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TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	CRCD Department of Science	College/School	CRCD
Prepared by	Tom Marsik	Phone	842-5109
Email Contact	tmarsik@alaska.edu	Faculty Contact	same

See <http://www.uaf.edu/uafgov/faculty/cd/cdman.html> for a complete description of the rules governing curriculum & course changes.

1. ACTION DESIRED (check one):

Trial Course New Course

2. COURSE IDENTIFICATION:

Dept Course # No. of Credits

Justify upper/lower division status & number of credits:

This course is designed to serve as a course in the Environmental Studies (ENVI) Certificate program and the Occupational Endorsement in Sustainable Energy. ENVI 121 is an introductory level course with no prerequisites that concentrates on the basics of indoor air quality and its relationship to ventilation and energy use in Alaskan homes. Due to its introductory level, it is a 100-level course. Since it is a course that covers only basics, it can be delivered in 14 contact hours, which corresponds to one credit.

3. PROPOSED COURSE TITLE:

4. CROSS LISTED? YES/NO If yes, Dept: Course #

(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

5. STACKED? YES/NO If yes, Dept: Course #

6. FREQUENCY OF OFFERING:

(Every or Alternate) Fall, Spring, Summer - or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (if approved)

8. COURSE FORMAT:

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

COURSE FORMAT: (check one)

1 2 3 4 5 6 weeks to full semester

OTHER FORMAT (specify)

Mode of delivery (specify lecture, field trips, labs, etc)

9. CONTACT HOURS PER WEEK: LECTURE hours/weeks LAB hours/week PRACTICUM hours/week

Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See <http://www.uaf.edu/uafgov/faculty/cd/credits.html> for more information on number of credits.

OTHER HOURS (specify type)

10. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):

ENVI 121 – Building Ventilation and Energy (1 cr) - Basics of indoor air quality and its relationship to ventilation and energy use in buildings. Main topics include types of indoor air pollutants; basic science related to moisture, condensation, and mold; and heat recovery ventilation. Course emphasizes practical ways of how homeowners can maintain healthy indoor air while keeping their energy bill low.

11. COURSE CLASSIFICATIONS: (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)

H = Humanities N = Natural Science S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? YES NO

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, Format 6 W = Writing Intensive, Format 7 Natural Science, Format 8

12. COURSE REPEATABILITY:

Is this course repeatable for credit? YES NO

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit? TIMES

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course? CREDITS

13. GRADING SYSTEM:

LETTER: PASS/FAIL:

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES

These will be required before the student is allowed to enroll in the course.

RECOMMENDED

Classes, etc. that student is strongly encouraged to complete prior to this course.

15. SPECIAL RESTRICTIONS, CONDITIONS

16. PROPOSED COURSE FEES

Has a memo been submitted through your dean to the Provost & VCAS for fee approval? Yes/No

17. PREVIOUS HISTORY

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

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

18. ESTIMATED IMPACT

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

This is a one-credit course with no lab, thus it should have minimal influence on budget, facility, and space resources. Faculty has been hired to teach this course. This course is intended to be offered anywhere across Alaska as a face-to-face course. Courses taught in rural Alaska may require travel money, if no qualified instructor is present in that location. This money has been secured through a Title III grant from Department of Education for the Bristol Bay region for foreseeable future.

Office and classroom space will be provided by existing University urban and rural campuses throughout Alaska. In villages without a University facility, training space can be found in the local

schools, native associations, and businesses. No new facilities or space will be required.

19. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (ffklj@uaf.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

September 13, 2013 - No resource impact.

20. IMPACTS ON PROGRAMS/DEPTS

What programs/departments will be affected by this proposed action? Include information on the Programs/Departments contacted (e.g., email, memo)

Environmental Studies and Sustainable Energy:

This course will have a positive impact on the Environmental Studies and Sustainable Energy programs as it will broaden the courses and topics offered. This should attract more students into these programs and help prepare students for higher degree studies or entry-level employment in the environmental studies and sustainable energy fields. The impact was discussed in person with Dr. Todd Radenbaugh, the academic director of the Environmental Studies program, who is very supportive of this new course offering.

Construction Trades Technology:

This course will have a positive impact on the Construction Trades Technology program as it will broaden the options for elective courses in the Sustainable Energy track of the Construction Trades Technology Certificate. The impact was discussed by email with Michael Hirt, the Construction Trades Technology program head, who is supportive of this new course offering.

21. POSITIVE AND NEGATIVE IMPACTS

Please specify **positive and negative** impacts on other courses, programs and departments resulting from the proposed action.

This course will broaden the spectrum of UAF courses in the area of sustainable energy, which is a field of quickly growing importance. The course addresses energy efficiency - one of the main pillars of the sustainable energy field. Sustainable energy is a high demand field across Alaska with a lot of potential for growth.

This course will also benefit non-degree students interested in home improvements with respect to ventilation and energy.

No significant negative impacts are anticipated.

JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

Residents of rural Alaska are facing challenges with respect to the cost of energy as well as environmental and social sustainability of current practices. They are seeking education to both deal with their personal issues related to energy and follow careers in the energy and environmental fields. This course will help satisfy that demand.

This course will serve as a course in the Environmental Studies Certificate program and the Occupational Endorsement in Sustainable Energy, which will broaden and enhance the topics covered by these and other programs, which in turn will attract more students.

UAF Bristol Bay Campus has experienced faculty in the area of sustainable energy to deliver this course and help maintain the quality of UAF education.

APPROVALS:

<i>[Signature]</i>	<i>Frank Maritz</i>	Date	9/13/2013
Signature, Chair, Program/Department of:		Environmental Studies & Sustainable Energy	

<i>[Signature]</i>		Date	10/04/15
Signature, Division Chair: CRCD of:		Department of Science	

<i>[Signature]</i>		Date	10/04/2013
Signature, Chair, College/School Curriculum Council for:		CRCD	

<i>[Signature]</i>		Date	10/7/15
Signature, Dean, College/School of:		CRCD	

		Date	
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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: (if required)

		Date	
Signature, Chair, Program/Department of:			

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

		Date	
Signature, Dean, College/School of:			

APPROVALS:

	Date	
--	------	--

Signature, Chair,
Program/Department of:

	Date	
--	------	--

Signature, Division Chair CRCD
of:

	Date	
--	------	--

Signature, Chair, College/School Curriculum
Council for:

	Date	
--	------	--

Signature, Dean, College/School
of:

	Date	
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Review Committee

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Program/Department of:

	Date	
--	------	--

Signature, Chair, College/School Curriculum
Council for:

	Date	
--	------	--

Signature, Dean, College/School
of:

ATTACH COMPLETE SYLLABUS (as part of this application).

Note: syllabus must follow the guidelines discussed in the Faculty Senate Guide

<http://www.uaf.edu/uafgov/faculty/cd/syllabus.html>.

The department and campus wide curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course change will be denied.

SYLLABUS CHECKLIST FOR ALL UAF COURSES

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

1. Course information:

Title, number, credits, prerequisites, location, meeting time (make sure that contact hours are in line with credits).

2. Instructor (and if applicable, Teaching Assistant) information:

Name, office location, office hours, telephone, email address.

3. Course readings/materials:

Course textbook title, author, edition/publisher.
 Supplementary readings (indicate whether required or recommended) and
 any supplies required.

4. Course description:

Content of the course and how it fits into the broader curriculum;
 Expected proficiencies required to undertake the course, if applicable.
 Inclusion of catalog description is *strongly* recommended, and
 Description in syllabus must be consistent with catalog course description.

5. Course Goals (general) and Student Learning Outcomes (more specific)

6. Instructional methods:

Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

7. Course calendar:

A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

8. Course policies:

Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

9. Evaluation:

Specify how students will be evaluated, what factors will be included, their relative value, and
 how they will be tabulated into grades (on a curve, absolute scores, etc.)

10. Support Services:

Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

11. Disabilities Services:

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials.

State that you will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to students with disabilities."

ENVI 121 – Building Ventilation and Energy

Term: Spring 2014
Course Title: Building Ventilation and Energy
Dept. & Num: ENVI 121
Credits: 1
Prerequisites: None
Dates: TBD
Days and Times: Fri 6pm-9pm, Sat 10am-6pm, Sun 10am-3pm
Location: UAF BBC, Dillingham and Bristol Bay villages

Instructor: Dr. Tom Marsik
Office Location: UAF Bristol Bay Campus, Room 117
Position: Assistant Professor
Phone: 842-5109
Fax: 842-5692
Email: tmarsik@alaska.edu
Hours Available: Available during the days the course is offered

Required Text: Material provided by instructor:
1) Indoor Air Hazards, US Environmental Protection Agency, 2005
2) Heat & Energy Recovery Ventilators, Home Ventilation Institute, 2008
3) Selected parts (Chapter 9 – Ventilation) of Alaska Residential Building Manual by Rich Seifert et al., UAF Cooperative Extension Service, 2008. Available free online from http://www.ahfc.us/files/2813/5716/1325/building_manual.pdf

Course Description:

Basics of indoor air quality and its relationship to ventilation and energy use in buildings. Main topics include types of indoor air pollutants; basic science related to moisture, condensation, and mold; and heat recovery ventilation. Course emphasizes practical ways of how homeowners can maintain healthy indoor air while keeping their energy bill low.

Course Goals:

The general goals of this course are to provide education that will help students understand the relationship between energy and indoor air quality and make educated decisions regarding building ventilation and energy use.

Student Learning Outcomes:

Upon successful completion of this course, the student will be able to:

- Recognize basic science concepts as related to moisture and condensation.
- Identify types of ventilation systems.
- Discuss home energy improvement options with respect to energy and indoor air quality.
- Describe the procedure of balancing a heat recovery ventilator (HRV).
- Understand the procedure of measuring the efficiency of a heat recovery ventilator.

Instructional Methods:

- Lectures
- Project
- Discussions
- Homework
- Readings
- Handouts

Course Calendar:

Friday

6:00pm-7:00pm Course introduction
7:00pm-8:00pm Basic building science – air flow, moisture, condensation
8:00pm-9:00pm Grandma's house – exercise on basic building science
Reading assignment: Read through the whole first booklet - Indoor Air Hazards

Saturday

- 10:00am-12:00pm Indoor air pollutants of concern
- 12:00pm-1:00pm Lunch break
- 1:00pm-2:00pm Ventilation requirements
- 2:00pm-3:00pm Calculations related to heat loss via ventilation
- 3:00pm-4:00pm Natural ventilation – pros and cons
- 4:00pm-5:00pm Mechanical ventilation with no heat recovery – pros and cons
- 5:00pm-6:00pm Heat recovery ventilation – pros and cons

Reading assignment: Read through the whole second booklet - Heat & Energy Recovery Ventilators

Sunday

- 10:00am-12:00pm Class project – balancing an HRV and measuring its efficiency
- 12:00pm-1:00pm Lunch Break
- 1:00pm-2:00pm Review
- 2:00pm-3:00pm Final exam

Course Policies:

1. UAF requires students to conduct themselves honestly and responsibly, and to respect the rights of others.
2. Attendance is mandatory.
3. Late assignments will not be accepted without prior approval of instructor.
4. The instructor reserves the right to amend this course outline as needed.

Evaluation:

Final grades are calculated from the points earned in the following areas:

Attendance and Participation	10%
Students are expected to attend the entire 3-day classroom session and actively participate in group discussions.	
Class Project	30%
In the class project, students will actively participate in balancing an HRV and measuring its efficiency. Under the observation of the instructor, they will demonstrate understanding of techniques used to balance an HRV and measure its efficiency.	
Homework	30%
Each student will in his/her home: 1) Identify type of ventilation system, 2) Estimated ventilation rate and whether or not it is sufficient, 3) Calculate energy loss associated with the ventilation, 4) Suggest improvements	
The homework will be assigned on Saturday afternoon and due on Sunday morning.	
Final Exam	30%
An open book final exam will cover material from the whole course.	

Grading Policy:

This course will be graded pass/fail. In order to receive a passing grade, students must receive a 70% or higher grade.

Support and Disability Services:

University of Alaska Fairbanks
 Bristol Bay Campus – Student Services
 PO Box 1070
 Dillingham, Alaska 99576
 907-842-5109
 800-478-5109
 Fax: 907-842-5692

Students can also go to the UAF website <http://www.uaf.edu> or to the College of Rural and Community Development website <http://www.uaf.edu/rural/> or to Bristol Bay Campus website <http://www.uaf.edu/bbc/index.html>.

UAF Disability Services for Distance Students

UAF has a Disability Services office that operates in conjunction with the College of Rural and Community Development (CRCD) campuses and UAF’s Center for Distance Education (CDE). Disability Services, a part of UAF’s Center for Health and Counseling, provides academic accommodations to enrolled students who are identified as being eligible for these services. If you believe you are eligible, please visit <http://www.uaf.edu/chc/disability.html> on the web or contact a student affairs staff person at your nearest local campus. You can also contact Disability Services on the Fairbanks Campus at (907) 474-7043, fydso@uaf.edu

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