New Courses
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. Request submitted by (Department or Program Name): Department of Anthropology

2. Course prefix, number and complete title of course: ANTH 656 Ancient Foodways and Cooking Technology

3. Catalog course description (not to exceed 50 words):
This seminar reviews the study of ancient foodways and cooking technologies, particularly fire-based methods, especially in the contexts of human evolution, subsistence and settlement behavior, social organization, theoretical underpinnings, and archaeological manifestations thereof, with the focus on ancient hunter-gatherer populations, wild plants, terrestrial animals, and aquatic resources.

4. Prerequisite(s): ANTH 602 or 604 or Permission of Instructor

5. Is this a variable credit course? □ Yes ✔ No
If yes, from ________ to ________

6. Is this a repeatable course? □ Yes ✔ No
If yes, this course may be taken ________ times.
Will this course be repeated within the same semester? □ Yes ✔ No

7. This course will be:
a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
   N/A
b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
   MA and PhD in Anthropology

8. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

9. Prefix Course # Title (excluding punctuation)

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<th>Prefix</th>
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<td>ANTH</td>
<td>656</td>
<td>ANCIENT FOODWAYS &amp; COOK TECH</td>
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Approval recommended by:
Dr. Cynthia Werner
Department Head or Program Chair (Type Name & Sign) Date: 2-26-2014

Chair, College Review Committee Date: Patricia A. Munley 3-20-14

Dean of College Date: Patricia A. Munley 3-20-14

Submitted to Coordinating Board by:
Associate Director, Curricular Services Date: Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Curricular Services – 02/14

CUA 14126 02-11
SYLLABUS/CALENDAR: ANTH-656 -- Fall 201_

Ancient Foodways and Cooking Technologies

Instructor: Dr. Alston V. Thoms
Office: Anth. Bldg., Rm. 312C
Office Hrs: ____________________________

Meeting Place: Anth. Bldg., Rm. ___
Meeting Time: ____________________________
E-mail: a-thoms@tamu.edu

Course Description

This seminar reviews the study of ancient foodways and cooking technologies, particularly fire-based methods, especially in the contexts human evolution, subsistence and settlement behavior, social organization, theoretical underpinnings, and archaeological manifestations thereof, with the focus on ancient hunter-gatherer populations, wild plants, terrestrial animals, and aquatic resources. Course Prerequisite: Anthropology 602 or 604 or permission of instructor.

Course Standards and Learning Outcomes

- Understand the ecology wild and domestic foodstuffs, their inherent nutrients
- Understand cooking requirements for carbohydrate-, protein-, and fat-rich foods
- Understand the diversity of fire-based cooking—grilling, baking, steaming, and boiling—as well as fermentation and other techniques
- Understand and critique basic theoretical and methodological issues of studying technological organization through cooking-feature assemblages and how those issues are addressed in archaeological settings around the world
- Acquire detailed knowledge of a given cooking topic or method and apply it to a topic or problem of research interest
- Write a research paper on that topic/problem and deliver it orally in a concise, well-organized fashion that critiques and reaches a specified objective
- Acquire insights developed from the study of ancient food and cooking technologies and apply them toward fine-tuning critical thought and skill in the students’ graduate and professional careers.

Class Structure: The seminar format is designed to provide students with a working knowledge of ancient food and cooking technologies through readings, lectures, and discussions. Students are required to write a research paper on a topic that pertains to ancient food and cooking technology, and, ideally, relates to their own field of study or research interests. Research papers and discussions about them, as shared with classmates, provide case-study examples of ancient foods and related cooking technologies and address questions about past human behavior as evidenced in the archeological record. A typical, 3-hour seminar consists of: (1) ca. 45 minutes for a student-led review/discussion of selected readings; students to provide written summary/critique of assignments to classmates and professor; (2) ca. 45 minutes for instructor’s lecture/discussion on the topic of the day, including case-study data on his past/current research; (3) 15-minute break; and (4) ca. 45 minutes follow-up discussions (first ½ of course) or student presentations/discussions on their sections of research papers (second ½ of course). During the second ½ of the semester, students present and submit written papers (ca. 5-10 double-space pages, plus illustrations and references cited) biweekly that are drafts of sections of their research paper, including: (a) outline; (b) introduction/general background; (c) methods and related background; (d) data/content presentation/results; (e) discussion and conclusions. Presentations are graded; drafts are reviewed, graded, and returned with comments in the final paper. Final papers are presented (15 minutes) in class via PowerPoint and submitted for grading.
Research Paper: 20-25 double-spaced pages (12 pt. font) of text, plus tables, figures, and references cited—must research an archaeological issue(s), method, or theory, or the methods and theoretical underpinnings of a research topic. Selection of a specific region(s) and archaeological focus is dependent on each student’s research interest (known or anticipated). Insofar as practical, selections should "fit" comfortably with a student’s own thesis or dissertation topic. The content of papers will vary considerably from student to student but it will be determined and through discussions with the professor and revised, as necessary, via in-class “peer-review” by the other students and professor.

Class Requirements and Grade: Consistent class attendance, participation in discussions, timely completion of assigned readings, oral presentations, and written summaries are required. Grades are based on the research paper and final presentation (65%), and class participation/quality of weekly presentations/synopses (35%). To receive an “A” in this class is likely to require ca. 9 hrs per week of reading, writing, and research time, as well as consistent class attendance and meaningful participation. Final letter grades will be assigned based on numeric averages (i.e., 59 or less=F; 60-69=D; 70-79=C; 80-89=B; 90-100=A).

OTHER STATEMENTS.

The Americans with Disabilities Act (ADA) Statement:

The following ADA Policy Statement (part of the Policy on Individual Disabling Conditions) was submitted to the University Curriculum Committee by the Department of Student Life. The policy statement was forwarded to the Faculty Senate for information.

Approved by the University Curriculum Committee, March 7, 1997
Approved by the Graduate Council, March 20, 1997
Approved by the Faculty Senate, May 12, 1997

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room 126 of the Koldus Building or call 845-1637.

Handouts used in this course are copyrighted: By "handouts," I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, review sheets, and additional problem sets. Because these are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

Scholastic Dishonesty: “An Aggie does not lie, cheat, or steal or tolerate those who do.” As commonly defined, plagiarism consists of passing off as one's own the ideas, words, writings, etc., which belong to another. In accordance with the definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of the person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Regulations, under the section "Scholastic Dishonesty." Student Rules is available on line at: http://studentrules.tamu.edu/ Also see web site on Academic Integrity Task Force, 2004 at: http://www.tamu.edu/aggiehonor/FinalTaskForceReport.pdf
Required text—for summary/critique, as assigned:

Wrangham, Richard

**Required and Recommended Readings**—summaries/critiques as assigned to individual students such that most of these are covered in class (subject to additions/substitutions during semester): to be available through eCampus (http://ecampus.tamu.edu/; accessed with your Neo ID and password)

Abbott, James T., and Charles D. Frederick

Ames, K.M.

Andrus, C. Fred T. and Douglas E. Crowe

Aouadi-Abdeljaouad, N. and L. Belhouchet

Atalay, Sonya and Christine A. Hastorf

Backhouse, Paul N., Eileen Johnson, Alexander Brackenreed-Johnston, and Briggs Buchanan

Balme, Jane and Sandra Bowdler,

Barbetti, M. and H. Allan

Barfield, L. H.

Barton, H. and P. J. Matthews

Basgall, M.E.

Benyshek, D.C. and J.T. Watson

Belcher, William R.

Bell WT.

Bellomo, R.V.

Binford, L.R.

Bird, Douglas W. and James F. O’Connell

Bird, D. W., J.L. Richardson, P.M. Veth, and A.J. Barham

Black, S. L and A.V. Thomps

Bousman, C. B. and M. Quigg

Boyd, D.K., G. Mehalchick, and K. W. Kibler
Brace, C.L., S.L. Smith and K.D. Hunt

Brink, J. W.

Brink, J.W. and Dawe, B.

Bryant, V.M. and G. W. Dean

Buonasera, Tammy

Cachel, Susan

Chandler-Ezell, Karol, Deborah M. Pearsall, and James A. Zeidler
2006 Root and Tuber Phytoliths and Starch Grains Document Manioc (Manihot esculenta), Arrowroot (Maranta arundinacea), and Llerén (Calathea sp.) at the Real Alto Site, Ecuador. Economic Botany 60(2):103-120.

Churchill, Steven E. and Jill A. Rhodes

Cohen, M.N.

Cordain, L., S.B. Eaton, J. Brand Miller, N. Mann, and K. Hill

Darby, M.
Deacon, H.J.  

Dering, J. Philip  


Dogome, H.  

Eaton, S. Boyd  

Fogel, Marilyn L. and Noreen Tuross  

Glassow, Michael  

Gose, W.A.  

Hall, G.D.  

Hayden, B. and Cousin, S.M.  

Henry, Amanda G., Holly F. Hudson, and Dolores R. Piperno  

Holdaway, Simon, Patricia Fanning, and Ed Rhodes  
Hu, Yaowu, Hong Shang, Haowen Tong, Olaf Nehlich, Wu Liu, Chaohong Shao, Jincheng Yu, Changsui Wang, Erik Trinkaus, and Michael P. Richards

James, S. R.

Jones, Martin

Jones, T.L. and J.R. Richman

Johns, Timothy and Isao Kubo

Keefer, David K., Susan D. deFrance, Michael Moseley, James B. Richardson III, Dennis R. Satterlee, and Amy Day-Lewis

Kenoyer, J. M., J.D. Clark, J.M. Pal, and G.R. Sharma

Kidder, Norm

Leach, Jeff D.

Leach, Jeff D., David Nickels, Bruce K. Moses, and Richard Joues

Lepofsky, D. and Peacock. S.L.,

Lombard, M. and L. Wadley

Losey, Robert J., Sylvia Behrens Yamada, and Leah Largaspada


Lubinski, Patrick M.


Madsen, David B., Ma Haizhou, P. Jeffrey Brantingham, Gao Xiing, David Rhode, Zhang Haiying, and John W. Olsen


Malainey, M.E.


Movius, H.L., Jr.


Nakazawa, Yuichi, Lawrence G. Straus, Manuel R. Gonzalez-Morales, David Cuenca Solana, and Jorge Caro Saiz


Nambi, K.S.V. and M.L.K. Murty


Neel, J.V.


Pagoulatos, Peter


Park, Hi-hyun


Peacock, Sandra L.

Piperno, Dolores R., Anthony J. Ranere, Irene Holst, Jose Iriarte, and Ruth Dickau

Poinar, Hendrik N., Melanie Kuch, Kristin D. Sobolik, Ian Barnes, Artur B. Staniewicz, Tomasz Kuder, W. Goeffrey Spaulding, Vaughn M. Bryant, Alan Cooper, and Svante Paabo

Pratt, Jo Ann

Reeves, B.O.K.

Reid, K.

Rick, John W. and Katherine M. Moore

Roberts, S.L., C.I. Smith, A. Millard, and M.J. Collins

Rolland, Nicolas

Schalk, Randall F.

Schalk, R., and Meatte, D.
1988 FCR Feature Chapter In The Archaeology of Chester Morse Lake: The 1986-87 Investigations for the Cedar Falls Improvement Project. Draft report submitted to the Seattle Water Department by the Center for Northwest Anthropology, Washington State University, Pullman.

Shea, John
Speth, John D. and K.A. Spielman

Straus, Lawrence Guy

Sullivan, A.P., III, R.A. Cook, M.P. Purtill, and P.M. Uphus

Thoms, A.V.


Wandsnider, LuAnn.


Whitaker, Adrian R.

Williamson, B.S.
Wohlgemuth, E.

Wolverton, Steve, Lisa Nagaoka, Julie Densmore, and Ben Fullerton
2008 White-Tailed Deer Harvest and Pressure and Within-Bone Nutrient Exploitation during the Mid- to Late-Holocene in Southeast Texas. Before Farming [on-line version] 2 article 3 http://www.waspess.co.uk/journals/beforefarming/about/index.php

Wood, Jacqui
CLASS CALENDAR

Week 1—September _:
Topic: Introduction to course and the professor; comments by students on their research interests and potential topics for research paper; general comments on ancient food-getting and cooking technologies as keys to learning about past human behavior (a “we-are-what-we-eat” perspective) land-use-intensification theory as a context for examining ancient food and cooking technologies; discussion of the embedded ethics/stakeholders issues, as they pertain to topics at hand


Assignment: Attend class prepared to discuss your research interests in and ideas about what fields/subfields and kinds of knowledge might be applicable to a study of ancient food and cooking technology and what ethics issues are embedded therein

Week 2—September _:
Topic: Behavioral-ecology-and-archaeology (i.e., archaeological ecology) as a useful theoretical perspective for examining ancient food and cooking technologies; fundamentals of modern human diets and cooking requirements of basic food types; bioanthropological relationships between diet and dental/cranial structure

Readings: Bird and O’Connell (2006); Brace et al. (1990); Wandsnider (1997)

Assignment: Read all weekly articles/chapters and write/submit a one page overview—including a 100- word abstract and a critique/reaction—that focus on information directly relevant to food and/or cooking technology; present/discuss—ca. 10 min—assigned article in class

INDIVIDUAL ASSIGNMENTS:

Week 3a—September _:
Topic: Of Fire and Food in Human Evolution, Part I: Hominid dietary evolution during the Pliocene and Pleistocene, as envisioned from perspectives of the selective advantages of cooking food and modern apes and monkeys as models

Readings: Wrangham (2009), first ½

Assignment: INDIVIDUAL ASSIGNMENTS:

Week 3b—September _: Day-long field trip and archaeological tour of Fort Hood to visit burned-rock-midden sites and collect raw cook stone for cooking experiments

Week 4—September _:
Topic: Of Fire and Food in Human Evolution, Part II: Hominid dietary evolution during the Pliocene and Pleistocene, as envisioned from perspectives of the selective advantages of the controlled use of fire and modern apes and monkeys as models

Readings: Wrangham (2009), second ½
Assignment: INDIVIDUAL ASSIGNMENTS:

Week 5—September __:
Topic: Of Fire and Food in Human Evolution, Part III: Archaeological Evidence for the controlled use of fire in the Old World; relationships among fire, cooking, and dental characteristics; role(s) of diet/subsistence patterns in the development of gender-based division of labor and home-bases during the Pliocene and Pleistocene; more on basic food types and nutrition
Readings: Balme & Bowdler (2006); Bellomo (1994); Eaton (2007); James (1989); Rolland (2004); Speth and Spielman (1983); Straus (1989)
Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, submit ca. 5 page detailed outline of your proposed research paper and a working bibliography

Week 6—October __:
Topic: A Diversity of Cooking Techniques and Land-Use Patterns: Roasting, baking, grilling, boiling, and steaming; cooking as evidence for land-use intensification and diets during the Holocene
Readings: Ames (2005); Atalay and Hastorf (2006); Binford (1968); Cachel (1997); Cohen 1995; Thoms (2003); Thoms (2008a)
Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, find/Read/Abstract/Critique an article relevant to the topic of the day and your research interest (including from the working bibliography) and submit a one page summary, including “copied” 100 word abstract, and present/discuss it in class (5 minutes tops)

Week 7—October __:
Topic: Review of the nature of the ecologies of wild plant foods, their carbohydrate and other nutrients, and requisite cooking technologies, with ethnographic examples
Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, submit a ca. 5-10 page draft (double-space with 12 point font) of introduction and method-background sections of your proposed research paper

Week 8a—October __:
Topic: Review of the nature of the ecologies of terrestrial-animal foods, their protein and fat nutrients, and requisite cooking technologies, with ethnographic examples
Readings: Brink (1997); Churchill and Rhodes (2009); Cordain et al. (2002); Reeves (1990); Rick and Moore (2001); Roberts et al. (2002); Shea (2009); Wandsnider (1999); Wolverton et al. 2008

Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, find/Read/Abstract/Critique an article relevant to the topic of the day and your research interest (including from the working bibliography) and submit a one page summary, including “copied” 100 word abstract, and present/discuss it in class

Week 8b—October __: Weekend field trip to Fort Hood, Texas or Land Heritage Institute (San Antonio) to tour the Richard Been site and vicinity and collect raw cook stone and geophytes for cooking experiments

Week 9—October __:
Topic: Review of the nature of the ecologies of aquatic-animal foods, their fat nutrients, and requisite cooking technologies, with ethnographic examples

Readings: Andrus and Crowe (2002); Belcher (1991); Bird et al. (2002); Jones and Richman (1995); Keefer et al (1998); Losey et al. (2004); Lubinski (1996); Schalk (1977); Whitaker 2008

Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, submit a ca. 10 page draft of data and results section of your proposed research paper

Week 10—November __:
Topic: Review of morphologically oriented analytical techniques—archaeological feature form and function—for understanding the nature and diversity of cooking facilities and tracking ancient diets

Readings: Abbott and Frederick (1990); Backhouse et al. (2005); Brink and Dawe (2003); Gose (2000); Leach et al (1998); Pagoulatos (2005); Schalk and Meatte (1988) Thoms (2007)

Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, find/Read/Abstract/Critique an article relevant to the topic of the day and your research interest (including from the working bibliography) and submit a one page summary, including “copied” 100 word abstract, and present/discuss it in class

Week 11a—November __:
Topic: Review of microscopic, chemical, and molecular oriented analytical techniques—floral and faunal remains—for understanding the nature and diversity of cooking facilities and tracking ancient diets

Readings: Barton and Matthews (2006); Bousman and Quigg (2006); Buonasera (2005); Bryant and Dean (2006); Dering (1998); Fogel and Tuross (2003); Henry et al. (2009);
Lombard and Wadley (2007); Malainey (2007); Piperno et al. (2009); Poinar et al. (2001)

Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, submit a ca. 5 page draft of discussion/conclusion

Week 11b—November ___: Guest participants __________, Tribal Historic Preservation Officer, __________Nations, 2:00 PM Friday, November 13; outdoor hot-rock cooking experiments, Saturday and Sunday, November 14 and 15

Week 12: —November ___
Topic: Review and case-studies of the evolution of cooking technologies in the Old World: Europe, Africa, Middle East, Asia, and Australia

Readings: Aouadi-Abdeljaouad and Belhoucnet (2008); Barbetti and Allan (1972); Barfield (1991); Bell (1991); Deacon (2001) Dogome (2000); Holdaway et al. (2008); Hu et al. (2009); Jones (2009); Kenoyer et al. (1983); Madsen et al. (2006); Movius (1966); Nambi and Mutry (1983); Nakazawa et al. (2009); Park 1990; Williamson (2004); Wood (2000)

Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, find/Read/Abstract/Critique an article relevant to topic of the day and your research interest (including from the working bibliography) and submit a one page summary, including “copied” 100 word abstract, and present/discuss it in class

Week 13—December ___:
Topic: Review and case-studies of the evolution of cooking technologies in the New World: North America, Mesoamerica, and South America

Readings: Chandler-Ezell et al (2006); Darby (2005); Glassow (1996); Hall (200); Hayden and Cousin (2004); Lepofsky and Peacock (2004); Pratt (1999); Reid (1977); Sullivan et al. (2001); Thoms (2008b); Thoms (2009); Wohlgemuth (1996)

Assignment: INDIVIDUAL ASSIGNMENTS:

ALSO, find/Read/Abstract/Critique an article relevant to the topic of the day and your research interest (including from the working bibliography) and submit a one page summary, including “copied” 100 word abstract, and present/discuss it in class

Wednesday, December ____—No class, as this is a designated Reading Day:
Week 14—December ________: FINAL EXAMINATION consisting of (a) 10 minute oral summary/PowerPoint presentation of individual research paper; and (b) submission of final research papers
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. Request submitted by (Department or Program Name):
   Bush School of Government and Public Service

2. Course prefix, number and complete title of course:
   INTA 662 Nuclear Security Threat Assessment and Analysis

3. Catalog course description (not to exceed 50 words):
   Study the manner in which we conduct threat assessments and the analysis of non-state actors in the fields of nuclear and radiological security; intended end state is to equip graduate students with the ability to determine the threats associated with non-state actors in terms of nuclear or radiological capabilities

4. Prerequisite(s):
   None

5. Is this a variable credit course? □ Yes ☑ No
   If yes, from _______ to _______

6. Is this a repeatable course? □ Yes ☑ No
   Will this course be repeated within the same semester? □ Yes ☑ No
   If yes, this course may be taken ______ times.

7. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
      MIA-The Bush School
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S. Ph.D. in geography)
      MIA-The Bush School

8. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

9. Prefix  | Course # | Title (excluding punctuation) |
          |          | NUCL SEC THRST ASSESSMENT    |

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Approval recommended by:

Larry C. Napper
Department Head or Program Chair (Type Name & Sign) Date

Leonard Bright
Chair, College Review Committee Date

Arnold Vecchio
Dean of College Date

Submitted to Coordinating Board by:

Associate Director, Curricular Services

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Curricular Services – 02/14
From: Charlton, William S  
Sent: Wednesday, February 19, 2014 9:24 PM  
To: Wood, Janeen H  
Cc: Bright Jr, Leonard A; Boyle, David R  
Subject: RE: Nuclear Threat Assessment  

Follow Up Flag: Flag for follow up  
Flag Status: Flagged  

Janean:

The Nuclear Engineering Department has no objection to this course. As you know we worked closely with Professor MacNamee on the development of the course and are happy to see it as an International Affairs course.

-Dr. Charlton  

William S. Charlton, Ph.D.  
Associate Professor | Nuclear Engineering Department | Texas A&M University  
Director | Nuclear Security Science & Policy Institute | Texas A&M Engineering Experiment Station  
3473 TAMU | College Station, TX 77843-3473  
ph: 979.845.7092  | mobile: 979.220.7622 | wcharlton@tamu.edu  

http://nsspi.tamu.edu | Educating the Next Generation of Leaders in Nuclear Security Science

From: Wood, Janeen H  
Sent: Wednesday, February 19, 2014 2:10 PM  
To: Charlton, William S  
Cc: Bright Jr, Leonard A; Boyle, David R  
Subject: Nuclear Threat Assessment  
Importance: High  

Dr. Charlton,

The Bush School is proposing to put forward Professor Richard Mac Namee’s course, Nuclear Security Threat Assessment and Analysis for a permanent course number to be added to the graduate catalog, 2015-16. Before we did that we wanted to make sure that the Nuclear Engineering Department had no objection. If you are not the person I should direct this to could you let me know who I should contact. Our GIC meets on Monday so I’m trying to get a pretty quick turn-around. I apologize for the very short notice. The syllabus is attached.

Thank you for your consideration.  
Janean

Janean H. Wood ’90  
Assistant to the Director  
Masier’s Program for International Affairs  
The Bush School of Government & Public Service  
4220 TAMU  
College Station, TX 77843-4220  
979-458-2276
INTA 661 Nuclear Security Threat Assessment and Analysis

Richard C. Mac Namee
The Bush School of Government and Public Service
Texas A&M University
4220 TAMU College Station
Room 1104, Academic Building West
College Station, TX 77843-4220

Telephone : 979-862-3469
Email : rmacnamee@bushschool.tamu.edu
Office Hours : By appointment
Class Hours : Room 1063 Monday 1:30pm to 4:20pm

COURSE DESCRIPTION

"while nothing is easier than to denounce the evildoer,
nothing is more difficult than to understand him".
Fyodor Mikhailovich Dostoevsky

In order to effectively and efficiently manage risk there is an imperative to first identify and understand threat. The primary objective of INTA-689-610 Nuclear Security Threat Assessment and Analysis is to study the manner in which we conduct threat assessments and the analysis of non-state actors in the fields of nuclear and radiological security. The intended end state is to equip graduate students with the ability to determine the threats associated with non-state actors in terms of nuclear or radiological capabilities. Students will also develop a better understanding of counter-measures as well as government operational and policy responses that seek to achieve an appropriate, proportional, cost-effective and robust risk management strategy.

The course will examine the history of threats and security issues in an effort to better understand terrorist groupings, their motivations, as well as the attack methodologies that terrorist organizations are both capable and most likely to operationalize against nuclear and radiological facilities and supply lines.
It should be noted that the *Threat Assessment and Analysis Methodology* framework which will be taught and utilized throughout the course will focus on nuclear and radiological issues. That said, the methodology used throughout the class has utility across a broad range of government and commercial sectors, entities, and facilities.

The course will also briefly study the various government entities involved in assessing and addressing these threats.

Key questions to consider include:

- What makes something a threat/security issue?
- How can we conceptualize these issues?
- What similarities/differences do we find?
- How do these issues threaten individual, national, international security?
- What responses are possible and/or appropriate at the national, sub-national, non-national, and super-national levels?

The answers to these questions will help fulfill the key objective of this course: to consider these transnational threats from a range of levels of analysis, the system, regions, states, sub-groups, and individuals.

**LEARNING OBJECTIVES**

The primary goal of this course is to educate the student in such a manner that on completion they are able to conduct a threat assessment and analysis for non-state actors and the threat which they present to nuclear and radiological facilities and supply lines. Approaching the subject matter in this way forces a student to efficiently and effectively identify security threats and ultimately craft and articulate plausible policy responses to such threats. Specifically, students will focus on threats emanating from nuclear weapons, radiological material, and related technology. After completing this course, the student should be able to:

- Understand the history of terrorism, including its causes, motivations, strategies, and tactics, particularly regarding nuclear terrorism.
- Explain counterterrorism strategies and policies and the role of intelligence in counterterrorism.
- Analyze current and future nuclear threats from countries and non-state or sub-state actors and provide recommendations on how to address these security issues.
- Define and analyze the various types of transnational threats and targets in order to craft effective policy responses.
- Describe nuclear weapons proliferation, including incentives and disincentives for proliferation.
- Analyze smuggling methods and counter-proliferation strategies.
- Identify materials of concern and the physical characteristics of these materials. Also prioritize these materials based on their attractiveness, location, and the threat they pose.

PREREQUISITES

Graduate standing.

COURSE READINGS

The primary texts used for this class are as follows;


These readings will be supplemented with assignments from journals and periodicals as directed by the lecturer. Students will be allocated "Reading Reactions" on a weekly basis which they will be required to present during class and form the starting point for subsequent discussion.

COURSE REQUIREMENTS

Active participation is central to the course and will represent a major component of your final grade. Please note, class participation is not just attendance, it is more about contribution. Further, participation is not just about how much you speak, but about the quality of your commentary and how it informs and feeds the wider discussion. Thus, asking a good question is of equal value to bringing some new information the class’ collective attention.

Reading assignments provide essential background for the course sessions. Students are also encouraged to be adventurous and seek out relevant and interesting readings (from reputable sources) independently.

PARTICIPATION and READING REACTIONS

Students should ensure that they attend class not simply prepared to discuss the readings, but to also be prepared to present the readings when called upon to do so by the instructor. Students may will be randomly selected and asked to begin the discussion with a short presentation on the issues raised in
the readings. Students should be prepared not simply to describe what they have read, but to critique arguments and present independent thoughts. As part of in-class discussions, students will engage in role-playing exercises, classroom debates and evaluate and analyze case studies. These activities are designed to enhance and deepen student understanding of the issues at hand and translate the readings and discussion into a simulated reality.

WORKING GROUP PRESENTATION

Students will also prepare a team oral presentation (no more than 2-3 students per team) in which the individual teams will provide background analysis to a notional “Head of Agency” (role played by the lecturer) on a terrorist operation or organization. The lecturer will determine Working Groups and allocate subject areas during Week 1.

FINAL POLICY MEMORANDUM

The final assignment, which will build on the mid-term assignment, will be a Policy Memorandum. Students by this stage will hopefully have developed a particular area of interest which should form the basis of their chosen topic. Students should select a contemporary and significant “Insurgency or COIN” issue or campaign to analyze and make recommendations to a policymaker as to how best address the issue in question. The paper should be no more than 5 double spaced pages, using FONT 12 Point Arial with 1” margins at top and bottom and 1.25 margins at right and left. You should reach agreement with the lecturer on a topic for this paper by Friday March 6th, 2015 by email.

The deadline for the Final Policy Memorandum is at the start of class on Friday April 24th, 2015 in hardcopy and e-copy (WORD). Late papers will be penalized five points per day (from A to A-, from A- to B+, etc.). Incompletes will not be allowed except in extreme or unusual circumstances (e.g. serious illness). Problems with technology are not an acceptable reason for late work. It is essential that you exercise “best practice” in terms of contingency and save your work in several places as you write.

GRADING

Students are required to attend all sessions, arrive on time, and have read the Required Readings prior to each session.

The course grade will be computed as follows:

- Class Participation and Reading Reactions - 30%
- Working Group Presentation - 35%
- Final Policy Memorandum - 35%
The following scale will be used for calculating final grades for this course:

- Grade A - 90 to 100%
- Grade B - 80 to 89%
- Grade C - 70 to 79%
- Grade D - 60 to 69%
- Grade F - 0 to 59%

Grading for written deliverables is established through the use of a 10 point grading rubric. Please find a copy of the template utilized at Annex A.

IMPORTANT DATES

1. Final Policy Memorandum Topic Due March 6th, 2014
2. Final Policy Memorandum Due April 24th, 2014

ACADEMIC INTEGRITY

An Aggie does not lie, cheat, or steal or tolerate those who do.

Students are expected to adhere to standards of academic integrity. Scholastic dishonesty consists of lying, cheating or stealing academic information with intent to gain academic advantage. Academic dishonesty comes in a variety of forms. The most common forms are plagiarism, cheating, and academic misconduct. Students who participate in any of these activities will be subject to appropriate University disciplinary action.

Students are expected to review, utilize and adhere to the University’s Honor Council Rules and Procedures, which are posted on the University’s web site at http://www.tamu.edu/aggiehonor. This website provides detailed information and clarification policies, procedures, and rights and responsibilities related to academic integrity.

PLAGIARISM

The attention of each student is directed to the requirement to avoid plagiarism or the appearance of plagiarism through careless citation. As commonly defined, academic dishonesty/plagiarism consists of passing off as one’s own ideas, words, writings, etc, that belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and submit the final article as if it were your own, even if you have the permission of the person. It does not matter from where the material is borrowed - a book, an article, material off the web, another student’s paper - all constitute plagiarism unless the source of the work is fully identified and credited. It is important when using a phrase, a distinct idea, concept, a sentence, or sentences from another source to credit explicitly that source
either in the text, a footnote or endnote. Plagiarism is a violation of academic and personal integrity and carries extremely serious consequences. Scholastic dishonesty (including cheating and plagiarism) will not be tolerated and will be punished in accordance with Texas A&M University Student Rules. If you have any questions, please consult the course instructor.

AMERICANS WITH DISABILITIES ACT (ADA) POLICY STATEMENT

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities at 979-845-1637 by phone or at disability@tamu.edu by email.

COURSE OVERVIEW

Week 1: Course Overview and Defining “Threat”
(Introduction of the Threat Assessment and Analysis Methodology)

Week 2: Terrorism in Historical Context
(Classroom Exercise - “In-Tray” Threat Assessment and Analysis)

Week 3: Terrorism Causes and Motivations
(Working Group Presentation 001 - Aum Shinrikyo Sarin Gas Attack 1995)

Week 4: Terrorist Strategy and Tactics
(Classroom Exercise - “Terrorist Planning Scenarios”)

Week 5: WMD Terrorism
(Working Group Presentation 002 - Goiania Radiological Incident 1987)

Week 6: Material Characterization

Week 7: Proliferation of Nuclear and Radiological Materials and Technologies
(Final Policy Memorandum Topic Submission)

Week 8: In Need of Attention: North Korea
(Working Group Presentation 003 - Lashkar-e-Taiba - LeT)

March 9th: No Class - Spring Break

Week 9: The Rise of Iran: Persian Hegemony of The Middle East
(Working Group Presentation 004 - Al-Qaeda in the Islamic Maghreb - AQIM)

Week 10: Counter-Terrorism Strategy and Policies
(Working Group Presentation 005 - Fukushima Nuclear Disaster)
Week 11: The Role of Intelligence in Counter-Terrorism

Week 12: Policy and Government Response to Nuclear Terrorism

Week 13: Class Planning Exercise and Simulation - Houston “Dirty Bomb”

Week 14: Guest Speakers - TBA and Summary Arguments - Nuclear Terrorism
(Final Policy Memorandum submission)

END OF DOCUMENT
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and attach a course syllabus.

1. Request submitted by (Department or Program Name):
   Department of Marine Sciences

2. Course prefix, number and complete title of course:
   MARS 658 Fisheries Management Strategies

3. Catalog course description (not to exceed 50 words):
   International and U.S. federal and selected state fishery management strategies; history of fisheries, jurisdictional issues, eco-system approaches and case studies.

4. Prerequisite(s): 
   Required standing or approval of instructor

5. Is this a variable credit course?  □ Yes  ☑ No  If yes, from _______ to _______

6. Is this a repeatable course?  □ Yes  ☑ No  If yes, this course may be taken _______ times.
   Will this course be repeated within the same semester?  □ Yes  ☑ No

7. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)

   MARM, MARB-IDP

8. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

9. Prefix Course # Title (excluding punctuation)
   MARS 658 Fisheries Management Strategies

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Approval recommended by:

Melanie J. Leeke 2/19/14
Department Head or Program Chair (Type Name & Sign) Date

Chair, College Review Committee 2/19/14
Date

Dean of College 2/15/14
Date

Chair, GC or GCC 2/20/14
Date

Submitted to Coordinating Board by:

Associate Director, Curricular Services 3/10

Questions regarding this form should be directed to Sandra Williams at 845-8301 or sandra.williams@tamu.edu.
Curricular Services – 3/10
Course Description: International and U.S. federal and selected state fishery management strategies; history of fisheries, jurisdictional issues, eco-system approaches and case studies. Prerequisite: graduate status or approval of instructor.

OBJECTIVES: This course provides an overview of international and U.S. federal and selected state fishery management strategies. The course will introduce students to the basic principles of fisheries management, preparing the student to undertake future management decisions by emphasizing the approach and process that underlies sound management strategies. The course also includes discussion of the history of fisheries, jurisdictional issues, eco-system approaches to fishery management, voluntary fishery management regimes, and specific cases. The emphasis is on commercial and marine fisheries although many of the principles and ideas apply to recreational and freshwater fishers. Specific objectives are found at the beginning of each module; general objectives include:
1. Provide an overview of the approach and process of fisheries management strategies
2. Cover tools used to manage fish populations and their habitats
3. Learn from primary literature related to fisheries management
4. Develop an interest in scientific research related to fisheries management including the development of critical thinking skills

Again, specific Objectives may be found at the beginning of each module.

Contacting Dr. von Zharen: Please email Dr. v via BB mail on the Mars 658 class link which can be accessed through the eCampus link on Howdy. Mail will be checked on a regular basis. For questions that require a faster response, please email dr_vonzharen@msn.com. Dr. v is almost always available and ready to help!


All other readings may be found on the web.

Logistics: Read Carefully
1. Availability of Materials: The course is available via distance learning. All material will be posted in the form of Modules, in Power Point, in BB Vista. BB can be accessed through the eCampus link under the Howdy portal. Your goal is to complete at least one module per week.
2. Logistics Module: Module 0 is the Logistics module; read it carefully as well as these instructions.
3. Exchange of Material: The modules will include discussion questions; they are to be answered and exchanged with a partner. You must also critique and discuss your partner's answers he/she exchanges with you. Copy Dr. v. and Ms. Williams, the TA, via BB on all assignments.
4. Module Quiz: Each module has a quiz at the end. You will take the quiz and exchange your answers with your partner when the module is completed.
5. Your Own Reading Quiz: You will also be developing five short answer (multiple choice or true/false – no fill-in-the-blank or required sentence-answers) questions and answers from the required reading material noted at the beginning of each module. Exchange these with your partner for that module. When you provide the quiz answers, include the page number of the reading on which you found the material so that your partner can review her or his response more thoroughly.
6. Choosing Weekly Partner: To choose a partner, the first name on the roster will be partnered with the last name of the roster, for example Adams and Yin. Each week, work your way through the list, e.g., on week 2, Adams will be partners with Xavier. The BB provides the list
of all students enrolled; choose a partner for each module as quickly as possible. Try to work with a different partner each week.

7. COPY DR. V AND THE T.A.: Again, please copy all BB emails to Dr. v., the T.A., as well as to your partner.

8. DON'T BE LATE: Remember, if you are late on an assignment, this is penalizing your partner.

9. RATE OF MODULES’ COMPLETION: Again, beginning with the first week of class, a module should be completed at the rate of one per week minimum.

10. DO NOT PROCRASTINATE. Always contact Professor von Zharen or the TA immediately with any questions.

11. ERRORS: Use the spelling and grammar check programs on your computer. Bad spelling and grammar make it difficult to read and understand your work and may result in a poor grade. If you have trouble writing and footnoting legal papers, 1) see The Elements of Style by Strunk and White (available online); 2) look over the “Ocean Governance” article by von Zharen and available on Lexis; and 3) ask someone to proofread your papers.

12. For this course, a student is expected to dedicate **nine hours minimum per week.**

**METHODOLOGY AND GRADING:**

The objectives of the course will be met through readings, modules including Camtasia lectures, and involvement in specific projects:

1. Current Module, Reading, Development of and Response to Quizzes AND Critiquing and Evaluation of Colleagues’ Submission including final module – in other words, actively and effectively participating in all requirements by the due date (65%)

2. Research and Development of Interactive Fishery Management Strategies Module in PowerPoint with Camtasia and/or videos (30%)

3. Self-Evaluation (5%)

4. Bonus Modules and Bonus Points: You may complete these at any time; if you don’t complete any bonus module or Bonus Points within Modules, you will not be penalized. If you do complete a bonus, you will earn extra credit depending on how many you complete.

**Current Module, Reading, and Quizzes:**

Current Power Point Modules: Within each module, there is a quiz and discussions; evaluate your partner’s discussion and quizzes. All postings should be copied to Dr. v. as well as the T.A., Ms. Jessica Williams.

**Research:** Development of Interactive Fishery Management Strategy Module in PowerPoint

Each student must select a fishery management topic and develop a Power Point module with interactive components that emphasizes three areas concerning that particular topic: science, law, and management. The module should be posted to BB by the date indicated in the schedule. The module should be both informative and enjoyable to read. Include any relevant reading assignments, quizzes, videos, among other materials.

The module must be critiqued and evaluated by all other members of the class. These critiques are due on the date indicated in the schedule. The student then has until the last “regular” day of class to make any final changes to her or his module and post it again.

*It is critical that the student cite all sources including photos and videos.* If the idea or photo is not your own (if the information did not come from your own scientific, legal, or management research), then you must give a reference citation at the exact place where the quote, paraphrasing, bulleted, photo, etc., is inserted in the PowerPoint. If you did not take the photo or your research did not arrive at a conclusion or a statistic, for example, then you must provide the source. Also, give a list of sources/references at the end of the presentation.

**Critique and Evaluation of Colleagues’ Submission**
Again, students must critique the questions and answers submitted. Development of interactive Fishery Management Strategy modules should also be critiqued by everyone in the class.

**Self-Evaluation**

One of the most powerful complex structures of self-assessment in thinking is that of completing a global analysis of the strengths and weaknesses of your overall performance in class. Therefore, you are required to argue for a grade you believe you deserve and "make a case" for receiving a particular grade using criteria provided in this syllabus and citing specific evidence from your work throughout the semester. Understand that if you argue for a higher grade than you deserve, your grade will be negatively affected. However, an accurate documentation of a lower grade will raise that grade. For example, if you do an excellent job documenting that you have done "D" work on the course, then you will receive an "A" on the self-assessment, thereby raising your final grade by a certain percentage. For graduate students, the self-evaluation should be no fewer than four single-typed pages and no more than five single-typed pages.

**What Each Grade Represents:**

F – The essence of F-level work is that the student demonstrated a pattern of non-critical thinking and/or failed to do the required work of the course. Typical characteristics of the work of a student who receives an F include: the student does not understand the basic nature of thinking in this subject area and does not display the related skills and abilities which are the heart of the course. The work at the end of the course is vague, imprecise, and unreasoned as it was in the beginning. There is little evidence that the student is genuinely engaged in the task of taking charge of her/his thinking. Many assignments appear to have been done pro forma with the student simply going through the motions without really putting any significant effort into thinking her or his way through them.

D – The essence of D-Level work is that it demonstrates only a minimal level of understanding and skill in critical thinking in the course area. D work at the end of the course shows only occasional environmental thinking skills. Most assignments are poorly done. There is little evidence that the student is “reasoning through the assignment in a critical manner. D work rarely shows any effort to take charge of ideas, assumptions, inferences, and intellectual processes. In general, D-level thinking lacks discipline and clarity.

C – The essence of C-level work is that it demonstrates more than a minimal level of skill, but it is also highly inconsistent with as many weaknesses as strengths. C-level work illustrates some but inconsistent achievement in grasping what environmental thinking is along with the development of modest critical thinking skills or ability. Though some assignments are reasonably well done, others are poorly done or at best are mediocre. On the whole, C-level work shows only modest and inconsistent reasoning and problem-solving skills.

B – The essence of B-level work is that it demonstrates more strengths than weaknesses and is more consistent in high level performance than C-level work. It nevertheless has some distinctive weaknesses though no major ones. B-level work represents demonstrable achievement in grasping what environmental thinking is. B-level work at the end of the course is, on the whole, clear, precise, and well-reasoned, though with occasional lapses into weak reasoning. The work demonstrates a mind beginning to take charge of its own ideas, assumptions inferences, and intellectual processes with the student often analyzing issues clearly and precisely.

A – The essence of A-level work is excellence overall with no major weaknesses. A-level work demonstrates real achievement in grasping what environmental thinking is, along with the clear development of a range of specific skills and abilities. The work at the end of the course is, on the whole, clear, precise, and well-reasoned. The A-level students analyzes issues clearly and precisely, formulates information clearly, usually distinguishes the relevant from the irrelevant, recognizes key questionable assumption. A-level work displays excellent reasoning and problem-solving skills and is consistently at a high level of intellectual excellence.

**BONUS MODULES & BONUS POINTS**

Bonus Modules will be posted as "Bonus Modules" with a title on the Home Page. Complete the module and then submit an evaluation of the module including telling me what worked to help you learn
the subject matter as well as suggestions on how to improve the module if necessary. Bonus Points will be found within various required modules.

Statement on Academic Dishonesty. For many years Aggies have followed a Code of Honor: "Aggies do not lie, cheat, or steal, nor do they tolerate those who do." As such, it is the responsibility of students and faculty members to help maintain scholastic integrity at the University by refusing to participate in or tolerate scholastic dishonesty. The Aggie Code of Honor and the Scholastic Dishonesty sections in the TAMUG University Rules handbook will be the standard upon which scholastic integrity is maintained in this course. Academic dishonesty infractions will result in failure of this course as a minimum sanction. Statement on American Disabilities Act. The American Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Counseling Office, Seibel Student Center, or call (409) 740-4587. For additional information visit http://www.tamug.edu/counsel/services/dssprocedures.htm and notify each of your course instructors. Absences. Information concerning absences can be found in the University Student Rules Section 7: http://www.tamug.edu/stulife/Academic%20Rules/Rule%207.pdf. The university views class attendance as an individual student responsibility. All students are expected to attend class and to complete all assignments. For a University excused absence, the student should contact the Counseling Office to request a letter for the instructor stating that the Associate Vice President for Student Affairs, or his or her designee has verified the student's absence as excused. Please consult the University Student Rules for reasons for excused absences, detailed procedures and deadlines. If the absence is excused in the process as outlined in the University Student Rules, the student must be given the opportunity to make up the work. The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unauthorized absence. See Part III, Student Grievance Procedures, Section 49, Unexcused Absences, for more information on appealing an instructor's decision. Family Educational and Rights to Privacy Act (FERPA). FERPA is a federal law designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records and to provide guidelines for the correction of inaccurate and misleading data through informal and formal hearings. To obtain a listing of directory information or to place a hold on any or all of this information, please consult the Admissions & Records Office.

NOTE: The Marine Policy site offers excellent research tools. For searches re the Marine Policy site, use Google at: http://www.tamug.edu/marinepolicy.

Fall 2014 Schedule

Week: 1

Module 0 – Course Logistics

Upon completing the logistics module, you should:
- Understand the logistics of the course
- Understand the requirements of the course including the fact that it is not self-paced
- Understand when the student-developed modules are due and the review process
- Reply to Dr. v. and the TA that you have read and understood the syllabus and the requirements of the course
- During the first week, have introduced one of the students in the class to the rest of the class and post appropriate photos
- Be aware of the importance of interaction and discussion in the course
- Make sure you have nine hours minimum per week to dedicate to this class

KNOW: Thou Shall NOT PROCRASTINATE!!!

Module 1 – The History of Fisheries Management

Objectives:
• To provide an overview of the history of Fisheries Management including events that led to modern day fisheries management strategies, e.g., evolution from low-tech, labor-intensive pursuits to factory trawlers and their impacts
• Discuss significant components incorporated into current fisheries management
• To be able to discuss the differences among various statutes, regulations, and management including how laws were promulgated and interpreted.
• To be able to discuss why fisheries management is necessary from an environmental and socioeconomic perspective

2 Module 2 – Fishery Management Process
Objectives: To be able to discuss –
• What is meant by "The Commons" in Fisheries Management (we began this discussion in Module 1)
• How did "The Commons" form the Fishery Management Processes?
• What does Open-Access mean in Fisheries Management?
• And explain criteria used in Fishery Management processes and why finding balance is difficult.

3 Module 3 – Stressors, Science, and Strategies in Fishery Management
At the end of this module, you should be able to:
○ Discuss the multiple anthropogenic stressors on the marine ecosystem and the resulting implications (and reach out beyond by-catch/drift nets)
○ Discuss international and federal regimes with “ocean responsibilities”
○ Discuss the role of science in fisheries management: what role it has played, is playing, and should be playing
○ Discuss strategies for an ecologically persistent, adaptive, resilient (we’ll touch on this again) and robust fishery – know the difference among these terms
○ Define various fishery management terms such as the precautionary principle, population dynamics, and TAC and how they are used in fisheries management
○ Discuss the conflict between commercial fishers and recreational fishers/anglers and their impacts on fish population and management strategies

4 Module 4 – International Fisheries Management
At the end of this module, you should be able to:
○ Discuss the critical issues of jurisdiction including the international enforcement mechanism and be able to discuss specific jurisdictional issues that have come before the ICJ
○ Discuss major international marine legal regimes including: all United Nation’s regimes (both in general such as UNCLOS I and III and the specific fisheries law such as the Straddling Stock Agreement; and voluntary management strategies)
○ Identify specific problems encountered in international fishing
Know the basic tenets of international legal regimes and why and how U.S. law embraces some of these principles

**Module 5 – Federal Law**
At the end of this module, you should:
- Be able to explain the basic concepts used in managing fisheries in Federal waters.
- Understand the role of the Fishery Management Councils in developing strategies for sustainability of U.S. fisheries.
- Be able to discuss the major laws and regulations utilized to guide Federal Fisheries Management including where they have succeeded and failed (and why).

**Module 6 – Fisheries Management with a Focus on Texas’ Waters**
Objectives:
- To understand the importance of fish and their role as environmental indicators
- To understand what fisheries management is from a state’s perspective, the state laws involved, how state regulations are made, and differences between federal and state law
- To determine how landing data are measured and what is excluded
- To compare two states’ management strategies and evaluate their effectiveness including how effectiveness is measure

**Module 7 – Federal Fisheries Enforcement**
Objectives:
- To be able to explain the important laws and regulations guiding federal fisheries enforcement.
- To be able to discuss the interactions between federal fisheries enforcement agencies such as NOAA and state agencies including jurisdictional issues.
- To be able to explain the organizations tasked with fisheries enforcement as their primary missions (you should have already learned quite a bit about Texas and the role of federal and state enforcement officials).
- To be able to discuss & understand the difficulties associated with fisheries enforcement

**Module 8 – Multiple Stakeholders and Multiple Uses**
Objectives:
- To understand the various fisheries’ stakeholders’ perspectives, problems, and solutions including ethical perspectives
- To understand the issues involved in multiple use of aquatic resources
- To understand the major points in assessing stakeholders’ role in fisheries management and the impact of differing perspectives
Module 9 – Dealing with Risks and Uncertainty

Objectives:
- Understand the basics of climate change and the impact to marine fishers
- Be able to discuss the Monte Carlo Approach
- Be able to discuss indicators, reference points, and control laws in reference to fisheries management
- Be able to discuss the basic of the Bayesian Information Criterion
- Be able to discuss the basics of the Gordon-Schaefer Logistics Growth Model
- Be able to discuss why wicked risk assessment should be applied in development management strategies and where this application is more critical

Module 10 – Requirements of an Ecosystem Approach to Fishery Management (EAFM)

At the completion of this module you should be able to:
- Understand the principles of ecosystem approaches to fisheries
- Define what EAFMs are
- Discuss significant indicators
- Understand the major management tools
- Discuss the importance of Gear Modifications

Draft version of Interactive Fishery Management Module in Power Point Due

Module 11 – Management for a Resilient Fishery (out with sustainability, eh?)

Objectives:
- To know the critical differences and similarities between Sustainable and Resilient Fisheries
- To know various approaches for creating resilient fisheries including precepts of the MSC
- To be able to apply what you learned to real world problems through case studies and current examples in the news

Critiques of Interactive Fishery Management Module in Power Point Due

Module 12 – Socio-economic and Cultural Factors in Fisheries Management

Objectives:
- To understand social and cultural issues in fisheries management
- To understand how social and cultural issues in addition to economic issues pertain to fishers in general and, in particular, to aboriginal and First Nations peoples as well as artisanal fishers and women
- To understand how economic issues relate to and must be considered with social and cultural as well as ecological issues
- To understand what fisheries management strategies and laws require and/or incorporate social/cultural/economic data and consideration of these data
- To understand how changes and/or closures of fisheries have a cultural and social impact on fishers and those humans associated with the fisher and the fishery
• To understand how these issues apply, in particular, to specific fish/shellfish species such as sharks