FORMAT 1
Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500).
See http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/ for a complete description of the rules governing curriculum & course changes.

TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	**HSEM**	College/School	**School of Management**
Prepared by	**Anita Hughes**	Phone	**Ext 4622**
Email Contact	**Alhughes2@alaska.edu**	Faculty Contact	**Cam Carlson, cdcarlson@alaska.edu**

1. ACTION DESIRED (CHECK ONE): Trial Course [ ]   New Course [XX]

2. COURSE IDENTIFICATION: Dept **HSEM**   Course # **F233**   No. of Credits **3**

Justify upper/lower division status & number of credits: **This is entry level exposure to material not requiring critical thinking skills or analysis**

3. PROPOSED COURSE TITLE: **Critical Infrastructure Protection**

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: **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 (AY2011-12 if approved by 3/1/2012; otherwise AY2012-13)   **Spring 2015**

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	[XX] 6 weeks to full semester
OTHER FORMAT (specify)						
Mode of delivery (specify lecture, field trips, labs, etc)	**Lecture**					

9. CONTACT HOURS PER WEEK: **3/15**   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-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):

HSEM F233 Critical Infrastructure Protection 3 credits

This course provides tools and techniques to students who desire to increase their knowledge, skills and abilities in the protection of critical infrastructure elements. The course focuses on the predominant infrastructure sectors such as water, energy, SCADA, power, telecommunications, internet and cyber infrastructure. *Prerequisites: HSEM F120 or HSEM F121.* (3+0)

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:	XX

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	XX

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 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 <u>variable</u> 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:	XX	PASS/FAIL:	

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES	**HSEM F120 or HSEM F121**

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

15. SPECIAL RESTRICTIONS, CONDITIONS	

16. PROPOSED COURSE FEES	$

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**	Y

If yes, give semester, year, course #, etc.:	Special Topics, HSEM F293 Spring 2014

18. ESTIMATED IMPACT

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

None. This course will be taught as demand requires. Adjuncts currently are budgeted to teach this class as a special topics course Spring 2014.

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	XX	Yes		Library materials are not required for this course

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)

None

21. POSITIVE AND NEGATIVE IMPACTS

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

This course helps fill out the 200-level HSEM offerings. It likely will only draw in more students where the need is not currently being met, rather than pull students from any other course.

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 fills a need in the lower division HSEM course offerings leading to the BEM degree.

APPROVALS: Add additional signature lines as needed.   SEE ATTACHED SIGNATURES

	Date	
Signature, Chair, Program/Department of:		

	Date	
Signature, Chair, College/School Curriculu 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.

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APPROVALS: Add additional signature lines as needed.

| | Date | 1 May 2014 |
| Signature, Chair, Program/Department of: | HSEM | |

| | Date | 5/2/14 |
| Signature, Chair, College/School Curriculum Council for: | | |

| | Date | 5/1/14 |
| Signature, Dean, College/School of: | SOM | |

| | 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
Faculty Senate Review Committee: ___Curriculum Review   ___GAAC

___Core Review   ___SADAC

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

	Date	

Signature, Chair,
Program/Department of:

	Date	

Signature, Chair, College/School Curriculu
Council for:

	Date	

Signature, Dean, College/School
of:

ATTACH COMPLETE SYLLABUS (as part of this application). Note: The guidelines are online:
http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/uaf-syllabus-requirements/
The Faculty Senate curriculum committees will review the syllabus to ensure that each of the item listed below are included. If items are missing or unclear, the proposed course (or changes to it may be <u>denied</u>.

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 (see #6)**

6. ❑ **Student Learning Outcomes (more specific)**

7. **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.).

8. **Course calendar:**
   ❑ A schedule of class topics and assignments must be included. <u>Be specific</u> 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.

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

10. **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.) ❑ Publicize UAF regulations with regard to the grades of "C" and below <u>as applicable</u> to this course. (Not required in the syllabus, but may be a convenient way to publicize this.) Faculty Senate Meeting #171:
    http://www.uaf.edu/uafgov/faculty-senate/meetings/2010-2011-meetings/#171

11. **Support Services:**
    ❑ Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

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.
    ❑ State that you will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655)to provide reasonable accommodation to students with disabilities.

Critical Infrastructure Protection
HSEM F233
3 credits
Prerequisites: None ~~HSEM F120 or HSEM F121~~

Instructor Information:

Spring Semester 2014
Instructor: Mr. Sean McGee
Adjunct Professor, UAF School of Management
semcgee@alaska.edu
cell 907.378.2566

Course Description:

This course introduces students to a framework for understanding Critical Infrastructure Protection (CIP) and provides learning resources for understanding portions of the framework. Over the past fifty years, as society became more interconnected and interdependent, our government has recognized the importance of protecting the infrastructures that are essential to the functioning of the nation.

In the 1980s, our understanding of CIP began to evolve as the U.S. government charged the head of each federal department and agency with the responsibility of protecting essential resources and facilities within their organizations.

As global events have occurred over the past 15 years, the awareness of acts of terror has grown not only with the American people and government, but globally. Concurrent with these events, policy decisions, made by the federal government have focused on the development of a coordinated CIP effort.

This course provides tools and techniques to students who desire to increase their knowledge, skills, and abilities in the protection of physical critical infrastructure elements. The focus of this course is the predominant infrastructure sectors such as water, energy, SCADA, power, telecommunications, internet and cyber infrastructure.

The lecture content will present techniques helpful in the evaluation of various aspects of CIP. Students will be assigned quizzes and problems illustrating the application of the topics presented. Students will also be assigned a term paper which will involve writing an essay analyzing a critical infrastructure they are familiar with.

The grade in the course will be determined on the basis of attendance, participation, homework, quizzes and examinations.

Course Objectives:

The overall objective of this course is to enable students to analyze key critical resource components, and ultimately create informed policies regarding infrastructure. Students will achieve this goal by accomplishing the following objectives:

- Ability to describe the traditional and the emerging cornerstones of Homeland Security.
- Understand the regulatory and technical architecture of the principle critical infrastructure sectors in the U.S.
- Learn how each sector works
- Analyze vulnerabilities in each sector
- Ability to discuss the 11 sectors of the National Strategy for Protection of Critical Infrastructure and Key Assets (water, power & energy, information & telecommunications, chemical industry, transportation,

banking & finance, defense industry, postal & shipping, agriculture and food, public health, and emergency services)
- Ability to distinguish between level 2 and level 3 infrastructures and associate these levels with dependencies.
- Be able to formulate best strategies on how to maximize protection of each sector given budgetary constraints.
- Ability to derive optimal strategies and to draft policies to minimize and protect critical infrastructure in response to adverse events.

Course Materials:

Required Textbook
Radvanovsky, Robert S. (2013-04-11). <u>Critical Infrastructure: Homeland Security and Emergency Preparedness,</u> Third Edition. CRC Press.
ISBN-13: 978-0471786283

Additional Materials
Additional reading and viewing assignments have been selected from articles and websites.

Description of Instructional Methods:

The course will delivered through an in class (resident) and distance virtual classroom utilizing both Blackboard and Adobe Connect. The hybrid class will utilize facilitated discussions, assignments, case studies, and independent research.

Technical Requirements:

This course requires a computer with internet access. Being able to log on to Adobe Connect to view the lectures and participate in class will be crucial. Students should also ensure they have access to their UA email accounts and a Power Point viewer.

Evaluation:

Attendance and in-class discussion
Attendance is mandatory and is worth 25% of your grade. Please obtain approval from the instructors before missing class. If you miss class, it is your responsibility to obtain class notes from a classmate. Your regular participation in the classroom discussion will play a large part in your achieving an excellent grade this semester.

Blackboard based discussion
This class will be utilizing discussion forums on a weekly basis to enhance assure student interaction and understanding of the assigned material. Weekly participation through the Blackboard discussion board is required. You will be graded on the frequency and engagement of your posts. Feel free to create new threads, comment on existing ones, etc. At least one original response to each forum, and one response to a thread for each forum is required. Responses should be original, and should cite sources if using any quotations. These responses are worth 25% of your grade so make sure to participate.

Midterm and Final Exam
The midterm and final exam will consist of multiple-choice and short-answer questions. Each exam will be worth 25% of your grade. Questions may be taken from assigned readings and class discussions.

Grading:

Your final grade is based on the total points that you earn during the semester. Cutoffs for letter grades are based on the following scale: 90% = A, 80% = B, 70% = C, 60% = D, below 60% = F. The table below summarizes the point allocation for your final grade.

Component	Percentage
Attendance & In-Class Discussion	25%
Blackboard Based Discussion	25%
Midterm Exam	25%
Final Exam	25%
Total	100%

Course Policies:

Students are expected to remain up to date with the scheduled lesson plans on a weekly basis. Students will be penalized (10%) for the late submission of class assignments and another 10% for each day afterwards (outside of emergency or mutually agreed upon circumstances).

Classroom Behavior
Please remember to turn off the audio ringer on your cell phones and pagers before entering the classroom. You may use your laptop computer during class to take notes, but using your laptop in a way that distracts other students around you or otherwise disrupts the class (e.g., playing audio/video recordings, chatting) may result in you being asked to leave the classroom.

You should plan to arrive before class begins and not leave until after class ends. This is an issue of respect for everyone involved – not just for the instructor, but also the students whom you disturb with your late entry and/or early departure. If you arrive late to or must leave a lecture early, please sit near an exit in the back of the classroom.

Academic honesty (i.e. Cheating)
Students are expected to observe academic honesty. Dishonest practices including giving or receiving assistance in any manner or form during an examination, unauthorized possession of exam questions, and plagiarism (willfully presenting another person's writings, opinions or thoughts as one's own, without proper credit and documentation) will not be tolerated. Assignments submitted are to be of original work intended for the assignment at hand.

Violations of the UAF Student Code of Conduct will be referred to the appropriate authority for possible disciplinary actions including removal of violator from this course.

<u>Student Services:</u>

Students are encouraged to utilize the UAF Writing Center in 801 Gruening (Phone # 474-5314) as needed to assist in the development and refinement of their written products. Please contact me as required should you need to contact other subject matter support services relevant to the development of your leadership or class projects/topics.

<u>Students with Disabilities:</u>

If you anticipate issues related to the format or requirements of this course, please contact me to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you contact the Office of Disabilities Services http://www.uaf.edu/disability/ (208 WHITAKER BLDG, 474-5655) to provide reasonable accommodation for students with disabilities.

Class Schedule:

This course syllabus provides a general plan for the course; deviations may be necessary. The following is a tentative schedule of course topics:

Module	Topic
1	Introduction & Overview Discussion Board (course introductions)
2	Strategic Principals of Infrastructure Protection Discussion Board
3	Origins of Infrastructure Protection Discussion Board
4	Networks and Their Properties Discussion Board
5	Vulnerability Analysis Discussion Board
6	Risk Analysis Discussion Board
7	Water Infrastructure Protection Discussion Board
8	Mid Term Exam
9	SCADA Systems Discussion Board
10	Power Infrastructure Protection Discussion Board
11	Energy Resource Protection Discussion Board

12	Telecom Infrastructure Protection Discussion Board
13	Internet Infrastructure Protection Discussion Board
14	Cyber Security Discussion Board
15	Final