

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	Civil and Environmental Eng.	College/School	CEM
Prepared by	Robert Perkins	Phone	474 7694
Email Contact	raperkins@alaska.edu	Faculty Contact	Robert Perkins

1. ACTION DESIRED (CHECK ONE):	Trial Course		New Course	X
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2. COURSE IDENTIFICATION:	Dept	CE	Course #	F653B	No. of Credits	1
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Justify upper/lower division status & number of credits:

Course is intended for professional students who are college graduates. Credits are based on contact minutes and content. They are roughly one-third of a regular three-credit graduate course.

3. PROPOSED COURSE TITLE:	Project Network Scheduling
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4. To be CROSS LISTED? YES/NO	No	If yes, Dept:		Course #	
(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)					

5. To be STACKED? YES/NO	No	If yes, Dept.		Course #	
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6. FREQUENCY OF OFFERING:	As demand warrants
	Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) – or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (if approved)	As demand warrants
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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 all that apply)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6 weeks to full semester
OTHER FORMAT (specify)	Two 2 hour and 15 minute lectures per week for three weeks delivered face-to-face or via video conferencing.					
Mode of delivery (specify lecture, field trips, labs, etc)	Lectures					

9. CONTACT HOURS PER WEEK:	4.5	LECTURE hours/weeks		LAB hours /week		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
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10. **COMPLETE CATALOG DESCRIPTION** including dept., number, title and credits (50 words or less, if possible):

CE F653B, Project Network Scheduling, 1 credit

Use of network scheduling in owner and contractor organizations, CPM, PERT, and Linear Scheduling Method. Resource allocation for single and multiple projects. Analysis of float/slack and delays. Probabilistic methods and graphical presentation.

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

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

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:** Specify only one.

LETTER:

X

PASS/FAIL:

RESTRICTIONS ON ENROLLMENT (if any)

14. **PREREQUISITES**

None

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

RECOMMENDED

Admission to the Graduate Certificate in Construction Management program

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

No

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

18. **ESTIMATED IMPACT**

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

These courses were approved by the Board of Regents for special tuition and are expected to be self-supporting

19. **LIBRARY COLLECTIONS**

Have you contacted the library collection development officer (kljensen@alaska.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	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No library involvement
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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 Graduate Certificate in Construction Management and its courses was approved by the CEE faculty and the CEM dean.

21. POSITIVE AND NEGATIVE IMPACTS

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

This course follows the New Degree Program Request which examined the growth in the CEE department. No additional positive or negative impacts from this course are likely.

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.

This course is part of a UAF CEE outreach to package our graduate classes in a way that is convenient to students and their employers. This outreach was formalized in a New Degree Program Request for a Graduate Certificate in Construction Management which was approved by the UA Board of Regents in September 2009. The courses in this program grew out of a needs assessment by UAF CEE of Alaska engineering employers, including governments, consultants, and contractors, that indicated that courses of about one credit's intensity were best. The classes are being taught by UAF faculty, emeritus faculty, or appropriate adjuncts approved by the CEE faculty and Chair. All classes feature an assessment process: tests, reports, presentations, and/or graded homework.

APPROVALS:

		Date	
Signature, Chair, Program/Department of:			
		Date	
Signature, Chair, College/School Curriculum Council for:			
		Date	
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		

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	
Signature, Chair, Program/Department of:		

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

	Date	
Signature, Dean, College/School of:		

Outline Syllabus

Project Network Scheduling

1. Course information:

Project Network Scheduling, CE F653B, One credit,

Prerequisites: Recommended Admission to the Graduate Certificate in Construction Management Program. Recommended one prior course in scheduling.

Location and Meeting Time will be specific to each offering of the course.

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

Instructors Name, Office Location, Office Hours, as well as *Telephone and Email* contact information will be specific to each offering of the course.

3. Course readings/materials:

Handout of text material and assigned materials students will download from the Internet. Students will download trial copies of scheduling software. Readings, such as : Linear Scheduling Model: Development of Controlling activity path, Harmelink, ASCE Journal of Construction Engineering and Management, 1998. "Enhanced" PDM - Concepts & Benefits, Scott C. Herold, P.E., Black & Veatch Corporation.

4. Course description:

Use of network scheduling in owner and contractor organizations, CPM, PERT, and Linear Scheduling Method. Resource allocation for single and multiple projects. Analysis of float/slack and delays. Probabilistic methods and graphical presentation.

5. Course Goals (general), and (see #6)

Improve the student's understanding of the theory and practice of scheduling. Student will understand the main types of schedule and how these are used to monitor and control projects. Student will be able to describe how constraints of time, date, resources are shown in various scheduling systems, and how these may be interpreted. Documenting delays and changes with CPM another others.

6. Student Learning Outcomes (more specific)

Student will be able to draft a CPM schedule, using MS Project or Prima Vera, starting with a work breakdown structure and use analysis of float/slack to allocate and level resources. Review proposed changes for their impact on the schedule and review after-the-fact changes for delays to the project. Analyze concurrent delays. Student will make a LSM schedule and a repetitive activity schedule. Student will understand who the various schedule methods present data.

7. Instructional methods:

Face to face lecture and remote lectures via video conferencing, student presentations and reports. Students will use the Internet to download some instruction material.

8. Course calendar:

Class 1

Introduction

Scheduling basics: CPM, Linear, Repetitive Activity, learning curve, deterministic vs. probabilistic.
Programs: Project, Prima Vera, others.

Class 2

Constraints of date, time, and resource. Enhancements and effects on schedule. Presentations to technical audiences and public. Guest Lecture: Contractor.

Class 3

Precedence Diagramming other than CPM. Flow charts. GERT.

Guest Lecturer: Owner.

Class 4

Quiz – Hands on scheduling exercise.

Class 5

Use of schedules for claims and changes. Cases. What was and wasn't important. Contract clauses.

Class 6

Class Presentations.

9. Course policies:

Due to the limited number of classes, attendance and class participation is expected in all classes, unless arranged otherwise with the instructor, and will be considered in determining final grade. Plagiarism will not be tolerated.

10. Evaluation:

The final grade will be determined on the following basis:

Final presentation (written: 30%; oral: 25%)	55%
Quiz	20%
Class participation	13%
Attendance (6 @2%)	12%

11. Support Services:

Administrative services for the course are provided by the Center for Distance Education 907-479-4757 and technical assistance by Video Conferencing Services 1-800-910-9601.

12. 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.

We will work with the Office of Disabilities Services (208 WHIT, 474-5655) to provide reasonable accommodation to students with disabilities.