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
(Attach copy of syllabus)

SUBMITTED BY:

Department	**Homeland Security and Emergency Management**	College/School	**School of Management**
Prepared by	**Amber Lammers**	Phone	**Ext. 4622 or 6736**
Email Contact	**allammers@alaska.edu**	Faculty Contact	**Cameron Carlson, cdcarlson@alaska.edu; ext 6537**

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

2. COURSE IDENTIFICATION: Dept **HSEM**   Course # **F415**   No. of Credits **3**

Justify upper/lower division status & number of credits:	This course will be used for a concentration within the BEM degree. It requires a 300-level course as a prerequisite and 400-level status is appropriate as there are advanced concepts expounded upon from lower level courses.

3. PROPOSED COURSE TITLE: Cyber Domain in the 21st Century

4. To be CROSS LISTED? YES/NO   **No**   If yes, Dept: Course #

NOTE: Cross-listing requires approval of both departments and deans involved. Add lines at end of form for additional required signatures.

5. To be STACKED?* YES/NO   **No**   If yes, Dept.   Course #

How will the two course levels differ from each other? How will each be taught at the appropriate level?:	

* Use only one Format 1 form for the stacked course (not one for each level of the course!) and attach syllabi. Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi (undergraduate and graduate versions) will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e. is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online - see URL at top of this page.

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 (Effective AY2015-16 if approved by 3/31/2015; otherwise AY2016-17)   **TBD**

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

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9. CONTACT HOURS PER WEEK: | **3** | 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):

Example of a complete description:

FISH F487 W, O   Fisheries Management
   3 Credits   Offered Spring
Theory and practice of fisheries management, with an emphasis on strategies utilized for the management of freshwater and marine fisheries. *Prerequisites: COMM F131X or COMM F141X; ENGL F111X; ENGL F211X or ENGL F213X; ENGL F414; FISH F425; or permission of instructor.* Cross-listed with NRM F487. (3+0)

HSEM F415   Cyber Domain in the 21st Century
3 Credits   Offered as Demand Warrants

This is meant to be a foundational cyber course. The cyber domain is misunderstood and the characteristics of the cyber domain are not applied in a coherent manner. This course will provide a theoretical and practical overview of cyber as an operating domain, cyber security as a protective requirement, and cyber power as a means to use cyber assets in conflict. This course is designed to teach undergraduate students the history of the cyber domain, practical application of the principles of cyber domain, and understand the context in which the cyber domain could influence current and future conflicts. The course addresses a range of topics to provide the student a solid overall theoretical foundation of cyber as a domain, a source of national security interest, and exposure to the characteristics of cyber commons. The course will provide analysis of case studies, readings, and strategy to enhance understanding of cyber security, cyber power, and the cyber enterprise. Persons who want careers in Homeland Security or desire base knowledge of cyber, cyber domain, and the use of cyber functions in the future will obtain historical, theoretical, and application knowledge and concepts. (prerequisite: HSEM 301 or permission of instructor) (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:	

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, Format 6		W = Writing Intensive, Format 7		X = Baccalaureate Core	

11.A Is course content related to northern, arctic or circumpolar studies? If yes, a "snowflake" symbol will be added in the printed Catalog, and flagged in Banner.

YES		NO	**XX**

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 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: Changing the grading system for a course later on constitutes a Major Course Change - Format 2 form.

LETTER:	XX	PASS/FAIL:	

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES	

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	No

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

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

This course is primarily taught in an online format. Adjunct faculty will teach the course.

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		**Cyber security materials will generally be used. In the event that other library materials will be needed, they will be contacted.**

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)

There will be no impact on other departments. HSEM students are specifically drawn to this course.

21. POSITIVE AND NEGATIVE IMPACTS
*Please specify **positive and negative** impacts on other courses, programs and departments resulting from the proposed action.*

There are no negative impacts. This course offers more options for HSEM BEM students to specialize in their chose field.
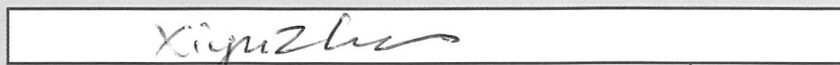
The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

> **This is a new course designed to provide specific materials to those BEM students who are already in the cyber security field and wishing to advance, or to those new students who might be looking for their first career jobs. It provides more choices for BEM students and may expose some to a field they might never have thought about.**

APPROVALS: *Add additional signature lines as needed.*

		Date	12 Oct 15
Signature, Chair, Program/Department of:	HSEM		

		Date	10/09/2015
Signature, Chair, College/School Curriculum Council for:	School of Management		

		Date	10/14/15
Signature, Dean, College/School of:	School of Management		

Offerings above the level of approved programs must be approved in advance by the Provost.

	Date	
Signature of Provost (if above level of approved programs)		

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 Curriculum Council for:		

	Date	
Signature, Dean, College/School of:		

ATTACH COMPLETE SYLLABUS (as part of this application). This list is online at:
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 items listed below are included. If items are missing or unclear, the proposed course (or changes to it) may 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 (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. 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.

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 as applicable to this course. (Not required in the syllabus, but is a convenient way to publicize this.) Link to PDF summary of grading policy for "C":
   http://www.uaf.edu/files/uafgov/Info-to-Publicize-C_Grading-Policy-UPDATED-May-2013.pdf

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

12. **Disabilities Services:** Note that the phone# and location have been **updated.**
   http://www.uaf.edu/disability/ The Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures 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.

5/21/2013

HSEM 415: Cyber Domain in the 21st Century
3 Credits
Class Location: Online
Class Meeting Time: TBD
Prerequisites: HSEM 301 or permission of instructor

<u>**Instructor Information**</u>

Instructor:	O. Shawn Cupp, Ph.D.
Office Hours:	By appointment; hours and days of email availability to be published
Office Location:	TBD
Work Telephone:	TBD
E-mail:	**oscupp@alaska.edu** alternate scupp@kc.rr.com

<u>**Class Textbooks/Materials**</u>

Harris, Shane, (2014). @War: The Rise of the Military Internet Complex, Houghton Mifflin Harcourt Publishing: New York. ISBN 978-0-544-25179-3 (Required)

Nye, Joseph S. Jr. (2011). The Future of Power. PublicAffairs: New York. ISBN 978-1-61039-069-9 (Required)

Cyber Strategy of the United States 2015, online: http://www.defense.gov/News/Special-Reports/0415_Cyber-Strategy

Covertino Sebastian M., LtCol, DeMattei, Lou Anne, and Knierim, Tammy M. LtCol. (2007). Flying and Fighting in Cyberspace, The Maxwell Papers, Air War College, Maxwell Paper No. 40. (provided on Blackboard)

Langø, Hans-Inge. (2013). Slaying Cyber Dragons: Competing Academic Approaches to Cyber Security. Norsk Utenerikspolitisk Institutt. Norwegian Institute of International Affairs, NUPI Working Paper 820. http://brage.bibsys.no/xmlui/handle/11250/277537

Paul, Richard and Elder Linda. (2006). The Miniature Guide to Critical Thinking and Tools. www.criticalthinking.org/files/Concepts_Tools.pdf

Students expected to stay on top of current events and debates by reading national and international news via reputable sources on the Internet.

Additional Readings: Case studies / handouts as assigned. Be prepared to discuss the readings during the week assigned. Readings and links to readings will be available on Blackboard.

Course Description

This course will provide a theoretical and practical overview of cyber as an operating domain, cyber security as a protective requirement, and cyber power as a means to use cyber assets in conflict. This course is designed to teach undergraduate students the history of the cyber domain, practical application of the principles of cyber domain, and understand the context in which the cyber domain could influence current and future conflicts. The course addresses a range of topics to provide the student a solid overall theoretical foundation of cyber as a domain, a source of national security interest, and exposure to the characteristics of cyber commons. The course will provide analysis of case studies, readings, and strategy to enhance understanding of cyber security, cyber power, and the cyber enterprise.

Course Goals

Students in this will learn, analyze, and apply knowledge obtained to the cyber enterprise. The students exposed to historical, theoretical, and application characteristics of the cyber domain. The national security, legal, and commercial aspects are applied to the understanding students attain in the course. This is a foundation course and provides a basic and fundamental understanding of the cyber domain its place in the 21st century.

Student Learning Outcomes

Students will be able to:
- o Assess the role of strategy and policy in determining the role of cyber domain application.
- o Identify and contrast the theory and application of cyber domain concepts.
- o Appraise interrelationships within the cyber domain including strategy, conflict, commerce, legal, and threat aspects.
- o Differentiate the legal constraints and regulatory guidance pertaining to the cyber domain including the interagency complexities.
- o Propose and support change, or enhancements to the current HSEM planning, coordination and execution effort.
- o Assess the importance and future roles of the cyber commons.
- o Evaluate the trends and patterns that will determine the future state of the cyber domain.

Instructional Methods

This class will be taught as a hybrid course. A hybrid course uses various delivery methods to best meet course and session outcomes. The blend may consist of any combination of face-to-face classroom instruction, asynchronous discussion forums, and synchronous sessions. Instructional methodologies, including lectures, case studies, small group activities, student presentations and open and directed discussions, are used to actively involve each student in the learning process. When possible and practical, learning activities will be processed to include not only "what" was learned, but the "so what" and "now what" in order to complete the learning cycle. This course requires a computer with internet access, as we will be utilizing Blackboard. Additionally, students will need internet access for assigned discussions involving online research, as well as access to their UA email accounts and a PowerPoint viewer.

Course Policies

Students expected to remain up to date with the scheduled lesson plans on a weekly basis. Students will be penalized for the late submission of class assignments or if they fall behind by more than two weeks (outside of emergency or mutually agreed upon circumstances). Each late assignment will be docked 10% for every day it is late, up to 100%.

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

Evaluation

40% Research Paper Outline and Term Paper Draft (400 points): Each student will choose an appropriate topic *(25 points)* prepare and submit an outline of their term paper *(50 points),* submit a draft of their term paper *(125 points),* and turn in the final paper *(200 points).*

Requirements for research paper:

Handout will provide all rubrics for topic, outline, draft, and final research paper submissions.

20% Critical Analysis (200 points): There will be two case studies assigned with required analysis to be provided by the student (100 points each). Analysis based upon the intellectual standards outlined within the Paul, Richard and Elder Linda. (2006). *The Miniature Guide to Critical Thinking and Tools* on pages 5-6.

> ***Requirements for Critical Analysis:***
>
> ***Use the Paul and Elder Miniature Guide and conduct analysis with at least four of the identified Elements of Thought and four of the Universal Intellectual Standards. Total page count will vary based upon the analysis conducted but should exceed 6 pages for each case study critical analysis submitted. Instructor will provide case study suggestions for student decision and use.***

20% Participation (200 points): Each student is expected to attend class and participate in the classroom debates. If you have more than 3 unexcused absences throughout the semester you will lose 10% of your final grade. Unexcused absences are missing in-person class meeting, failing to participate in class discussions weekly, or failing to log in weekly and turn in assignments on time for online students.

20% Structured Reflective Journal Comments (200 points): Providing answers and reflection on a structured basis with four different topics (50 points each). Students will provide their comments and reflections on assigned topics throughout the course. They will occur approximately one every four weeks. We will use the Paul and Elder Miniature Book for conducting these journal entries www.criticalthinking.org/files/Concepts_Tools.pdf .

Requirements for Structured Reflective Journal Comments:

Instructor will provide shell where student will fill in comments. Use of the Elements of Though and Universal Intellectual Standards form the Paul and Elder Miniature guide is highly encouraged.

Course Rubric based upon assignments and grade calculation

Research Paper	400 points
Critical Analysis	200 points
Participation	200 points
Structured Reflective Journal	200 points
Total	**1000 points**

A =	90-100% (900-1000 points)
B =	80-89% (800-899 points)
C =	70-79% (700-799 points)
D =	60-69% (600-699 points)
F =	59 % or less (599 points or less)

Assignment Evaluation Criteria

- Uses complete sentences
- Uses proper grammar
- Response reflect depth of thought and critical thinking skills using Paul and Elder Miniature Guide, p. 5-6, Elements of Thought and Universal Intellectual Standards www.criticalthinking.org/files/Concepts_Tools.pdf
- Provides coherent and reasonable response to all questions
- Integrates real world examples into responses
- Meets submission timeline

Support Services

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. Students are also encouraged to use the UAF Speaking Center for coaching and practice. The Center is located in 507 Gruening. Call 474-5470 for Speaking Center hours and to schedule an appointment. 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.

Students with Disabilities:

Students with learning or other disabilities who may need special accommodations are encouraged to make an appointment with the Office of Disability Services, http://www.uaf.edu/disability/ (907 474-5655 or TTY at 907 474-1827). Please inform me of any impediments to meeting course objectives which cannot be fully addressed by the Office of Disability Services. I will work with the Office of Disabilities Services (208 Whitaker Bldg) to provide reasonable accommodation to students with disabilities.

	Week	Date	Item	Activity
	Week 1			Class Overview
Historical	Week 2		Assigned	**Term Paper Topic Due Date**
			Topic	History of Cyber Environment
			Reading	*Digital Disaster, Cyber Security and the Copenhagen School* by Hansen and Nissenbaum
	Week 3		Assessed	**#1 Structured Reflective Journal Comments Due**
			Topic	ARPRANET and Historical Aspects of the Internet
			Reading	*From ARPANET to Internet: A history of ARPA sponsored networks* by Abbate
Theoretical	Week 4		Topic	Cyber as a Doman of Conflict
			Reading	*Flying and Fighting in Cyberspace, The Maxwell Papers* by Convertino, DeMattei, and Knierim
			Reading	*Principles of War for Cyberspace* by Cahanin
	Week 5		Assessed	**Term Paper Topic Due**
			Topic	Theoretical Typology of Cyber Domain
			Reading	*Slaying Cyber Dragons: Competing Academic Approaches* by Langø,
	Week 6		Topic	Cybersecurity Strategy
			Reading	*Cyber Strategy of the United States 2015*
			Reading	*@War: The Rise of the Military-Internet Complex* by Harris (chapters 1,2,3,4)
	Week 7		Assessed	**#1 Critical Analysis Due**
			Topic	Cyber Power
			Reading	*The Future of Power* by Nye (chapters 5,6,7)
Application	Week 8		Assessed	**Term Paper Outline Due**
			Topic	Cyber and the Military (attacks and types of denial)
			Reading	*Joint Publication 3012 (R) Cyberspace Operations*
			Reading	*The Future of Power* by Nye (chapter 1,2)
	Week 9		Assessed	**#2 Structured Reflective Journal Comments Due**
			Topic	Economics of Cyber Attacks
			Reading	*Case Study on Target*
	Week 10		Topic	SCADA (Supervisory Control and Data Acquisition) and Cyber Domain
			Reading	*Improving Security for SCADA Control Systems* by Hentea
Application of Knowledge	Week 11		Assessed	**#3 Structured Reflective Journal Comments Due**
			Topic	Laws and Statutes within Cyber Domain
			Reading	*Getting it Right: Protecting American Critical Infrastructure in Cyberspace* by Condron
	Week 12		Assessed	**Term Paper Drafts Due**
			Topic	Cyber Strategic Surprise
			Reading	*@War: The Rise of the Military-Internet Complex* by Harris (chapters 8,9,10,)
			Reading	*Case Study on Russia and Georgia Conflict 2008*
Operational	Week 13		Assessed	**#2 Critical Analysis Due**
			Topic	Cyber Security
			Reading	*@War: The Rise of the Military-Internet Complex* by Harris (chapters 5,6)
Future	Week 14		Assessed	**#4 Structure Reflective Journal Comments Due**
			Topic	Anonymous and their place in the Cyber Domain
			Reading	
	Week 15		Assessed	**Term Papers Due**
			Topic	Future of the Cyber Domain
			Reading	*@War: The Rise of the Military-Internet Complex* by Harris (chapters 13,14)