

University of Alaska Fairbanks

New Occupational Endorsement Request: Format 3A

**OCCUPATIONAL ENDORSEMENT IN RURAL SURFACE WATER QUALITY
TESTING**

9 credits minimum

Submitted by
UAF Bristol Bay Campus
College of Rural and Community Development
November 2015

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II. IDENTIFICATION OF THE OCCUPATIONAL ENDORSEMENT

DESCRIPTION OF THE OCCUPATIONAL ENDORSEMENT

Occupational Endorsement Title: Rural Surface Water Quality Testing

Admission Requirements and Prerequisites:

Course Descriptions

Requirements for the Endorsement

Complete the following Water Quality requirements (9 to 13 credits)

PLANS FOR PHASING OUT PROGRAM IF UNSUCCESSFUL
ASSESSMENT OF THE PROGRAM

Occupational Endorsement in Rural Surface Water Quality Testing Individual Learning
Outcomes Assessment Rubric

IX. APPENDICES

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quality training. The proposed OE in Rural Surface Water Quality Testing will provide students with a broad-based educational foundation to conduct basic quality analysis and acquire defensible data. This OE will not specifically train a student for one career path but will teach the students a universal skill set that can be used for a broad range of careers including EPA IGAP assistants and coordinators. These skills could also serve as a foundation for other technical work available in their communities. Training local students in these sk

C. PROVISION FOR REVIEW SIGNATURES OF PREPARATION:

CRCD Science Chairman

Date

Environmental Studies Program Head

Date

Reborah M. Lean

9-4-15

Director, UAF Bristol Bay Campus

Date

9/8/15

Director, UAF Northwest Campus

Date

**College of Rural and Community Development
Academic Council**

Date

Dean, College of Rural and Community Development

Date

SIGNATURES FOR APPROVAL:

Curricular Affairs Committee Chair

Date

President, UAF Faculty Senate

Date

Chancellor, UAF

Date

develop their own U.S. EPA approved QAPP for surface water quality monitoring.
Prerequisites: ENVI F110 and ENVI F11 or permission of instructor. (0.5+0+1.5)

ENVI 160 – Internship in Environmental Studies (1-2 cr)

Under the guidance of a UAF Bristol Bay Campus-approved agency or business (public or private that monitors, tests, analyzes or studies the environment), students gain supervised pre-professional experience in environmental studies. The intern will explore the interdisciplinary aspects of field or laboratory re

Sample Course of Study for the Occupational Endorsement in Basic Water Quality

Fall

ENVI 110	1 credit
ABUS 183	1-2 credits

b. OCCUPATIONAL ENDORSEMENT GOALS

1. Objectives and Means of their Evaluation:

The goal of this OE is to provide the preparation needed for graduates to enter directly into the

Partners consisting of community and industry leaders from rural Alaska were contacted in September 2013 to facilitate the development of an OE designed to address statewide community water quality training needs. The committee recognized Dan Bogan's (UAA, Alaska Natural Heritage Program) extensive efforts in training EPA IGAP personnel for water quality. Input from the committee regarding the knowledge and skills needed for entry level employment in water quality monitoring and assessment guided the development of the proposed OE.

3. Occupational/Other Competencies to Be Achieved:

Employment opportunities for water quality technicians are available throughout Alaska as the EPA IGAP program often requires tribes, villages, and watershed councils to conduct baseline water testing. The skills and knowledge students

Dan Bogan, Research Scientist, Alaska Natural Heritage Program, UAA

2. Adjunct Faculty

Adjunct faculty will be hired on demand by participating UAF CRCD academic units

that there is a need for more training and educational programs designed for entry-level employees.

C.

VI. OTHER

A. COUNCIL OF ADVISORS

This proposal is the result of an ongoing initiative by the University of Alaska, Alaskan residents, local nonprofits, and tribes/villages wanting to increase educational opportunities available, especially to the rural Alaska workforce. The guiding force behind this OE is the Council of Advisors. The Council of Advisors will continue to plan, guide, monitor, and assess the Occupational Endorsement.

Occupational Endorsement in Rural Surface Water Quality Testing

Council of Advisors

Dan Bogan	Alaska Natural Heritage Program, University of Alaska Anchorage
Carol Gales	Program Development Manager, UAF Northwest Campus
Susan Flensburg	Environmental Program Manager, Bristol Bay Native Association
John Oscar	Director, Kuskokwim Watershed Council
Kevin Zweifel	Norton Sound Health Corporation

B. FACULTY

The majority of the faculty is currently employed in the University of Alaska System. Dr. Todd Radenbaugh has been hired specifically to coordinate the Environmental Studies program as well as teach two required courses (ENVI 101, ENVI110). Dan Bogan works with the Alaska Natural Heritage Program, UAA and helped develop three of the required courses (ENVI 110, 111, and 112). Other faculty will come from well-established CRCD programs. If the program requires more instructors, adjuncts can be hired on demand.

VII. RELATION OF ENDORSEMENT TO OTHER UNIVERSITY PROGRAMS

A related university program is the OE in Rural Utilities Business Management that specifically addresses operation of rural water and wastewater utilities. This proposed OE Rural Surface Water Quality Testing is different from the existing program as it deals with all surface water not related to municipal or village water supplies or waste streams. This proposed OE is designed to train technicians to conduct general environmental monitoring for programs such as EPA IGAP and watershed councils. Thus, this OE does not duplicate or approximate other programs statewide. At present there is no water quality training program designed specifically to serve the needs of the rural environmental workforce.

VIII. IMPLEMENTATION/TERMINATION

A. DATE OF IMPLEMENTATION

The program is expected to be in the UAF catalog and available in the fall semester of 2015. All required courses have been piloted or/are either already existing as catalog UAF courses.

B. PLANS FOR RECRUITING STUDENTS

Promotion of this new program will be accomplished throughout the state in cooperation with local and tribal governments, local for-profit and nonprofit native corporations, rural university campuses and centers, and the urban Fairbanks campus. Upon approval, the UAF CRCD is prepared to market the program with brochures, on community campus websites, and other conventional methods of student recruitment.

Rural tribal councils, local nonprofits, and local for-profit corporations will be encouraged to organize and support students in this recruitment endeavor. Organizations such as Bristol Bay Native Association, Southwest Alaska Municipal Conference, Kuskokwim Watershed Council, and the Telida Village Tribal Council will continue to have a need for water quality technicians. As part of normal workload, UAF CRCD faculty and staff regularly attend conferences and job fairs, participate in high school programs, and conduct community outreach activities in an attempt to promote university programs and recruit students. This OE program will be added to these recruiting efforts.

Preliminary marketing and research of the idea for the new program shows a strong interest from community partners. For example, Bristol Bay and Seward Peninsula communities are supportive of an educational program that works to develop local surface water technicians and could help to successfully transition more community members into higher education. It should be noted

**Occupational Endorsement in Rural Surface Water Quality Testing Student Outcomes
Assessment Plan**

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
<p>MISSION STATEMENT: This OE will provide students, including Alaska Native and rural students, with quality academic instruction and training responsive to community, government, and industry needs. It will help empower graduates and their communities to collect baseline data and to monitor surface water quality while protecting and enriching local culture.</p> <p>GOAL STATEMENT: Graduates of the OE will possess the necessary interdisciplinary skills needed for entry-level employment in surface water monitoring.</p>	<ol style="list-style-type: none"> 1. Graduates of this OE will be prepared academically for entry-level employment in the field of surface water quality analysis. 2. Graduates of this OE will be prepared vocationally for employment in the field of surface water quality analysis. 3. Graduates of this OE will be prepared to take additional undergraduate level coursework or advance into a science or engineering- related Certificate, Associate or Baccalaureate program. 	<ol style="list-style-type: none"> 1a. Individual student Learning Outcomes Assessment Rubric 2a. Individual student Learning Outcomes Assessment Rubric 2b. Community partner perception of interns and student hires 3. Student enrollment in additional UAF courses or programs 	<ol style="list-style-type: none"> 1a. Completed by Program Coordinator annually. 2a. Completed by Program Coordinator annually. 2b. Survey delivered to community partners annually. 3. Survey of OE graduates enrolled in additional UAF coursework completed by Program Coordinator annually.

**Occupational Endorsement in Rural Surface Water Quality Testing Individual Learning Outcomes
Assessment Rubric**

Outcomes	Expectations	Rating
<p style="text-align: center;">Academic Performance</p> <p>Accumulated student GPA in required courses</p> <p style="text-align: center;">QAPP Development/Compliance</p> <p>Learn the basic scientific reporting methodt techniques</p>	<p>A Grade Point Average of 'C' (2.0) or above in Occupational Endorsement in Water Quality courses (Rating scale: C=1, B=2, A=3)</p>	

Cat. E	Demonstrate knowledge of the safe and calibrated use of water quality instruments							
1	Recognize and identify various basic instruments		X	X	X			
2	Know how to calibrate standard instruments and follow an SOP		X	X	X	X		
3	Describe and demonstrate maintenance procedures for specific water quality instruments		X	X	X			
Cat. H	Demonstrate Algebra and computer skills required for water quality analysis							
1	Enter data accurately into a spreadsheet or database			X	X			X
2	Understand numbers as data that can be used to tell a story	X			X	X		X
Cat. K.	Apply effective interpersonal and communication skills							
1	Practice audience appropriate professional communication.	X					X	
2	Prepare a resume and cover letter.						X	
3	Be able to write reports, correspondences, etc.	X				X	X	
4	Prepare effective oral presentations.					X	X	
5	Demonstrate computer literacy.	X				X	X	X
6	Effectively communicate in job interview setting						X	

Appendix B.



What is to recognize the success and benefit to our students

Equality

Testing.

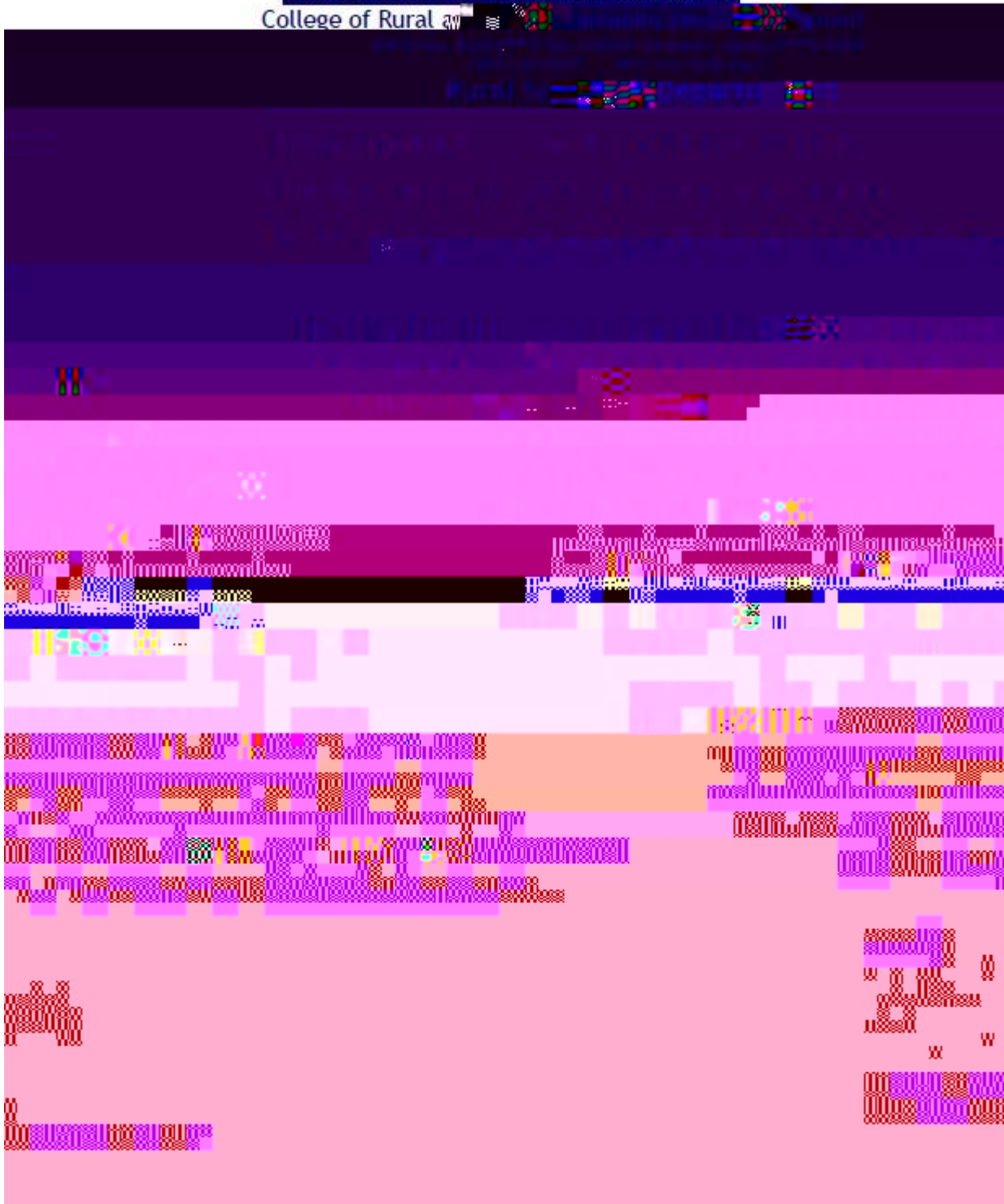
Sincerely,

A handwritten signature in red ink, appearing to read "R. ...".

UNIVERSITY OF ALASKA FAIRBANKS

College of Rural & Community Services

Rural & Community Services Department



3211 Providence Drive
Beatrice McDonald Hall



Alaska State University

UNIVERSITY OF ALASKA

FAIRBANKS, ALASKA, 99775

7 January 2015

surface water quality testing

Through the...
The proposed...
Occupational Endorsement in Rural Water Quality Testing...
enthusiastic support and approval and passage.

Sincerely,

D. D. B.

Daniel Rogan

ALEXANDER

Wildlife Management Program

College of Rural and Community Development

Call

US Telephone Numbers

INTERNATIONAL CALL

AK 99725-8720

Haines Road PO Box 78720 Fairbanks

Phone (907) 474-5430; Fax (907) 474-6008

November 14, 2014

Mr. MAIL ROOM

www.uaf.edu

Wildlife Management Program, Fairbanks, Alaska. I am pleased to write this letter of appreciation for the Department of Inge...

BRISTOL BAY NATIVE ASSESSMENT STATION

