

Submit original with signatures + 1 copy + electronic copy to UAF Governance.

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

TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	Construction Trades Technology	College/School	CRCD/ Interior-Aleutians Campus
Prepared by	Bryan Uher	Phone	474-2613
Email Contact	bmuher@alaska.edu	Faculty Contact	Rex Goolsby

1. ACTION DESIRED (CHECK ONE):

Trial Course	<input type="checkbox"/>	New Course	<input checked="" type="checkbox"/>
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2. COURSE IDENTIFICATION:

Dept	CTT	Course #	241	No. of Credits	3
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Justify upper/lower division status & number of credits: **Course builds on the 100 level CTT certificate. CTT 240 required. 44 contact hours meets requirements for 3 credit class.**

3. PROPOSED COURSE TITLE: **Introduction to Estimating, Cost Control, and Quality Control for Rural Residential Construction**

4. CROSS LISTED? YES/NO

No	If yes, Dept:	Course #
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(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

5. STACKED? YES/NO

No	If yes, Dept:	Course #
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6. FREQUENCY OF OFFERING: **As Demand Warrants**

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

7. SEMESTER & YEAR OF FIRST OFFERING (if approved) **Spring 2012**

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)

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 6 weeks to full semester
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OTHER FORMAT (specify)

Mode of delivery (specify lecture, field trips, labs, etc) **Distance Delivery: Lecture, Audio,**

9. CONTACT HOURS PER WEEK:

4HR. 11 Wk	LECTURE hours/weeks	<input type="checkbox"/>	LAB hours /week	<input type="checkbox"/>	PRACTICUM hours /week
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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) **N/A**

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

CTT F241 Introduction to Estimating, Cost Control, and Quality Control for Rural Residential Construction 3+0

This course builds upon the skills obtained in CTT 240 by introducing the roles and responsibilities of project managers relative to project scheduling, estimating, cost control and quality control. Students will learn to use project scheduling and cost control tools which have been developed for and proven effective in the management of residential construction projects in rural Alaska.

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** Certificate in Construction Trades Technology and CTT 240; or, approval of instructor.

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

RECOMMENDED None

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

15. **SPECIAL RESTRICTIONS, CONDITIONS** None

16. **PROPOSED COURSE FEES** \$0

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

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.: Fall 2010, CTT 293: Intro to Rural Residential Construction Management, Part 2

18. **ESTIMATED IMPACT**

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

This course will be taught by current CRCD faculty within the CTT program as part of their regular workload, or by adjunct faculty as funding allows. No additional facilities or space are required, and no impacts to budget are anticipated.

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 No additional items, equipment, or library services are needed. In a phone conversation that took place in June 2010 for the special topics class, no further consultation is required for CTT distance or offsite courses.

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)

The CRCD Construction Trades Technology Program will see direct impact through the increase in students continuing to take classes. Students taking these classes may articulate into other degree programs within CRCD, such as Tribal Management or Rural Development.

21. **POSITIVE AND NEGATIVE IMPACTS**

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

The proposed course will increase student numbers and credit hours for CRCD. Because the target audience is unlikely to come to urban areas to take coursework, the proposed class should not adversely impact other courses or programs.

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.

There is a great need in rural Alaska for trained local people to manage local construction projects. Because they are funded predominately by the U.S. Department of Housing and Urban Development (HUD) through the Native American Housing Assistance and Self Determination Act (NAHASDA), projects conducted by rural housing authorities and tribal organizations have unique planning and administrative requirements. Project managers working in rural Alaska also require specialized training due to complicating factors such as problematic soil conditions, materials availability, transportation and other logistical challenges, and variable workforce capacity.

Tribal and other rural organizations have requested the Interior-Aleutians Campus develop and deliver such classes. This course begins to address that need and will help determine future needs in this area. The course was piloted in the Fall 2010 semester to an overwhelming positive response, and requests for the course has come from other campuses within CRCD. This course will be a part of the new CTT Project Management Track within the A.A.S degree currently under development.

APPROVALS:

(As per attached.)

	Date	
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Signature, Chair, Program/Department of:

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

	Date	
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Signature, Dean, College/School of:

	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	
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Signature, Chair, UAF Faculty Senate Curriculum Review Committee

CTT 241
format 1

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)

The CRCOD Construction Trades Technology Program will see direct impact through the increase in students continuing to take classes. Students taking these classes may articulate into other degree programs within CRCOD, such as Tribal Management or Rural Development.

21. POSITIVE AND NEGATIVE IMPACTS

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

The proposed course will increase student numbers and credit hours for CRCOD. Because the target audience is unlikely to come to urban areas to take coursework, the proposed class should not adversely impact other courses or programs.

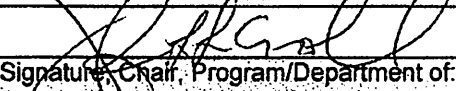
JUSTIFICATION FOR ACTION REQUESTED

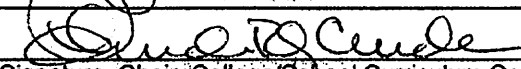
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APPROVALS:

 Date 3/7/11
Signature, Chair, Program/Department of: Indigenous Community - Tribal Programs

 Date 3/8/11
Signature, Chair, College/School Curriculum Council for: CRCOD Academic Council

 Date 3/13/11
Signature, Dean, College/School of: _____

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

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 (208 WHIT, 474-5655) to provide reasonable accommodation to students with disabilities." UNIVERSITY OF ALASKA

FAIRBANKS

**College of Rural and Community Development
Construction Trades Technology (CTT)**

Interior – Aleutians Campus
Harper Building, P.O. Box 756720 Fairbanks, Alaska 99775-6720

COURSE SYLLABUS

Course Title:	Introduction to Estimating, Cost Control, and Quality Control for Rural Residential Construction
Course No:	CTT 241
Credits:	3 (3+0)
Prerequisites:	CTT Certificate and CTT 240; or, permission of the instructor
Instructor:	Rex Goolsby P.O. Box 814 Tok, Alaska 99780 907-883-4054 rex.goolsby@gmail.com
Office Hours:	Instructor will inform students of office hours at first class.
Location:	Distance Delivered
Dates:	TBA 20XX
Times:	TBA
Text:	<i>NCCER Project Management (PM)</i> , 2nd Edition, Contren Learning Series, ISBN 0-13-604486-7 <i>Construction Jobsite Management, (CJM)</i> William R. Mincks and Hal Johnston, ISBN 0-8273-7152-7 <i>2009 International Residential Code</i> , International Code Council, ISBN 978-1580017275
Supplemental Materials:	Handouts, Electronic Management Tools (which consist of excel spreadsheets, calculators and forms), documentation forms, Microsoft Project 2007, Chief Architect Home Design Software Version 9. The supplemental materials shall be provided by instructor through grant funding.
Course Requirements:	Computer, Internet Connectivity and Phone Service

Course Description:

This course builds upon the skills obtained in CTT 240 by introducing the roles and responsibilities of project managers relative to project scheduling, estimating, cost control and quality control. Because they are funded predominately by the U.S. Department of Housing and Urban Development (HUD) through the Native American Housing Assistance and Self Determination Act (NAHASDA), projects conducted by rural housing authorities and tribal organizations have unique planning and administrative requirements. Students will learn to use project scheduling and cost control tools which incorporate these requirements and that have been developed for and proven effective in the management of residential construction projects in rural Alaska. Complicating factors for rural Alaska projects such as materials availability, transportation and other logistical challenges, variable workforce capacity, and complex political environment as it relates to project estimating, cost control, and quality assurance will also be discussed.

Course Goals:

The subject matter in this course, when combined with that learned in CTT 240, will provide the student with the knowledge and skills to plan, estimate, budget, and schedule a residential construction project in rural Alaska. The student will also be able to execute subcontracts and supply contracts in order to procure services and materials. The student will have an awareness

of the predominate physical, logistical, and other factors which complicate construction projects in rural Alaska, as well as an understanding of the unique administrative requirements of NAHASDA and the complex political environment of rural Alaska. These skills will be applied to a demonstration project using the computer software and management tools provided with this course.

Student Learning Outcomes:

Upon completion of the course students will be able to:

1. Be proficient in the use of the project management tools included with this course, including budgeting and cost control spreadsheets, calculators, documentation forms and software.
2. Document activities, costs, labor, conversations and correspondence, requests for information (RFIs) and project changes. Indicate how these tasks are impacted by the unique funding sources and administrative and logistical challenges in rural Alaska.
3. Utilizing the Work Breakdown Structure from the demonstration project from CTT 240, create an accurate construction schedule using the Critical Path Method, and identify the critical path for the project. Indicate how these tasks are impacted by the unique funding sources and administrative and logistical challenges in rural Alaska.
4. Perform an accurate cost estimate of materials, labor, subcontract values and rental costs for the demonstration project. Indicate how these tasks are impacted by the unique funding sources and administrative and logistical challenges in rural Alaska.
5. Transmit data collected from project planning and estimating to the master cost control program, construct a budget and manage actual costs. Indicate how these tasks are impacted by the unique funding sources and administrative and logistical challenges in rural Alaska.
6. Demonstrate in the project schedule, cost estimates, and project budget an understanding of the real-world implications of the complicating factors which make residential construction in rural Alaska unique.
7. Execute an invitation to bid, qualify subcontractors and supply contractors, award supply contracts and subcontracts, and operate an efficient and purposeful purchase order process.
8. Describe and implement a 5-tier quality assurance and quality control (QA/QC) program. Identify those elements of the QA/QC program that are specific to the unique project challenges in rural Alaska.
9. Internalize and demonstrate learned successful leadership characteristics. Assess and modify their management style, conduct meetings and interviews, and correct subordinates' behavior in role-play simulations.

Instructional Methods:

The method of instruction shall be a combination of electronic documents, recorded video, Blackboard, and audio conferencing. Audio and blackboard lectures and exercises will be continuously monitored. Students will demonstrate their understanding of concepts and proficiency in skill through demonstration projects and exercises. All projects and exercises will be communicated via email. Students must have Internet connectivity and phone service.

Course Evaluation:

A letter grade will be issued for participants who successfully complete the course. Exams will be given at the end of prescribed sections to test the knowledge of the participant. Practical tests, demonstrations and simulations shall be given to test proficiency in related subjects.

% of Total	Grade
91 to 100%	A letter grade
81 to 90%	B letter grade
71 to 80%	C letter grade
60 to 70%	D letter grade
59% and below	F letter grade

Total points for the course will be assigned and weighted based on the following:

Attendance (10%) Attendance in class is required to gain information from the lecture and to participate in activities, attendance is graded as part of this course. Attendance will be taken at the beginning of each day. Late arrivals will receive prorated credit for attendance at that portion of class.

Participation (10%) Group discussions, in-class exercises, and overall group dynamics are an essential part of the learning experience for this course. Students are expected to actively participate in group discussions in a variety of roles. Participation points for a missed class session cannot be made up.

Exercise completion, Demonstration Project (40%): Students are expected to be thorough and active in the completion of the demonstration projects and exercises. The Demonstration Project is the capstone project of this course. Students will continue the demonstration project began in CTT 240 implementing the skills studied in CTT 241

Course Notebook (10%) Students will be required to keep a course notebook for the entire class. Notebooks should include notes on the presentations, exercises, demonstrations, and reflections on how the information could affect the student's role as a construction manager or supervisor. Course notebook will be evaluated at the end of the course and returned to the student.

Exams (30%) Exams taken at the end of prescribed sections of the course will be the evaluation tools used to determine mastery of the associated skills.

Course Calendar:

This schedule is fluid and may be updated during the semester. The instructor will inform students of changes in a timely manner, Students are responsible for keeping track of schedule changes once announced.

Each Meeting day class will be from _____.

Day of Instruction		
Week	Date	
Week 1	TBA	Computer file management, documentation and communications, CJM pp. 95-114
	TBA	Computer file management, documentation and communications continued, CJM pp. 115-135
Week 2	TBA	WBS, Introduction to project scheduling, PM 8-1.0, 2.0, 3.0, Scheduling projects in rural Alaska: Timing, transportation, and logistics
	TBA	Project scheduling continued, PM 8-4.0, 4.1, 4.2,
Week 3	TBA	Project scheduling continued, PM 8-4.3
	TBA	Introduction to project estimating, PM 7-1.0, 1.1, 1.2 Estimating projects in rural Alaska: Added costs of transportation & logistics
Week 4	TBA	Project estimating continued, PM 7-2.0, 2.1, 2.2, 2.3, 3.0
	TBA	Project estimating continued, Exam # 241-1: PM module 8, CJM chapter 5
Week 5	TBA	Introduction to project budget and cost control, PM 7-3.2, 3.3, 4.0, 4.1, 4.2 Budget and Cost Control: NAHASDA regulations and reporting requirements
	TBA	Budget and cost control continued, PM 7-4.3, 4.4, 4.5
Week 6	TBA	Budget and cost control continued, PM 7-5.0, 5.1, 5.2, 6.0
	TBA	Coordinating estimating, cost control and scheduling
Week 7	TBA	Demonstration project, planning, estimating, budget, cost control and scheduling
	TBA	Demonstration project continued
Week 8	TBA	Exam # 241-2 is the demonstration project presentation
	TBA	Introduction to subcontracting, CJM pp. 258-278 Construction subcontracting under NAHASDA regulations
Week 9	TBA	Exercises in subcontracting
	TBA	Introduction to purchasing, CJM pp. 279-284 Procurement requirements under NAHASDA regulations
Week 10	TBA	Exercises in purchasing
	TBA	Introduction to quality control, PM module 10 Quality Control Challenges in Rural Alaska
Week 11	TBA	Successful Leadership, PM module 3
	TBA	Exam # 241-3: PM module 3 and 10, CHM chapter 10

Course Policies:

Students are expected to arrive ready to actively participate in the study and discussion of construction management principals and activities. Attendance is a critical component of this course and students must be on time and prepared for the course material.

Support Services:

The instructor is available upon appointment for additional assistance outside normal session/class hours.

UAF Disabilities 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.

Writing Center:

The Writing Center is a student-staffed, student-oriented service of the English Department. The UAF Writing Center and Computer Lab offers free writing tutoring to any student in any subject. Students can call 907-474-5314 for information on how to fax a paper and have it tutored over the telephone, or engage in an interactive Internet session (<http://www.alaska.edu/english/studentresources/writing/>). Both services are free.