Plan and facilitate a seminar that includes your coworkers, school administrators, and/or community members where you present an overview of what you learned through the course. Share your lesson plans, your personal approach to curriculum in your science classroom, and suggestions you have developed to improve the overall success of your school’s science program. Can be a formal or informal meeting depending on your situation. A write up of your presentation should include: 1) who attended, 2) your presentation notes, 3) any notes of any feedback you received, and 4) your reactions and thoughts regarding the meeting you facilitated (Where your suggestions challenged? Did your coworkers agree with you? Do you feel more Professional Development and Continued Education courses would be useful?).	On or before May 4.
<b>10</b>	<b>Supervised Scholarly Activity #3</b>	Send brief weekly journal-style reports to update me on your progress and future plans with the course materials and assignments.	Once a week upon the completion of the lecture series