University of Alaska Fairbanks  
School of Natural Resources and Agricultural Sciences  
Department of High Latitude Agriculture  

Natural Resource Management (NRM) 595  
Enhancing Agriculture Literacy for Regular Education, Gifted and Special Education Teachers  
1-2 Credit, Graded A-F  

Summer 2015  

Course Sponsor: Alaska Ag in the Classroom, Alaska Division of Agriculture, Fairbanks Soil and Water Conservation District  

Instructors: Marilyn Krause, Melissa Sikes, guest presenters  

Contact Information  
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Course Meeting Information:  
Location: UAF Agricultural and Forestry Experiment Station  
Fairbanks Experiment Farm  

Start and End Date: June 2-5, 2015  
Four–day Institute  

Final Project Due: Oct. 16, 2015  

Class Day(s) & Time(s): 9-hr (8am – 5 pm) workshop and field trips for 4 days (1 credit), submit lesson plans (2 or more) after implementation in classroom (2 credits)  

Course Description: This course introduces teachers to many aspects of Alaska agriculture, including conservation, production and marketing. It introduces the many resources available through the Alaska Ag in the Classroom program, and interdisciplinary methods, including STEM, to teach principles of agriculture, strategies to promote students’ understanding of soil science, the water cycle, nutrition, gardening/gathering, agro-economics, animal science, innovations, and careers. The class offers supplemental, differentiated, challenging curriculum and instruction for regular
education, resource and gifted students. Guest presenters will cover a wide variety of topics. Field trips will provide hands-on opportunities. Using lessons developed for Alaska and Nation Ag in the Classroom programs, the instructors will demonstrate how agriculture provides a hook to catch student’s interests.

**Intended Audience:** K-12 Educators

**Course Prerequisite/Co-requisites:** None

**Alignment with School of Natural Resources and Agricultural Sciences Vision, Mission and Conceptual Framework:**
We believe that the preparation and support of professional educators is the shared responsibility of the University of Alaska Fairbanks and our partners, and that our programs must evolve dynamically in response to unique community needs, research and continued program assessment. This course is designed to meet a professional development need in response to our partner school districts and professional organizations. The course fits within the mission of the School of Natural Resources and Agricultural Sciences as we encourage lifelong learning to meet the challenges of a rapidly changing world.

**Link to Standards for Alaska Teachers:**
This professional development effort is firmly rooted in the fundamentals of the standards for Alaska Teachers. It is offered to encourage and support practicing educators in attaining, maintaining, or surpassing the standards that, as stated in Standards for Alaska’s Teachers, “define the skills and abilities of our teachers and administrators need to possess to effectively prepare today’s students for successful lives and productive careers.” (Roger Sampson, http://www.eed.state.ak.us/standards/pdf/teacher.pdf)

**Course Design:**
- Requires 39 contact hours including classroom instruction, scheduled activities and field trips (1 cr) and approximately 30 hours of work outside class (2 cr).
- Does not apply to any UAF certificate or degree program
- $150 materials and field trip fees beyond standard charges.
- This course is based upon the collegial sharing, collaboration, and support of the participants and facilitator as a community of learners. Course activities will include group discussions, collective learning processes, peer coaching/mentoring, and reflective practices.

**Instructional Goals and Defined Outcomes:**
RESEARCH BASED THEORY/PRINCIPLES/PRACTICES/TRENDS (CONTENT)

1.0 **Instructional Goal:**
Outline value and integration of agriculture and its related fields to educators for sharing with students.
Introduce Ag in the Classroom (AITC) curriculum and demonstrate interdisciplinary methods to teach principles of agriculture.

Defined Outcome:
1.1 Participants will examine important components of the agricultural industry and Alaska Agriculture in particular.

1.2 Participants will examine Key elements of the AITC curriculum.

1.3 Participants will examine inquiry-based learning approaches to engage the scientific mind of students.

1.4 Participants will examine how to integrate agriculture content matter and science principles to enhance STEM (Science, Technology, Engineering and Mathematics).

1.5 Participants will describe the relevancy of curriculum and interdisciplinary teaching methods to their experiences, classroom practices, and students’ needs.

THEORY INTO PRACTICE (APPLICATION)

2.0 Instructional Goal:
Provide a collaborative structure for participants to adapt the AITC curriculum for use in their classroom practices.

Defined Outcome:
2.1 Participants will examine the strengths and potential problems of implementing the AITC curriculum in their classrooms.

2.2 Participants will describe how they will use the curriculum to promote an understanding of human interrelationships with the environment and the wise use of natural resources.

REFLECTION ON THEORY INTO PRACTICE (REFLECTION)

3.0 Instructional Goal:
Engage participants in reflective examinations of the curriculum and the interdisciplinary approach for teaching principles of the ecosystem.

Defined Outcome:
Participants will analyze and reflect upon the AITC curriculum, its
application to their classroom, the outcomes of the implementation, and the implication for future instructional direction, as well as professional learning needs.

RELATIONSHIP TO STANDARDS

4.0  Instructional Goal:
Familiarize participants with the district, state, and national standards addressed by the strategies and concepts presented.

Defined Outcome:
Participants will identify the standards met by implementing the AITC curriculum in their classrooms and by creating new lesson plans for the AITC program.

Writing Style Requirements:
Participants’ writing will reflect the clarity, conciseness, and creativity expected of post-baccalaureate certificated educators.

Attendance and Make-up Policy:
Participants are expected to actively and collegially participate in all activities as a contributing member of a learning community. Attendance at every workshop session is, therefore, very important and make-up for missed sessions will be approved by the instructor on an exception basis only.

Course Assignments, Assessment of Learning, and Grading System

Contact Hours (total 39)

In-Person Workshop 36 hours

Post-Workshop contact/Conference on Lessons 3 hours

Non-Contact Hours (total 30/60)
(required to receive 2\textsuperscript{nd} credit)

Pre-Course assignment 2 hours

Develop curriculum (at least 2 lessons or units for 2\textsuperscript{nd} credits) 15/30 hours

Deliver curriculum to students 6/14 hours

Fine-tune and format curriculum 4/8 hours

Peer evaluate curriculum 2/4 hours
Evaluate success of curriculum  

1/2 hours

Totals  

30/60 hours

Course Calendar/Schedule:

Completed pre-course assignment  

before

In-person workshop

Curriculum presentations

Final curriculum submitted

Evaluations submitted

*Final Project due:

Course grading will be A-F based upon the following. Models and rubrics will be provided for each assignment.

a. Workshop Participation (including pre-course assignment)  

45%

Participants are expected to actively and collegial participate in all activities.

b. Lesson Plan/Curriculum  

50%

Participants are expected to collegially prepare their lesson plan project on or before the scheduled

c. Self-review of Lesson  

5%

Participants are expected to use input from colleagues and students to write a self-assessment to be included with final project.

Quality of Work

Assignments, projects, papers, presentations, etc. will be graded for quality as follows:

“A” work goes beyond the assignment in originality, scholarship or critical thinking; excellent in all aspects.

“B” work is complete, comprehensive, and well prepared; clearly indicates that considerable time and intellectual effort was expended in preparing the
assignment.

“C” work is average; completed as requested, on time and in appropriate format.

“D” work is below average; incomplete or chronically late; in inappropriate format; does not meet course standards, shows limited effort and understanding.

“F” indicates that the student has not met the guidelines for “A-D” work.

Related Professional Organizations
National Science Teachers Associations

Course Texts, Readings, Handouts, and Library Reserve:

Required Text/Materials:

Alaska Ag in the Classroom Super Combo Ag Literacy CD (supplied)
Hopeful Harvest CD (supplied)

Content References:
Each presenter will present using their own references and will supply on the day they present.


Other materials from:

http://www.usda.gov/
US Department of Agriculture

http://www.alaskafb.org/
Alaska Farm Bureau

http://www.agclassroom.org/
Ag in the Classroom

http://dnr.alaska.gov/ag/
Alaska Division of Agriculture

http://www.nr.cs.usda.gov/
Natural Resource Conservation Service

http://www.mypyramid.gov/
USDA Food Pyramid

Standards References:

http://www.ankn.uaf.edu/standards/standards.html


Course Policies:

Incomplete Grades
An “I” (incomplete) is a temporary grade. It is used to indicate that a student has made satisfactory progress in the majority of the work in a course, but for unavoidable absences or other conditions beyond the control of the student, has not been able to complete the course. The Incomplete Grade Contract, a signed contract form between the student and the course instructor that stipulates the assignment(s) required to finish the course, is required and must be completed before an “I” grade is assigned. Course work must be completed by a date specified in the contract, not to exceed one year. Upon completion of the required course work, the course instructor must submit a change of grade to the UAF Registrar. If course work is not completed within one year or
if the terms specified on the Incomplete Grade Contract are not met, the student may be assigned a failing grade (F).

**ADA Policy**
The provision of equal opportunities for students who experience disabilities is a campus-wide responsibility and commitment. Disabilities Support Services (DSS) is the designated UAA department responsible for coordinating academic support services for students who experience disabilities. To access support services, students must contact DSS (907)474-5655, or by TTY at (907)474-1827 and provide current disability documentation that supports the requested services. Disability support services are mandated by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. Additional information may be accessed at the DSS office in the Whitaker Building room 208 or online at http://www.uaf.edu/disability/.

**Academic Dishonesty Policy**
Academic integrity is a basic principle that requires all students to take credit only for the ideas and efforts that are their own. Cheating, plagiarism, and other forms of academic dishonesty are defined as the submission of materials in assignments, exams, or other academic work that is based on sources prohibited by the faculty member. Academic dishonesty is defined further in the “student Code of Conduct”. In addition to any adverse academic action that may result from the academically dishonest behavior, the University specifically reserves the right to address and sanction the conduct involved through student judicial review procedures and the Academic Dispute Resolution Procedure specified in the University catalog.

**Professional and Ethical Behavior**
Students are expected to abide by the State of Alaska Code of Ethics of the Education Profession (http://www.eed.state.ak.us/teachercertification/20aac10.html) and professional teaching standards as they concern students, the public and the profession. The standards, adopted by the Professional Teaching Practices Commission, govern all members of the teaching profession. A violation of the code of ethics and professional teaching standards are grounds for revocation or suspension of teaching certification.

**Technology Integration**
Students are expected to (a) demonstrate sound understanding of technology operations and concepts; (b) plan and design effective learning environments and experiences supported by technology; (c) implement curriculum plans that include technology applications in methods and strategies to maximize student learning; (d) facilitate a variety of effective assessment and evaluation strategies; (e) use technology to enhance productivity and professional practice; and (f) understand the social, ethical, and human issues surrounding use of technology in Pre-K-12 schools and apply those principles in practice.

**NOTE**
This course syllabus was adapted from the course titled Enhancing Agriculture Literacy, offered as ED 580/416 and NRM 593 by the College of Education at the University of Alaska Anchorage and the University of Alaska Fairbanks. The course content is from curricula developed by the National Ag in the Classroom Program (http://www.agclassroom.org/).