# Trial Course or New Course Proposal

**Submitted By:**

<table>
<thead>
<tr>
<th>Department</th>
<th>Emergency Services: Fire Science</th>
</tr>
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<tbody>
<tr>
<td>Prepared by</td>
<td>Tylan Martin</td>
</tr>
<tr>
<td>Email Contact</td>
<td><a href="mailto:Tjmartin5@alaska.edu">Tjmartin5@alaska.edu</a></td>
</tr>
<tr>
<td>College/School</td>
<td>CRCD/CTC</td>
</tr>
<tr>
<td>Phone</td>
<td>907-347-8386</td>
</tr>
<tr>
<td>Faculty Contact</td>
<td>John George</td>
</tr>
</tbody>
</table>

1. **ACTION DESIRED**
   (CHECK ONE):
   - [ ] Trial Course
   - [X] New Course

2. **COURSE IDENTIFICATION**:
   - **Dept**: FIRE
   - **Course #**: F255
   - **No. of Credits**: 2.0
   - Intermediate level course filling the curriculum for the AAS Wildland fire at the 200 level

3. **PROPOSED COURSE TITLE**:
   - Wildland Fire Behavior II

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 #:  

6. **FREQUENCY OF OFFERING**:
   - Spring, Even-Numbered Years
   - Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

7. **SEMESTER & YEAR OF FIRST OFFERING**
   - Spring 2014
   - (AY2011-12 if approved by 3/1/2012; otherwise AY2012-13)

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)
     - 1 2 3 4 5 X
     - 6 weeks to full semester
   - **OTHER FORMAT** (specify)
   - Mode of delivery (specify lecture, field trips, labs, etc)
     - Lecture

9. **CONTACT HOURS PER WEEK**:
   - 2.0 [ ] LECTURE hours/week
   - 0 [ ] 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-senate/curriculum/course-degree-procedures/guidelines-for-computing/](http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/guidelines-for-computing/) for more information on number of credits.

   **OTHER HOURS (specify type)**
10. COMPLETE CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

FIRE F255 Wildland Fire Behavior II

2.0 credits (2+0)

This course will give students an understanding of the determinants of fire behavior through studying input datum for fire (weather, slope, fuels and fuel moisture). Operation of fire behavior prediction tools, assessing and selecting proper inputs, interpreting the results in terms of rate of spread, fire line intensity, potential for extreme fire behavior; and documentation processes. Course is based on a National Wildfire Coordinating Group (NWCG) course.

NWGC Course included: S-390 Introduction to Wildland Fire Behavior Calculations

Offered Spring Even-numbered Years

11. COURSE CLASSIFICATIONS: Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

H = Humanities [ ] S = Social Sciences [ ]

Will this course be used to fulfill a requirement for the baccalaureate core? If YES, attach form.

YES: [ ] NO: [ ] X

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 X

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 [ ] CREDITS

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

CREDITS

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. Note: Later changing the grading system for a course constitutes a Major Course Change.

LETTER: X [ ] PASS/FAIL: [ ]

14. PREREQUISITES

FIRE 155 or Instructor's permission

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

15. SPECIAL RESTRICTIONS, CONDITIONS

16. PROPOSED COURSE FEES

S 0

Has a memo been submitted through your dean to the Provost for fee approval?

Yes/No [ ]

17. PREVIOUS HISTORY

Has the course been offered as special topics or trial course previously?

Yes/No [ ]
18. ESTIMATED IMPACT
WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.
No anticipated additional impact

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 ☐ Yes ☒ No library resources required. Library was contacted on 3/6/2012

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)
School of Management - Bachelors of Emergency Management

21. POSITIVE AND NEGATIVE IMPACTS
Please specify positive and negative impacts on other courses, programs and departments resulting from the proposed action.
Positive impact: Provides additional credit opportunity for students to meet the BEM requirement of 30 credits from an AAS Fire Science degree.
Negative impact: None 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.
This course has been recommended by our wildland fire task force to meet the current industry needs for wildland fire. The course is composed of preexisting NWCG courses and realigns the degree and curriculum to match industry presentation methods.

APPROVALS: Add additional signature lines as needed.

<SEE SIGNATURE ON NEXT PAGE> Date
Signature, Chair, Program/Department of: 

Date 11/19/12
Signature, Chair, College/School Curriculum Council for: CTC

Date 11/19/12
Signature, Dean, College/School of: CTC

Signature of Provost (if applicable)
Offerings above the level of approved programs must be approved in advance by the Provost.
<table>
<thead>
<tr>
<th>Signature, Chair</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Faculty Senate Review Committee: ___Curriculum Review ___GAAC ___Core Review ___SADAC</td>
<td></td>
</tr>
<tr>
<td>ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)</td>
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</tr>
<tr>
<td>Signature, Chair, Program/Department of: Emergency Services and Public Safety</td>
<td>Date 10/4/12</td>
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<tr>
<td>Signature, Chair, College/School Curriculum Council for:</td>
<td></td>
</tr>
<tr>
<td>Date 12/3/12</td>
<td></td>
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<tr>
<td>Signature, Dean, College/School of: CRCO</td>
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University of Alaska Fairbanks
Community and Technical College
Emergency Services Program
FIRE 255 – Wildland Fire Behavior II
2.0 (2 + 0) Credits
Course Syllabus

Course Description:

This course will give students an understanding of the determinants of fire behavior through studying input datum for fire (weather, slope, fuels and fuel moisture). Operation of fire behavior prediction tools, assessing and selecting proper inputs, interpreting the results in terms of rate of spread, fire line intensity, potential for extreme fire behavior; and documentation processes. Course is based on a National Wildfire Coordinating Group (NWCG) course.

NWGC Course included:

S-390 Introduction to Wildland Fire Behavior Calculations

Offered Spring Even-numbered Years

Course Goals:

Successful course completion combined with national age, physical fitness and appropriate experience requirements as administered by a federal or state wildland fire agency will qualify the student for interagency fire qualification certifications.

Prerequisites:

FIRE 155

Student Learning Outcomes:

The successful student will be able to:

- List the assumptions, limitations, and appropriate uses of fire behavior prediction models.
- Describe how environmental factors and processes affect fire behavior predictions and safety.
- Define and interpret fire behavior prediction model inputs.
- Calculate fire behavior outputs using available fire behavior processors.
Interpret, communicate, apply, and document wildland fire behavior and weather information.

Methods:

The course is primarily lecture with visuals. Group discussion is strongly encouraged. Homework assignments, periodic quizzes and unit finals will document student progress.

Instructor Qualifications:

Lead instructor must have completed S-490, Advanced Fire Behavior Calculations and be a NWCG qualified division group supervisor, incident commander type 3, or prescribed fire burn boss type 1; recommend that the lead instructor be a NWCG qualified fire behavior analyst.
Unit instructors must be NWCG qualified as strike team leader, task force leader, or prescribed fire burn boss type 2.
A meteorologist is highly recommended to instruct the weather sections of this course.

Location and Meeting Times:

Room X, University Park Center, 1000 University Avenue
Date 1 through Date 2, Day of the week(s), Start Time – End Time

Grading Policy:

<table>
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<tr>
<th>Average Score</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>90 and above</td>
<td>A</td>
</tr>
<tr>
<td>80 to 89.99</td>
<td>B</td>
</tr>
<tr>
<td>70 to 79.99</td>
<td>C</td>
</tr>
<tr>
<td>60 to 69.99</td>
<td>D</td>
</tr>
<tr>
<td>0 to 59.99</td>
<td>F</td>
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Attendance and Participation: 20%
Quizzes: 40%
Course Examinations: 40%

Policies:

Attendance is required at all sessions with individual participation expected.
Homework is due on specified dates. Late work will be accepted with penalty.
Individual needs may be discussed. Academic integrity is expected and plagiarism is unacceptable.

UAF Honor Code
The public holds emergency services personnel accountable to the highest standards of ethics. The credibility of our degree program requires that we meet those expectations in every way possible. As a UAF student, you are subject to the Honor Code. The University assumes that the integrity of each student and the student body as a whole will be upheld. Honesty is a primary responsibility of you and every other UAF student. It is your responsibility to help maintain the integrity of the student community including the reporting any observed violations to the Instructor or Program Coordinator. UAF's Honor Code is as follows:

1. Students will not collaborate on any quizzes, in-class exams, or take-home assignments that will contribute to their grade in a course, unless permission is granted by the course instructor. Only those materials permitted by the instructor may be used to assist in quizzes and exams. The use of study groups is encouraged.

2. Students will not represent the work of others as their own. A student will attribute the source of information not original with himself or herself (direct quotes or paraphrases) in compositions, theses and other reports. (Specifically prohibited for this course are reports composed by other students from previous course offerings and any Internet sources.)

3. No work submitted for one course may be submitted for credit in another course without the explicit approval of both instructors. Students may use the same report topic and references from other courses if the Instructor is provided with a graded copy of any similar submissions to show that an identical report has not been submitted for credit twice.

Violations of the Honor Code will result in a failing grade for the assignment and for the course in which the violation occurred. Violations of the Honor Code may result in suspension or expulsion.

Disability Services:

The Office of Disability Services implements the Americans with Disability Act (ADA), and insures that UAF students have equal access to the campus and course materials. Your instructor will work with the Office of Disabilities Services (208 WHIT, 474-5655) to provide reasonable accommodation to student with disabilities.

Student Texts and Supplies:

- NFES 002931 S-390 Student Workbook
- NFES 002933 S-390 Student CD-ROM
- NFES 002220 Fire Behavior Nomograms, PMS 436-3
- NFES 002231 Ruler, 10 Scale, clear plastic

Suggested Reading:
Students should come to class prepared for discussion and note taking.

Course Calendar with Readings and Work Assignments:
(Subject to variation as the class progresses.)

Session 1
0800-0900  Unit 0 - Introduction
0900-1000  Unit 1 - Topography
1000-1100  Unit 2A - Atmospheric Stability
1100-1200  Unit 2B - Winds
1200-1300  Lunch
1300-1430  Unit 2B – Winds (continued)
1430-1600  Unit 2C - Weather Information and Forecasts

Session 2
0800-1000  Unit 3 - USFBPS Fuel Models
1000-1200  Unit 4 - Fuel Moisture
1200-1300  Lunch
1300-1600  Unit 5A - Non-Electronic Wildland Fire Behavior Processors

Session 3
0800-1000  Unit 5A (Continued)
1000-1200  Unit 5B - Spotting Model
1200-1300  Lunch
1300-1400  Unit 5C - Safety Zone Calculations
1400-1630  Unit 6A - Plotting Fire Size and Shape

Session 4
0800-1030  Unit 6B - Point Source
1030-1230  Unit 7 - Extreme Fire Behavior
1230-1330  Lunch
1330-1400  Unit 8 - Documentation, Briefings, and Monitoring for Fireline Safety
1400-1600  Unit 9 - Final Group Exercise
1600-1700  Final Exam

Schedule to provide for 32 contact hours

Instructors:

Instructor #1 Name

Contact Information:
  e-mail
  Office
  Home
Cell
Instructor #2 Name
Contact Information:
  email:
  Office
  Home
  Cell