

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 #	F653A	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:	Scheduling for Construction Administration
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4. To be 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. 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 F653A, Scheduling for Construction Administration, 1 credit

This course will investigate project tracking, changes to the project, delays, and network scheduling basics. Students will learn CPM and programs available for construction scheduling, – MS Project or Prima Vera

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**

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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.:

February 2008, CE 693

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:		

Course Syllabus – CE 653A Scheduling for Construction Administration

1. Course Information

CE 653A Scheduling for Construction Administration. 1 credit. Prerequisites (recommended): BS in engineering, science, or any college degree with construction experience. Location: Video Conference Room, 2nd floor, UAF Center for Distance Education, corner University Avenue and Davis Road, Fairbanks; State Office Building, 9th floor Conference Room, Juneau; Alaska Department of Administration Enterprise Technology Services (ETS) Building, 5900 Tudor Road, Small Conference Room, Anchorage. Meeting times: 3:00 to 5:15 PM.

2. Instructor

Dr. F. Lawrence Bennett, P.E. Office: Duckering 233 Office hours: arranged with instructor 907-479-5118 benco@alaska.net

3. Course readings/materials

Handout materials to complement lecture/discussions.

A large number of project scheduling books is available, many oriented toward construction management. Among the most recent are

Mubarak, Saleh. *Construction Project Scheduling and Control*. John Wiley & Sons, Inc., 2010, ISBN: 0470505338, 480 p.

Hajdu, Miklos. *Network Scheduling Techniques for Construction Project Management*. Springer US, 2010, ISBN: 1441947655, 352 p.

Newitt, Jay S. *Construction Scheduling: Principles and Practices* (2nd Ed.). Prentice Hall, 2008, ISBN: 0135137829, 384 p.

4. Course description

The course is part of the UAF Civil & Environmental Engineering department's effort to support training needs of practicing professionals. The course was developed with special support of and input from Alaska Department of Transportation and Public Facilities Pre-Construction. The catalog description is as follows:

Basics of project scheduling. Different types of schedules for different uses. Network scheduling, its value and limitations. Basic and advanced elements of Microsoft® Project software. Applications to project design scheduling, personnel management, progress monitoring and claims administration. Laptop computer with Microsoft® Project 2007 is required. (Trial version is available on Microsoft website.)

Written assignments and reports, student presentations, no final exam.

5. Course Goals (General):

- Provide practical basic training in project scheduling fundamentals and applications for use by engineering design managers and other project professionals

Student Learning Outcomes (More specific):

- Gain knowledge of different types of design schedules and levels of detail for different uses such as project planning, resource allocation, and reporting.
- Understand the basics of network scheduling, its value and limitations for the design process
- Acquire a comfortable level of competence with Microsoft® Project software
- Develop an appreciation of potential applications of network scheduling to personnel scheduling, progress monitoring and contract claims administration

6. Instructional Methods

The course will utilize a combination of lecture, discussion, and student reports. For various classes, lectures will originate in Fairbanks, Anchorage or Juneau, with live, interactive video transmission among the three sites.

7. Course Calendar

Class No. 1

Introduction, course objectives, outline & procedures

Overview and examples of schedules used in the design phase

Construction contract provisions related to scheduling

Introduction to project scheduling

- Work breakdown structure
- Estimating task durations
- Bar charts

Network scheduling basics

- Network elements
- Basic calculations
- Interpreting the results

Class No. 2

Complete discussion of network scheduling basics

Software features

Demonstration of Microsoft® Project 2007

Assignment #1 due today

Class No. 3

Panel discussion on Phillips Field Road and Barnett Street Bridge projects

Begin advanced topics

- Resource Scheduling
- Cost Planning and Reporting
- Monitoring and Updating

Assignment #2 due today

Class No. 4

Case Study: Guest speaker(s) on Critical Aspects of Schedule for Tanana River Bridge Project

Complete advanced topics

Begin assignment #3 in class

Class No. 5

Panel discussion on project scheduling in private sector design firms

Philosophy and applications

- Managing schedule risk
- Effect of crashing on project schedule
- Multi-project scheduling
- Alternative schedules: Plan B
- Use of templates
- Contract claims related to scheduling

Assignment #3 due today

Class No. 6

Student oral reports on assignment #5

A final case study -- Nome Landfill

Catch up and wrap up

Assignments #4 & 5 due today

8. Course Policies

Plagiarism will not be tolerated. Attendance is expected and will be considered in determining the final grade.

9. Evaluation

The final grade will be determined on the following basis:

Assignment No. 1	10%
Assignment No. 2	15%
Assignment No. 3	40%
Assignment No. 4	10%
Assignment No. 5	15%
Class Participation	10%

10. Support Services

No special support services will be required except for live, interactive video.

11. Disability Services

We will work with the Office of Disability Services to provide reasonable accommodation to students with disabilities.