Graduate Council Report
December 3, 2009

New Courses:

ANTH 603. Seafaring Life and Maritime Communities. (3-0). Credit 3. Course employs primary and scholarly sources to examine the social organization, work routines, living conditions, and material culture of mariners between 1450 and 1950; broader trends in maritime communities and global seafaring are also investigated. Prerequisite: Instructor's permission.

ANTH 619. Indians of Texas. (3-0). Credit 3. Detailed study of diverse native/immigrant Texas Indian lifeways/cultures from late pre-European to contemporary times; exploration of historical underpinnings, traditional cultures, especially land-use patterns; detailed assessment of tribal relationships with colonial powers, U.S., Texas governments as evidenced in ethnohistoric, historical materials; application to anthropological, archaeological, and human ecology research. Prerequisite(s): Graduate classification, ANTH 602, or ANTH 604, or 620, or 650.

CSCE 658. Randomized Algorithms. (3-0). Credit 3. This course gives an introduction to randomized algorithms; selected tools and techniques from probability theory and game theory are reviewed, with a view towards algorithmic applications; the main focus is a thorough discussion of the main paradigms, techniques, and tools in the design and analysis of randomized algorithms; a detailed analysis of numerous algorithms illustrates the abstract concepts and techniques. Prerequisite: Graduate standing.

ECEN 762. Ultrasound Imaging. (3-0). Credit 3. Covers mathematical analysis of wave propagation, scattering of ultrasound in biological tissues, electronic transducer arrays for the beam forming, models of the received signals and signal processing methods for medical ultrasound imaging of tissues. Research papers related to fundamental ultrasound imaging concepts are discussed throughout the course. Prerequisite: Approval of instructor.

ISEN 604. Competing on Information Flows in Supply Chains. (3-0). Credit 3. Review, evaluate, and contribute to the existing knowledge base regarding the management of information flows from automatic identification systems such as RFID. Prerequisites: ISEN 615 and PhD students or Masters students with a thesis degree plan or approval of instructor.

ISEN 611. Foundations of Technology Evaluation and Assessment. (3-0). Credit 3. Quantifying gambles arising in engineering activities associated with the design, deployment, and operations of technology; analytical foundations of technology evaluation and assessment from an engineering perspective; focus on examination of probability models supporting quantification of value and risk. Prerequisites: ISEN 609 or approval of instructor.

ISEN 637. Stochastic Dynamic Programming. (3-0). Credit 3. Methodologies for stage-wise stochastic-decision processes; includes finite-horizon models, infinite-horizon discounted total cost models, and average cost models; applications of methods to various situations. Prerequisites: ISEN 609 and ISEN 622, or approval of the instructor.

ISEN 638. Polyhedral Theory and Valid Inequalities. (3-0). Credit 3. Advanced knowledge of polyhedral theory and valid inequalities for (mixed) integer programming; introduction to fundamental concepts in polyhedral theory and several approaches to generation of valid inequalities; includes state-of-the-art advancements and current avenues of research. Prerequisite: ISEN 668.
ISEN 639. Methods Improvement for Construction Engineers. (3-0). Credit 3. Application of work methods and measurements to civil engineering construction; examination of factors that affect productivity in construction; study of motivational factors; review of the principles of accident prevention. Prerequisites: CVEN 405 and 473 or approval of instructor. Cross-listed with CVEN 639.

ISEN 641. Systems Engineering Methods and Frameworks. (3-0). Credit 3. Concepts, methodology, methods and tools for discovery, definition, analysis, design, creation, and sustainment of systems involving information, physical, and human elements; architecture modeling methods include IDEF/UPDM; systems engineering frameworks include DoDAF/MoDAF, and Zachman; analysis tools include executable architectures to assess consistency, interoperability and performance. Prerequisites: MATH 304 or approval of instructor.

ISEN 662. Production Economics. (3-0). Credit 3. Develop an understanding of the analytical and empirical techniques required to conduct an analysis of the magnitude and the sources of productivity change; programming and regression approaches to analyze industries include manufacturing, energy, and service systems. Prerequisites: ISEN 303 and ISEN 620 or approval of instructor.

*NRSC courses listed are included in Special Consideration Request for NRSC prefix.

*NRSC 601. Principles of Neuroscience I. (3-0). Credit 3. This course presents a detailed introduction to the basic fundamentals of cellular and molecular neuroscience. Topics will include membrane potentials, action potential generation, and the mechanisms underlying synaptic transmission, as well as their molecular basis. Prerequisites: Graduate standing or permission of instructor. Cross-listed with BIOL 627.

*NRSC 602. Principles of Neuroscience II. (3-0). Credit 3. This course presents a fully integrated overview of nervous system organization and systems-level neurobiology. Broad topics to be covered include sensory systems and sensory systems function, motor systems and neuromuscular function, central pattern generation and locomotion, homeostatic regulation, motivation, emotions, learning and memory, and circadian rhythms. Prerequisites: Graduate standing or permission of instructor. Cross-listed with: BIOL 628.

*NRSC 603. Neuroanatomy. (2-6). Credit 4. Gross, developmental and microscopic anatomy of nervous system of selected laboratory and domestic animals. Prerequisite: Approval of instructor. Cross-listed with VIBS 603.


*NRSC 605. Neuroanatomical Systems. (3-0). Credit 3. Course emphasis is on major neural systems that govern identifiable physiological functions, behavior and neurodegenerative disease. Whole-brain anatomy is approached from a “systems” perspective, wherein components of defined functional systems are described in terms of their location, inputs and outputs, and physiological/behavioral significance in health and disease. Prerequisite: Approval of instructor. Cross-listed with VIBS 606.
*NRSC 606. Learning. (3-0). Credit 3. Procedural and theoretical issues in study of basic learning mechanisms in animals and humans, including Pavlovian and instrumental conditioning. Application of this work to other domains and relevant biological mechanisms also discussed. Prerequisites: PSYC 340 or approval of instructor. Cross-listed with PSYC 606.


*NRSC 615. Perpetual Processes. (3-0). Credit 3. Complex sensory and perceptual phenomena with emphasis on the relationship between perception and motivation, cognition, creativity and instinctive/ethological; learning/experiential factors in higher level perceptual processes. Cross-listed with PSYC 615.

*NRSC 634. Comparative Neurobiology. (3-0). Credit 3. Cellular, molecular and systems neurobiology, together with neuroethology. A comparative approach to subject matter is stressed. Topics such as evolution of nervous systems and their diverse structure and complex functions are dealt with. Cross-listed with BIOL 634.

*NRSC 635. Biological Clocks. (3-0). Credit 3. Introduction to the formal properties of biological rhythms; cellular and molecular bases for rhythmicity; temporal adaptations of organisms using clocks. Prerequisites: Graduate classification or approval of instructor. Cross-listed with BIOL 601.

*NRSC 636. Signaling in Behavior and Development. (3-0). Credit 3. Will focus on signaling pathways used in multicellular animals. In each lecture, major signaling pathways used in behavior, physiology, and development will be introduced at the molecular level, and then be discussed in the context of organismal biology. Prerequisite: Graduate classification. Cross-listed with BIOL 615.

*NRSC 640. Neurobiology. (5-0). Credit 5. Biology of the mammalian central nervous system with emphasis on cellular and molecular interactions; contemporary research topics in areas such as neuronal-glial interactions, neuroimmunology, neuroendocrinology, developmental neurobiology and neurogenetics; extensive readings from primary literature. Prerequisites: Undergraduate or graduate cell biology, genetics and biochemistry or approval of instructor. Cross-listed with VIBS 640.

*NRSC 641. Principles of Neuropsychology. (3-0). Credit 3. Review of major areas of cognitive functioning including concentration, memory, language, visuospatial/construction skills and executive functions; review of neurobehavioral syndromes including dementia, epilepsy, head injury, stroke, drug toxicity, etc.; assessment of deficits associated with disorders. Prerequisites: PSYC 624 or 627 or equivalent as approved by instructor. Cross-listed with PSYC 641.

*NRSC 644. Neural Development. (3-0). Credit 3. Classical and current research literature to explore the major events in the development of a nervous system, including topics ranging from neurogenesis to synapse information. Prerequisite: Graduate classification. Cross-listed with BIOL 644.
*NRSC 649. Seminar in Behavioral Neuroscience. (3-0). Credit 3. Behavioral neuroscience; including behavioral pharmacology, neuropharmacology, methods and techniques, drug reinforcement, behavioral toxicology, pain-perception and ingestive behavior. May be repeated up to three times for credit. Prerequisite: PSYC 606 or equivalent; PSYC 609; graduate classification. Cross-listed with PSYC 649.

*NRSC 671. Experimental Design for Behavioral Scientists. (3-0). Credit 3. Intensive practical study of designs of special interest to behavioral scientists; repeated measures designs. Prerequisites: STAT 652 or equivalent. Cross-listed with PSYC 671.

PLPA 657. Biotechnology for Biofuels and Bioproducts. (3-0). Credit 3. Biotechnology issues in developing bioenergy as a renewable energy source; emphasis on the three generations of bioenergy and enabling technologies; special topics include recent advances in bioenergy research, government policy, and industrial development. Prerequisite: Graduate classification.

VTPP 610. Physiology I. (5-2). Credit 6. Introduction to physiology: cell physiology, cell signaling, cell cycle, body fluids, translocation of materials, membrane potentials, neurophysiology, autonomic nervous system, thermoregulation, cardiovascular, and muscle physiology. Prerequisites: Enrollment in MS/PhD program in Veterinary Physiology & Pharmacology – Instructor Approval.

VTPP 612. Physiology II. (5-2). Credit 6. Blood and lymph, respiration, renal physiology, and acid-based balance, gastrointestinal physiology, metabolism, endocrinology, and reproduction. Prerequisites: Enrollment in MS/PhD program in Veterinary Physiology and Pharmacology – Instructor Approval.

VTPP 628. Pharmacology I. (4-2). Credit 5. Pharmacokinetics, pharmacodynamics, CNS pharmacology, autonomic pharmacology, antineoplastic agents, immunopharmacology, recombinant products, fluid and electrolyte therapy, diuretics, pharmacology of the integument. Prerequisite: Instructor approval.

VTPP 629. Pharmacology II. (2-2). Credit 5. Antimicrobials, endocrine pharmacology, eicosanoids, anti-inflammatory agents, respiratory pharmacology, anticoagulants and hematinsics, GI pharmacology, cardiovascular pharmacology. Prerequisite: Instructor approval.

VTPP 630. Pharmacology/Toxicology. (2-2). Credit 5. Management and treatment of toxicosis, antidotal pharmacology, toxic plants, mycotoxins, chemical toxicants, metals, euthanasia. Prerequisite: Instructor approval.

Course Changes:
AGEC 643. Applied Simulation in Agricultural Economics.
Prerequisite:
FROM: AGEC 661; ECMT 676
TO: AGEC 622 and 661 or permission of instructor

CSCE 655. Human-Centered Systems and Information.
Title Change:
FROM: Human-Centered Systems and Information
TO: Human-Centered Computing
CVEN 639. Methods Improvement for Construction Engineers.
Cross-Listing with: ISEN 639

HISP 675. Methods of Teaching Spanish to Native Speakers.
Title:
FROM: Methods of Teaching Spanish to Native Speakers
TO: Spanish Language Teaching Methods
Prerequisites:
FROM: HISP 602 or approval of instructor
TO: Graduate classification and approval of instructor
Description:
FROM: Presentation of the various theories and methods for the teaching of Spanish to students of Spanish-speaking backgrounds in the United States.
TO: Overview of the current language methodology as it applies to the teaching of Spanish to native and non-native speakers, pedagogical and professional issues related to teaching Spanish at the college level.

MODL 697. Seminar on Foreign Language Teaching.
Withdrawal:
Approved

New Course Requests
Texas A&M University

Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of ____________
   Anthropology

2. Course prefix, number and complete title of course: ________
   ANTH 603 Seafaring Life and Maritime Communities

3. Catalog course description (not to exceed 50 words): Course employs primary and scholarly sources to examine the social organization, work routines, living conditions, and material culture of mariners between 1450 and 1950; broader trends in maritime communities and global seafaring are also investigated.

4. Prerequisite(s): ________ Instructor's Permission
   Cross-listed with: ________
   Cross-listed courses require the signature of both department heads.

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)
   M.A., Ph.D. 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 (exclusive of punctuation)

   ANTH 689 Seafaring Life & Maritime Communities

   Lect. Labs Syll. CHP and Fund Code
   0 3 0 0 4 3 5 0 1 0 0 0 1 0 2 8 0 1 0 - 1 1 0 0 3 6 3 2
   Admin. Unit Acad. Year HUC Code
   Approval recommended by: Donny L. Hamilton
   Department Head - Type Name & Sign Date
   Department Head - Type Name & Sign (if cross-listed course) Date
   Submitted to Coordinating Board by: Associate Director, Curricular Services

   Patricia A. Hurley 10-26-09
   Chair, College Review Committee Date
   Patricia A. Hurley 11-7-09
   Dean of College Date
   David W. Reed DEC 3 2009
   Dean of College Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu

Curricular Services – 3/09
Spring, 2010

Anthropology 603
Seafaring Life and Maritime Communities
1450-1950

Dr. Kevin Crisman
Office 131b Anthropology, tel. 845-6696, e-mail kcrisman@tamu.edu
Office hours: Weds. 1-3:30 p.m. or by appointment

Seafaring is among the most complex and labor-intensive of all human endeavors, and those who follow the sea must adapt to a life of privation and peril. The era between 1450 and 1950 saw the expansion of seafaring to a worldwide scale. This seminar-format course will use primary documents, archaeological evidence, contemporary images, and scholarly studies (and, in three instances, 20th-century cinematic interpretations of sailor’s lives) to investigate the mariners who sailed the ships: their origins, work routines, living conditions, common attitudes, and varied experiences. The course will also seek to understand broader trends in maritime communities and global seafaring in the early-modern era.

Course Pre-requisites: Instructor’s Permission

Course Objectives: This seminar is designed to broaden a student’s general knowledge of: 1) the realities of seafaring life and work, 2) changing societal perceptions of mariners over the course of five centuries, and 3) the range of archaeological and documentary evidence on seafaring life available to scholars. The course is also intended to provide participants with the context and methodologies needed to interpret archaeological data.

Week 1. Introduction to Seafaring Life and Maritime Communities.
1. Objectives of seminar, course requirements, assignment of seminar topics. [Crisman]
2. Special Feature: BATTLESHIP POTEMKIN (or, Abused sailors lead a proletarian revolt; 1925, 67 minutes).
Week 2. Profiling a Profession: Group Identity, Origins, Gender, Class and Race of Seafaring Populations.

Week 3. Shipboard Hierarchy, Living Quarters, and Work Routines.
1. Patterns of Shipboard Hierarchy, Occupational Organization, and Discipline in the early-Modern Era.
2. Divisions of Shipboard Living and Working Space as Seen in the Documentary and Archaeological Record.
3. “Stamp the Capstan 'Round”: Daily Work Routines on Sailing Ships (presentation to include discussion of music as a tool for synchronizing group labor).

Week 4. The Diet and Health of the Sailor.
1. Scourge of Sailors: The Causes and Treatments of Scurvy, Yellow Jack and Other Diseases or Injuries of Mariners.
2. Pipe All Hands to Dinner: Archaeological and Documentary Evidence of the Shipboard Diet: Storage, Preparation and Consumption of Food.

Week 5. Deprivation and Sensuality, Life and Death.
1. Sing Ho! for the Pipe and Bowl: The Sailor's Shipboard Diversions and Comforts.
2. “A Trip Ashore, He Does Adore”: Interactions Between Sailors and Shore-Side Communities.

Week 6. To the Ends of the Earth: European Mariners of the 15*-17* Centuries.

Week 7. Archaeological Clues to Seafaring Life.
1. Pathology of a Profession: Studies of Human Remains from Shipwrecks.
2. Special Feature: CAPTAIN BLOOD (or, Pirate life as it should have been, with Errol Flynn and Olivia de Haviland; 1935, 119 minutes).

Week 8. Bloodthirsty Pirate, Menial Laborer, Noble Proletariat.
2. MUTINY!: Famous Incidents from the Capitalist-Proletariat Struggle on the High Seas.
3. Gentle Lad, Merry Mischief-Maker, Sage Observer, Drunkard, Buffoon and Brawler: Contemporary Images of the Sailor. [Crisman]

1. The Experience of Battle in the Era of the Broadside.
2. Press Gang and Rendezvous: Manning the Wooden Walls from the 16th to the Early 19th Centuries.

Week 10. The Sea Harvesters: Fishermen and Whalers.
1. Fishermen and Fishing Communities in the 18th and 19th Centuries.
2. "Blubber Boilers": Manning and Work Routines on 19th-Century American Whalers.
3. Occupational Therapy: Arts and Handicrafts of the Sailor.

2. Mirror of the Times: Work, Race, Class, and Gender on the Western River Steamboats.
3. "O Tale of Woe!": The Influence of Fatal Steamboat Accidents on American Travel, Politics, and Society. [Crisman]

2. Temperance, Finding God, and the 'Red Register': Efforts to Improve the Lot of 19th-Century Sailors.

1. Sailors in the New Steel Navies of the Early 20th Century.
2. Special Feature: THE CRUEL SEA (based on the novel by Nicholas Monserrat, who served on R.N. corvettes during World War II; 1953, 121 minutes).

1. Research and Results to Be Presented in 15-Minute Summaries.

Course Requirements:
During the semester each student will be assigned several seminar topics to research and present in class (there are 30 seminar topics available; the number you are assigned will depend upon the size of the class). Presentations should be about 40-45 minutes in length, followed by 10 minutes of questions and discussion. Prepare and distribute a bibliography of the sources consulted for your seminar presentation. Use of visual and auditory aids such as Powerpoint™ projections, photocopied handouts, chalkboard illustrations, slides, musical selections, and interpretive dances is strongly encouraged.
In addition, each student is to conduct research on some aspect of Seafaring Life and Maritime Communities and prepare a publishable-quality term paper on the subject (recommended length: not less than 10 pages, or more than 30 pages). A 4-5 page term paper research proposal (modeled on a thesis or dissertation proposal) and a preliminary bibliography are due on January XX. Each student will present the results of his or her research during the final class session (to be arranged). The paper is to be submitted on or before 5 p.m., [Day], May XX, 2010. Submitting your paper after this date will result in a lower grade.

The final grade: 40% seminar presentations, 10% participation in seminar discussions, and 50% term paper. Seminar presentations will be graded on the basis of their thoroughness, organization, and clarity, as well as their inclusion of illustrations (where appropriate) and the distribution of a bibliography of sources consulted in preparing the presentation. Term papers will be graded along similar literary and scholarly lines (be sure to read and closely follow the instructor’s “Guidelines for Term Papers” issued to all students in this seminar). Grading basis: 90-100 – A; 80-89 – B; 70-79 – C; 60-69 – D; Below 60 – F.

Attendance of all classes and active participation in discussions are strongly encouraged. Chronic unexcused absences will result in a lower grade.

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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

__________________________________________________________

Academic Integrity Statement:

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

Any questions about this?

See the Student Honor Council Rules and Procedures on the web at http://www.tamu.edu/aggiehonor

__________________________________________________________
Spring, 2010

Anthropology 603
Maritime Life and Seafaring Communities
1450-1950
Select Bibliography

General Reading


Week 2. Profiling the Profession: Group Identity, Origins, Gender, Class and Race of Seafaring Populations.


**Week 3. Shipboard Hierarchy, Work Routines, and Living Quarters.**


**Week 4. The Diet and Health of the Sailor.**


Coughlan, Ryan M. *Salty Dogs and Salted Meat: How live animals and barreled meat were used by sailors involved in the Eastern trade, 1656-1811*. Master’s thesis, University of Western Australia, October, 2005.


**Week 5. Deprivation and Sensuality, Life and Death.**


**Week 6. To the Ends of the Earth: European Mariners of the 15th and 16th Centuries.**


Scammel, G. V. *Ships, Oceans, and Empires.* Norfolk, Great Britain, 1995. See Chapters II, IV, VI for discussions of English seamen in the 16th century.
Week 7.  **Archaeological Clues to Seafaring Life in the 16th, 17th and 18th Centuries.**


Week 8.  **Bloodthirsty Pirate, Menial Laborer, Noble Proletariat.**


**Week 9. Jack Tar the Seagoing Warrior: Naval Life in the Age of Sail.**


**Week 10.**  **The Sea Harvesters: Fishermen and Whalers.**


**Week 11.**  **Freshwater Sailors on North American Waters.**


From: Walter Buenger [mailto:w-buenger@tamu.edu]
Sent: Tuesday, November 10, 2009 4:06 PM
To: Hurley, Patricia
Subject: Re: letters of support from HIST

Pat,

Forgive the delay. I sent the courses to our Indian specialist and our naval history specialist. The Indian specialist commented that ANTH 619 looked very much like a history course with the three primary readings all standard history offerings. That said, however, they were unwilling to raise any serious objections. The naval person said fine. Based on that I approve these two courses, but I do ask that Anthropology be made aware of our concern about their courses on Indians.

Walter

At 02:39 PM 11/10/2009, you wrote:

Walter,

I believe Cynthia Werner sent you two syllabi for proposed new courses in ANTH a week or so ago. I am attaching them again for your convenience. When the college's graduate committee voted on these courses they were approved pending receipt of a note from HIST stating that there was no objection to either course since you had some similar courses.

Could you get back directly to me on this? The courses are on the Liberal Arts Council agenda for tomorrow. If they approve, I cannot send the courses forward to OGS for approval without your letter (or an e-mail – a response to this message would be fine).

Thanks

Pat

attachments: syllabi for

ANTH 603 Seafaring Life and Maritime Communities

ANTH 619 – Indians of North America
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Anthropology

2. Course prefix, number and complete title of course: ANTH 619, Indians of Texas

3. Catalog course description (not to exceed 50 words): Detailed study of diverse native/immigrant Texas Indian lifeways/cultures from late pre-European to contemporary times; exploration of historical underpinnings, traditional cultures, especially land-use patterns; detailed assessment of tribal relationships with colonial powers, U.S., Texas governments as evidenced in ethnographic, ethnohistoric, historical materials; application to anthropological, archaeological, and human ecology research

4. Prerequisite(s): Graduate classification, ANTH 602, or ANTH 604, or 620, or 650

Cross-listed with: Cross-listed courses require the signature of both department heads.

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 programs(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)

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) ANTH 619 INDIANS OF TEXAS

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Approval recommended by:

Donny L. Hamilton
Department Head - Type Name & Sign Date
Chair, College Review Committee Date

Department Head - Type Name & Sign Date
(If cross-listed course)
Dean of College Date

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 – 3/09
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Anthropology

2. Course prefix, number and complete title of course: ANTH 619, Indians of Texas

3. Catalog course description (not to exceed 50 words): Detailed study of diverse native/immigrant Texas Indian lifeways/cultures from late pre-European to contemporary times; exploration of historical underpinnings, traditional cultures, especially land-use patterns; detailed assessment of tribal relationships with colonial powers, U.S., Texas governments as evidenced in ethnographic, ethnohistoric, historical materials; application to anthropological, archaeological, and human ecology research

4. Prerequisite(s): Graduate classification, ANTH 602, or ANTH 604, or 620, or 650

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.

7. Will this course be repeated within the same semester? ☐ Yes ☒ No

8. 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)

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Approval recommended by:

Denny L. Hamilton  
Department Head - Type Name & Sign  
Date  

Chair, College Review Committee  
Patricia A. Butler  
Date  

Dean of College  
David W. Reed  
Date  

Submitted to Coordinating Board by:

Associate Director, Curricular Services  

Date  

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
CLASS SYLLABUS: INDIANS OF TEXAS, FALL 2010
Anthropology 619-

Instructor: Dr. Alston V. Thoms
Office: Anth. Bldg., Rm. 309J
Office Hrs: W, 2:20-5:10
Meeting Place: Anthro. Bldg., Rm. 214
Meeting Time: __________________
E-mail: a-thoms@tamu.edu

Course Description: Detailed study of diverse native/immigrant Texas Indian lifeways/cultures from late pre-European to contemporary times; exploration of historical underpinnings, traditional cultures, especially land-use patterns; detailed assessment of tribal relationships with colonial powers, U.S., and Texas governments as evidenced in ethnographic, ethnohistoric, and historical materials; application to anthropological, archaeological, and human ecology research

Learning Outcome: The course provides detailed knowledge of Native American lifeways in Texas' diverse ecological regions from the early 1500s into the 21st century. It also provides detailed knowledge of historical interactions between and among tribes and the diverse non-Indian governments that exerted political control of Texas and vicinity (i.e. modern-day Oklahoma, New Mexico, Louisiana, and Mexican states along the Rio Grande).

Course Objectives by Semester's End:
- Describe and discuss in detail cultural diversity, especially land-use patterns, among Indian groups in geographically diverse Texas and vicinity during the 1500s when they were first encountered European and enslave Africans and the nature of archaeological, ethnographic, and historical evidence thereof
- Describe and discuss in detail changes in the cultural diversity and geographic distribution of Indian groups in Texas and vicinity during the 17th through 20th centuries
- Discuss in detail the causes of these cultural and geographic changes and describe in general socio-political interactions with various colonial powers as well as Texas and U.S. governments
- Describe in detail the nature, distribution, and lifeways of 21st century Indian tribes and people in Texas and vicinity
- Articulate and debunk in detail common myths about the nature and history of Indian people and cultures through time in Texas and vicinity
- Acquisition of an ability to apply insights from Texas Indian studies toward fine-tuning critical-thought skills and incorporating decidedly cross-cultural perspectives

Prerequisites: Graduate classification; Archaeological Methods and Theory, ANTH 602 or Cultural Method and Theory, ANTH 604 or Prehistory of Texas, ANTH 620 or Ethnographic Field Methods, ANTH 650
This course is stacked with ANTH 419, with additional requirements for graduate students:

- Graduate students are required to understand and discuss relevant topics in detail; undergraduate students (i.e., ANTH 419) are required to obtain a general mastery of the material.
- Graduate students are required to lead class discussions; undergraduate students are not required to lead class discussions.
- Graduate students are required to use a complex database to generate data for graphs and arguments presented in their term papers; undergraduate students are not required to use this database.
- Graduate students are required to write an analytical term paper that is 25-30 pages in length; undergraduate students are required to write a descriptive paper 15-20 pages in length.
- Graduate students have approximately 35 additional assigned reading that are not assigned to undergraduate students and graduate students are assigned to review and additional five that are not assigned to undergraduate students.

Class Structure: This is a seminar-format with one-three-hour meeting each week. Approximately half the period is devoted to lecture and half to discussion of assigned readings and their relationships to the weekly topic(s) and relevant aspects of the students' research projects. Students are required to complete substantial reading assignments and lead class discussions as assigned. They are also required to discuss progress in preparing their research papers. Draft sections of these papers are due periodically during the course of the semester and are critiqued by the instructor. There are two short-answer and detail-discussion exams, one for covering the first half of the course and the other the second half.

Lewis Binford and Amber Johnson (Truman State University, Missouri) have kindly provided the class with ethnographic projections compiled from dozens of hunter-gatherer case studies along with environmental data from some 1000 NOAA/NCDC weather stations in TX, NM, OK, LA, AR, and northeast Mexico. These data (i.e., "frames of references") are provided in table format (Excel) and include various measures of temperature, growing season, vegetation, terrain, surface water, net above ground productivity, and big-game density. Collectively, these frames of reference are especially useful in generating expectations and assessing working models about the nature of agricultural and hunting and gathering lifeways in Texas and adjacent regions. Students will use these data to generate maps and graphs that afford a better understanding of Texas ethnohistory and serve as illustrations in their research papers.

Term Paper: Research papers afford case-study experience in the use of ethnographic and environmental data to address anthropological (aka "cultural") and/or archaeological topics related to behavioral patterns evidenced by native hunter-gatherers and farmers depicted in ethnographic and ethnohistoric records of Texas and vicinity. Student research papers focus on geographic areas, specific ethnic groups with pre-European homelands in Texas, or spatially comparative topics (e.g., bison hunting in ecologically diverse regions by culturally diverse groups or migration-related impacts on land-use practices). They must be analytical and synthetic in nature with well developed methods and theoretical approaches. Papers include
approximately 25-30 double-spaced pages of text, plus illustrations and a references-cited section. All papers must follow the style guide for the *American Antiquity*; it is available on line at the website for the Society for American Archaeology.

- **Week 3:** Outline for their research paper
- **Week 5:** Draft of the introduction, methods, and environmental contexts sections
- **Week 8:** Draft of the cultural context section
- **Week 10:** Draft of the data compilation section
- **Week 12:** Draft of the analysis section
- **Week 15:** Draft of the conclusion section
- **Final:** December ____, Final paper submission; 10-min. oral summary thereof

**Class Requirements and Grades:** Timely completion of assignments and presentations is required. Late assignments or presentations due to unexcused absence or without adequate justification are penalized at a rate of 25% each week for two weeks and 100% thereafter. Grades are determined from results of the two written exams (40%), a term paper (40%), and weekly assignments/presentations (20%). To accomplish the course objectives and receive an “A” in this class will require at least 9 hrs per week of reading and research time, plus consistent class attendance and meaningful participation.

At the end of the semester grades will be averaged according to the previously stated weights. Students will receive a letter grade corresponding to the standard TAMU percentage scale: 100-90%, A; 89-80%, B; 79-70%, C; 69-60%, D; 59-0%, F. Procedures for make-up exams and excused absences follow student rule 7, as stated in the following link: [http://student-rules.tamu.edu/rule7.htm](http://student-rules.tamu.edu/rule7.htm)

**OTHER STATEMENTS:**

*If you have difficulty understanding this course* or score poorly on the exams, please come by to discuss your concerns with the instructor early in the semester, as your chances of improving are best when you afford your professor opportunities to assist you throughout the semester.

**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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

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

**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://student-rules.tamu.edu/. Also see web site on **Academic Integrity Task Force, 2004 at:** http://www.tamu.edu/aggiehonor/FinalTaskForceReport.pdf

**PRIMARY TEXTS (see class calendar for dates for specific reading assignments):**

La Vere, David  
2004  *The Indians of Texas*. Texas A&M University Press, College Station.

Smith, F. Todd  
2005  *From Dominance to Disappearance: The Indians of Texas and the Near Southwest, 1786-1859*. University of Nebraska Press, Lincoln.

Foster, William C.  
2008  *The Historic Native Peoples of Texas: 1528-1722*. The University of Texas Press, Austin.

**ADDITIONAL ASSIGNED READINGS (see calendar for dates and specific assignments):**

Berlandier, Jean Louis  
1969  *The Indians of Texas in 1830*. Smithsonian Institution Press, Washington D.C.

Binford, Lewis R.  

Blair, William. F.  
Bocanegra, Juan Gutierrez  

Brusteth, J. E. and N. Kenmotsu  

Cabeza de Vaca, Alvar Nunez  

Campbell, T. N.  

Carr, John T., Jr.  

Castaneda, Pedro de  

Collins, Michael B.  

Coronado, Francisco Vazquez  

Duaine, C. L. (editor and translator)  
1971 Caverns of Oblivion. Packrat Press, Manchaca, Texas. (Alonzo de Leon’s First Discourse (1649) pertaining to Indians of northeaster Mexico and south Texas, pp. 27-44)  

Gentleman of Elvas  
Griffen, William B.

John, Elizabeth A. H.

Kavanagh, Thomas W.

Kennotsu, Nancy A. and Mariah F. Wade

Levy, Jerrold E.

Newcomb, W.W., Jr.


Newcomb, W.W. Jr., and Thomas N. Campbell

Opler, Morris E.

Parks, Douglas R.

Perttula, Timothy K.

Rogers, J. Daniel and George Sabo, III

Salinas, M.

Stahle, David W. and Malcolm K. Cleaveland

Stahle, David W. and Malcolm K. Cleaveland
1993 Southern Oscillation Extremes from Tree Rings of the Sierra Madre Occidental and Southern Great Plains. Journal of Climate 6(1):129-140.

Thoms, Alston V.
2007 Learning from Cabeza de Vaca: Revelations about Hunter-Gatherer Foodways at the Dawn of Written History in Texas. In Texas Beyond History: The Virtual Museum of Texas' Cultural Heritage--http://www.texasbeyondhistory.net/index.html-- edited by Steve Black, Special Exhibits, Cabeza de Vaca. The University of Texas at Austin, Collge of Liberal Arts.


Tiller, Veronica E.

Wade, Mariah F.

SUPPLEMENTAL TEXTS (FYI only; other suggestions available on request)

Ellis, L. Tuffly, James W. Pohl, and Ron Tyler (editors-in-chief)
1999 Handbook of Texas: Online. The General Libraries of Texas at the University of Texas and the Texas State Historical Association, Austin. (entries on some 500 hundred tribes/bands; specific entries assigned) http://www.tsha.utexas.edu/handbook/online/

Flint, R. and S. C. Flint (editors)
2005 Documents of the Coronado Expedition, 1539-1542: “They were not familiar with His Majesty, nor did they wish to be his subjects.” Southern Methodist University Press, Dallas. (specific chapters to be assigned)

Foster, W. C. (editor)

Krieger, Alex D.
2002 We Came Naked and Barefoot: The Journey of Cabeza de Vaca across North America. University of Texas Press, Austin

Oviedo y Valdez, G. F.
CLASS CALENDAR: ANTHROPOLOGY 619-___,
FALL 2010
INDIANS OF TEXAS

Instructor: Dr. Alston V. Thoms
Office: Anth. Bldg., Rm. 309J
Office Hrs: Wednesday, 2:20-5:10
Meeting Place: Anthro. Bldg., Rm. 214
Meeting Time: ____________
E-mail: a-thoms@tamu.edu

Topics, assignments, lectures subject to change on short notice to meet new circumstances

Week 1: Introduction to Course, Overview Historical Perspectives on Indians of Texas
Topic: Nature and scope of course; instructor’s theoretical perspective on human behavior, especially land use patterns, and approaches to understanding the roles of environmental and ethnographic data in anthropological and archaeological studies; students research interests
Assignment: Read and be prepared to discuss Binford (2001:1-5, 7-52; 465-472; H&G theory); La Vere (2004:ix-xiv; preface); Kenmotsu and Wade (2002:1-14; ethnohistoric research strategy and example); Newcomb (1993:1-63; historical detail about Cent. TX Indians); Smith (2005:xi-xv; preface); Thoms (2008:1-6; foreword in Foster); Wade (2001:23-44; examples of Indian-European interaction); familiarize yourself with Texas Beyond History (TBH: http://www.texasbeyonddhistory.net) by pursuing exhibits enough to grasp the scope of Texas’ environmental and cultural diversity; familiarize yourself with Handbook of Texas On-Line (HTO-L) and a couple of articles pertinent to your research interests http://www.tsha.utexas.edu/handbook/online/

Week 2: Overview of Ecological Zones and Climatic Changes since AD 1500
Topic: Texas’ ecological zones and their food-resource productivity; generating expectations for the general nature of ethnographic records from environmental frames of reference; students discuss potential topics for their term papers
Assignment: Read and be prepared to discuss Binford (2001:53-113; environmental variables); Blair (1950:93-113; biotic zones); Carr (1967:vi-27; climate patterns), Stahle and Cleaveland (1993: 124-140; past weather patterns N. Mex and S. Plains); Stahle and Cleaveland (1988:59-74; Texas drought history); a sample of TBH exhibits that describe/discuss Texas’ diverse environmental regions; be prepared to discuss expected subsistence patterns in Texas based readings to date and a perusal of Texas data contained in websites on climate (http://www.noaa.gov/climate.html), vegetation (http://plants.usda.gov/index.html), wildlife/general habitat (http://www.tpwd.state.tx.us/), and others (e.g., http://www.glo.state.tx.us/maps.html); read and be prepared to discuss use the Binford-Johnson data set to generate isobar/equivalent maps of the big game and net-above-ground productivity maps of Texas and vicinity as well as additional isobar/equivalent maps, as per your research interests in general terms comment on the topic of your term-paper, as initially envisioned;
Week 3: **Overview of Texas Archaeology**

**Topic:** Temporal changes in diagnostic tools, land-use patterns and intensification, especially food-getting strategies; discussion of evolutionary implications thereof, especially pertaining the distribution of hunting and gathering versus agriculturally based cultures

**Assignment:** Read and be prepared to discuss Collins (2004:101-126; overview of Central TX prehistory); Foster (2008:1-19; prehistory summary); La Vere (2004:3-25; prehistory summary); Perttula (2004:5-14; overview of TX prehistory); read the Richard Beene site exhibit on *TBH* as well as other exhibits sufficient to obtain a good picture of pre-Columbia archaeology in the state; *submit and discuss an outline for your term paper (2-4 double-spaced pages)* on a tribe/group, geographic area or specific topic to be addressed through time or across space; the outline should include sections on original homeland, land-use, tribal history, current government and current issues, as well as sections covering research problem/objectives, methods, and expected outcomes

Week 4: **Overview of Lifeways at European Contact and Thereafter**

**Topic:** Texas' native-culture areas and general patterns in ethnographic lifeways during the mid-16th century; generating expectations for the nature of specific ethnographic records from general ethnographic and specific environmental data

**Assignment:** Read and be prepared to discuss Berlandier (1969:99-152; an ethnography of TX Indians written in the late 1820s and early 30s); Binford (2001:114-159; baseline H&G research strategies); Foster (2008:21-35; summary of native lifeways, ca. AD 1500); La Vere (2004:26-56; summary of native lifeways when Europeans arrived); Newcomb (1961:103-131; Lipan Apache history as an example of land-use and location changes); Wade (2003:xvii-23; ethnohistoric research and initial Spanish-Indian encounters in N. Coahuila and SW TX); a sample of native-people sections in *TBH* exhibits in sufficient detail to develop a clear picture of cultural diversity during the historic era, being sure to include the areas that apply most directly to your research topic; articles from *HTO-L* about groups pertinent to your research topic; use the Binford-Johnson data set to *generate isobar/equivalent maps* of the expected percentage of hunting, gathering, and fishing contributions to subsistence; **Saturday, September ___:** Fieldtrip, Institute of Texan Cultures in San Antonio and the Land Heritage Institute along the Medina River 15 miles south of San Antonio

Week 5: **Overview of Early History of Political/Military Relationships among Indian Groups and Non-Indian Governments, 1528-1804**

**Topic:** Major events and outcomes of interactions between native groups and Spanish and French powers and characterization of respective Indian policies

**Assignment:** Read and be prepared to discuss John (1975:58-97; conflicts in New Mexico, 1600-1680); Smith (2005:1-66, historical relationships, 1528-1804); La Vere (2004:71-76, 95-97; discussion biological and materials exchanges, also introduction of horses); a variety of historical-encounter exhibits and sub-sections on *TBH*; *submit and discuss a draft* of the introduction, methods, and environmental context sections of your research paper

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Week 6: Initial and Later Developments, 1600-1784 and 1804-21st century: Political and Military Relationships among Indian Groups and Non-Indian Governments

Topic: Major events and outcomes of interactions between native groups and Spanish, French Texas, and U.S. powers and characterization of respective Indian policies

Assignment: Read and be prepared to discuss John (1975: 258-303, Indian relations in TX, 1718-1759); La Vere (2004:222-238; 20th -21st century Indians); and Smith (67-253); a variety of historical-encounter exhibits and sub-sections on TBH and articles in HTO-L about historical events pertinent to your term paper;

Week 7: EXAM 1 (first hour, covering readings & lectures for weeks 1-6) and Coastal Texas/Vicinity and Role of Aquatic Resources in General (2nd & 3rd hours)

Topic: Ethnographic lifeways along the Coastal Parries and Marshes and adjacent SE Texas

Assignment: Read and be prepared to discuss Cabeza de Vaca (2002:175-189), Foster (2008:114-145, 307-329; people of central and upper coasts), La Vere (2004:57-64, 112-115, 177-180; Karankawa, Atakapas); Newcomb (1983:359-367; Karankawa), Newcomb 2004:659-663; Atakapans); Salinas (1990:115-135; people of Rio Grande delta); Thoms (2007: TBH-Cabeza de Vaca: Main thru Coastal Foodways) review sections of Smith (2005) pertaining to the coastal and near-coat areas; review Cabeza de Vaca @ http://www.library.txstate.edu/swwc/cdv/about/index.html; the reading in Krieger (aka CdV 2002) is also found on this website under La Relacion, chpts.10-16

Week 8: Panhandle-Plains/Vicinity and Role of Bison in General

Topic: Ethnographic lifeways on the southern plains of Texas and adjacent regions, discussion of student progress and problems in addressing research topics

Assignment: Read and be prepared to discuss Bocanegra (1908: 223-232, Zaldívar expedition to the panhandle, 1599); Castaneda (1907:327-342, 361-366, Coronado expedition NM, TX, OK, KA); Coronado (1904:213-221, Coronado expedition to KA); Foster (2008:235-274, people of southern plains); Kavanagh (2001:886-906; Comanche); La Vere (2004: 84-92, 95-97, 134-146, 189-194, Plains Apache, horse, Comanche, Kiowa and Kiowa-Apache); Levy (2001:907-925; Kiowa); Tiller (1983:440-461; Jicarilla Apache); TBH sections on native peoples and historic encounters pertaining to your research topic; "Coronado's Journey Through New Mexico, Texas, Oklahoma, and Kansas" & “Discovering a Campsite in Texas” at: http://www.psi.edu/coronado/coronadosjourney2.html; they include good maps showing the probable route and article on the Palo Duro Canyon encampment; review official tribal websites for Comanche, Kiowa, and Jicarilla Apache(?) and sections of Smith (2005) pertaining to the Texas panhandle and vicinity; submit and discuss a draft of the cultural context sections of your research paper
Week 9: **Pineywoods/Vicinity and Role of Agricultural Resources in General**
Topic: Ethnographic lifeways in the Pineywoods and vicinity
Assignment: Read and be prepared to discuss Bruseth and Kenmotsu (1993:199-225; Moscoso's TX route); La Vere (2004:103-112, 146-176, 232-238; Caddo, Atakapa, and SE immigrants), Foster (2008:275-306; people of NE Texas); Gentleman of Elvas (1907: 235-249; de Soto expedition in AK ); Parks (2001:567-571; Kitsai); Rogers and Sabo 2004:616-631; Caddo); Nasoni and Sha'chahdinnih exhibits on TBH; review the official website for the Caddo Nation as well as information about the H. de Soto expedition, especially L. de Moscoso's travels in Texas, at: [http://www.floridahistory.com/texas.html#Texas](http://www.floridahistory.com/texas.html#Texas); also review sections of Smith (2005) pertaining to NE Texas and vicinity

Week 10: **Post Oak Savannah (inner Coastal Plain) & Role of Root Foods in General**
Topic: Ethnographic lifeways in the Post Oak Savannah, discussion of the importance of plant-food resources elsewhere in the state
Assignment: Read and be prepared to discuss Cabeza de Vaca (2002:189-198; also on-line at [http://www.library.texasstate.edu/swwc/cdv/about/index.html](http://www.library.texasstate.edu/swwc/cdv/about/index.html) under La Relacion, chpts. 17-19), Foster (2008:36-113; people of middle Brazos, Colorado, and San Antonio River basins), La Vere (2004:115-125; Tonkawa and others); Newcomb and Campbell (2001:953-964; Tonkawa); Thoms (2007: TBH-Cabeza de Vaca: Main-Interior Foodways and Heirloom Cooking); review official website for the Tonkawa tribe; also review sections of Smith (2005) pertaining to Post Oak region and vicinity; submit and discuss a draft of the data compilation section of your research paper

Week 11: **North-Central Texas and Vicinity and Role of Deer in General**
Topic: Ethnographic lifeways in the Cross Timbers and adjacent prairies
Assignment: Read and be prepared to discuss Foster (2008: review sections of 235-274 that pertain to central Texas and the Edwards Plateau area); La Vere (2004:128-133, 194-201; Wichita; reservations); Newcomb (2001:548-566; Wichita); review sections of Smith (2005) pertaining to north-central Texas and vicinity; review the official web site for the Wichita and Affiliated Tribes

Week 12: **Central Texas and Vicinity and the Role of Agave-like foods and Deer**
Topic: Ethnographic lifeways in the Hill Country of Central Texas and vicinity
Assignment: Read and be prepared to discuss Foster (2008: review sections of pp. 235-274 that pertain to central Texas and the Edwards Plateau area); La Vere (2004: 180-189; review pp. 139-146; 19th century conflicts in cen. TX and vicinity); Opler (2001: 941-52; Lipan Apache); Newcomb (1961:103-131, review this chapter about the Lipan Apache); Newcomb (1993:1-63, Central Texas Indians, review it again); Wade (2003:182-232; conclusions to cent. TX Indians); read in TBH “Native Peoples in the Plateaus and Canyonlands” and “Nature’s Harvest;” in “Prehistoric” section under Plateaus and Canyonlands; review sections of Smith (2005) pertaining to central Texas; submit and discuss a draft of the data analysis section of your research paper
Week 13  South Texas Plains/Vicinity and Role of Ethnographic Data in General, Part 1
Topic: Ethnographic lifeways in the South Texas Plains and vicinity
Assignment: Read and be prepared to discuss Cabeza de Vaca (2002:198-226; also on-line at http://www.library.txstate.edu/swwc/cdv/about/index.html under La Relacion, chpts. 20-31); Foster (2008:146-185; people of south Texas), La Vere (2004:64-68, 77-84, 202-209; Coahuiltecans and mission Indians); review official website for American Indians in Texas at Spanish Colonial Missions; Saturday, November __: Fieldtrip, San Antonio Missions Historical Park and meet with representatives of the Tap-Pilam Coahuiltecan Nations (descendants of mission Indians) at Mission San Juan Capistrano

Week 14  HOLIDAY: November __, University closure at noon for Thanksgiving Day and a long weekend!

Week 15  Exam 2 (first hour, covering readings for weeks 7-15 & lectures for weeks 7-13) and South Texas, Part 2 & Lower Pecos/Trans Pecos & Desert Resources in General (2nd and 3rd hours)
Topic: Ethnographic lifeways in South Texas and the lower Pecos regions and vicinity
Assignment: Read and be prepared to discuss Campbell (1983:343-358; Coahuiltecans and neighbors); Duaine (1977:27-44; native peoples of NE Mexico); Foster (2008:186-242 and 330-342; peoples of Trans-Pecos TX); Griffen (1983:329-342; people of n-c Mexico); La Vere (2004: 68-71, 80-84, 93-95, 97-102; Jumanos and Tiguan); Opler (1983:419-439; Mescalero Apache); Thoms (2007: TBH-Cabeza de Vaca: Deep South Texas and Beyond); review official website for the Mescalero Indian Reservation; submit and discuss a draft of the conclusion section of your research paper

FINAL: December ____: Submit term paper and present a 10-minute overview of its contents
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Computer Science & Engineering.

2. Course prefix, number and complete title of course: CSCE 658 Randomized Algorithms

3. Catalog course description (not to exceed 50 words): Introduction to randomized algorithms; review of selected tools and techniques from probability theory and game theory, with a view towards algorithmic applications; thorough discussion of the main paradigms, techniques, and tools in the design and analysis of randomized algorithms; detailed analysis of numerous algorithms illustrating the abstract concepts and techniques.

4. Prerequisite(s): Graduate standing

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)

MCS, M.E., MSCS, MSCE, PhDcs, PhDCE

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) | Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code | Approval recommended by:
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Department Head - Type Name & Sign Date
Chair, College Review Committee Date

Department Head - Type Name & Sign Date (if cross-listed course)
Dean of College Date

Submitted to Coordinating Board by:
Dean of College Date

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

1. This request is submitted by the Department of Computer Science and Engineering

2. Course prefix, number and complete title of course: CSCE 658 Randomized Algorithms

3. Catalog course description (not to exceed 50 words):
   This course gives an introduction to randomized algorithms; selected tools and techniques from probability theory
   and game theory are reviewed, with a view towards algorithmic applications; the main focus is a thorough
   discussion of the main paradigms, techniques, and tools in the design and analysis of randomized algorithms; a
   detailed analysis of numerous algorithms illustrates the abstract concepts and techniques.

4. Prerequisite(s): Graduate standing

   Cross-listed with:

   [List of cross-listed courses]

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 programs(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)

   MSC, MEN, MSCS, MSCE, PhDCS, PhDCE

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

9. Prefix Course# Title (excluding punctuation)

   CSCE 658 RANDOMIZED ALGORITHMS

   Text Book Self-Guided and Lab Code

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   Approval recommended by:

   Duncan M. Walker

   Department Head - Type Name & Sign Date

   Chair, College Review Committee Date

   Dean of College Date

   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 – 3/09

38 of 130 B
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Computer Science & Engineering

2. Course prefix, number and complete title of course: CSCE 658 Randomized Algorithms

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4. Prerequisite(s): Graduate standing

Cross-listed with: ____________________________

Cross-listed courses require the signature of both department heads.

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)

   MCS, MEN, MScS, MSCE, PhDcs, PhDCe

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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   Approval recommended by:
   Duncan M. Walker
   Date 1/1/09

   Chair, College Review Committee
   Date 11-13-09

   Dean of College
   Date 11-13-09

   Submitted to Coordinating Board by:

   Associate Director, Curricular Services

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Questions regarding this form should be directed to Sandra Williams at 845-8901 or sandra.williams@tamu.edu
Curricular Services – 3/09

39 of 130 B
Course title and number  CSCE658 Randomized Algorithms
Term (e.g., Fall 200X)  Spring 2010

Course Description

The course gives an introduction to randomized algorithms; randomization allows to design efficient algorithms, which are of elegant simplicity; selected tools and techniques from probability theory and game theory are reviewed, with a view towards algorithmic applications; the main focus is a thorough discussion of the main paradigms, techniques, and tools in the design and analysis of randomized algorithms; a detailed analysis of numerous algorithms illustrates the abstract concepts and techniques.

Learning Outcomes or Course Objectives

The course teaches the fundamentals of randomized algorithms. At the end of the course, the student should:

- know the fundamentals of discrete probability theory;
- know the basic randomized algorithms that have been discussed in class;
- be able to analyze selected randomized algorithms;
- know the theory of Markov chains and their algorithmic applications;
- be knowledgeable about selected randomized data structures;
- be familiar with the probabilistic method.

Instructor Information

Name  Andreas Klappenecker
Telephone number  979 458 0608
Email address  klappi@cse.tamu.edu
Office hours  TBA
Office location  HRBB 509B

Textbook and/or Resource Material


Grading Policies

The course has one midterm exam, a final project, and homework assignments. The grade will be calculated as follows:

Midterm exam: 25%, Project: 25%, Assignments: 50%

The scope of the project shall consist of research in the area of randomized algorithms. The findings should be summarized in a 4-5 page report in double column format that will be graded in terms of originality and depth of research and clarity of presentation.
### Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
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</thead>
<tbody>
<tr>
<td>A</td>
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<td>80-89</td>
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<td>D</td>
<td>60-69</td>
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<td>F</td>
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### Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quicksort and Mincut Algorithms</td>
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</tr>
<tr>
<td>2</td>
<td>Chernoff Bounds and Packet Routing</td>
<td></td>
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<tr>
<td>3</td>
<td>Occupancy Problems and Random Graphs</td>
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<td>4</td>
<td>Markov Chains</td>
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<td>5</td>
<td>Random Walks</td>
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<tr>
<td>6</td>
<td>Algebraic Technique</td>
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<td>7</td>
<td>Randomized Data Structures</td>
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<tr>
<td>8</td>
<td>Hashing</td>
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<td>9</td>
<td>Geometric Algorithms</td>
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<td>10</td>
<td>Graph Algorithms</td>
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<td>11</td>
<td>Graph Algorithms</td>
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<td>12</td>
<td>Number-theoretic Algorithms</td>
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<td>13</td>
<td>Linear Programming</td>
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<tr>
<td>14</td>
<td>Entropy, Randomness, and Information</td>
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</table>

### Other Pertinent Course Information
Americans with Disabilities Act (ADA) Policy 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.

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, the 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 Cain Hall or call 845-1637.

Copyrights

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

Scholastic Dishonesty

As commonly defined, plagiarism consists of passing off as one's own the ideas, work, writings, etc., that belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you 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 questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules [http://student-rules.tamu.edu/rule20.htm], under the section "Academic Misconduct".

Academic Integrity Statement

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

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional Information please visit: http://www.tamu.edu/aggiehonor

On all course work, assignments, and examinations at Texas A&M University, the following Honor Pledge shall be preprinted and signed by the student: "On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work."
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

Electrical & Computer Engineering
ECEN 762 Ultrasound Imaging

This request is submitted by the Department of

2. Course prefix, number and complete title of course:

3. Catalog course description (not to exceed 50 words):
Covers mathematical analysis of wave propagation, scattering of ultrasound in biological tissues, electronic transducer arrays for the beam forming, models of the received signals and signal processing methods for medical ultrasound imaging of tissues. Research papers related to fundamental ultrasound imaging concepts are discussed throughout the course.

4. Prerequisite(s):

Cross-listed with:

Cross-listed courses require the signature of both department heads.

5. Is this a variable credit course?  ☑ No

If yes, from _______ to _______

6. Is this a repeatable course?  ☑ No

If yes, this course may be taken ______ times.

Will this course be repeated within the same semester?  ☑ No

7. This course will be:

a. required for students enrolled in the following degree programs(s) (e.g., B.A. in history)

b. an elective for students enrolled in the following degree programs(s) (e.g., M.S., Ph.D. in geography)

M.S., MEN, Ph.D. in Electrical and Computer Engineering

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)

<table>
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<tr>
<th>Lect.</th>
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<th>Admin. Unit</th>
<th>Acad. Year</th>
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Approval recommended by:

Scott Miller

Date

Department Head

Date

Department Head - Type Name & Sign
(if cross-listed course)

Date

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 – 3/09
Department of Electrical and Computer Engineering  
Texas A&M  
ECEN 762 Ultrasound Imaging

**Time and Location:** Spring 2010, MW 4:10-5:25 pm, 223A Zachry

**Instructor:** Dr. R. Righetti, Department of Electrical and Computer Engineering, 235B Wisenbaker, Office Hours: TUE 10:00 – 12:00PM, Email: righetti@ece.tamu.edu

**Prerequisite:** Approval of instructor.

**Textbook:** Christensen, *Ultrasonic Bioinstrumentation*, Wiley, 1988

**Objectives:** Ultrasound is a non-invasive medical imaging modality that has a wide range of clinical applications, both as a primary modality and as an adjunct to other diagnostic procedures. Its utility in medicine is in large part due to some unique characteristics, such as real-time imaging capabilities, low cost, nonionizing radiation and portability. The purpose of this course is to present methods for characterizing and analyzing ultrasound imaging systems. Our goal is to present, with enough mathematical rigor, an integrated discussion of the requirements and problems associated with standard diagnostic ultrasound techniques.

**Course Description:** Covers mathematical analysis of wave propagation, scattering of ultrasound in biological tissues, electronic transducer arrays for the beam forming, models of the received signals and methods of signal processing for medical ultrasound imaging of tissues. Research papers related to fundamental ultrasound imaging concepts will be discussed.

**Class Schedule (tentative)**
Each lecture below is 1.5 hrs. long. There are 30 lectures listed, resulting in a total of 45 lecture hours.

- Fundamentals of Ultrasound (4 lectures)
- Piezoelectric Transducers (2 lectures)
- Aperture Fundamentals (5 lectures)
- Ultrasound Fields (3 lectures)
- Array Transducers (2 lectures)
- Pulse-Echo Ultrasound Instrumentation (2 lectures)
- Doppler Imaging Principles (3 lectures)
- Image Artifacts (2 lectures)
- Current Developments (3 lectures)
- Project Presentation (4 lectures)

**Project:** Research and presentation of fundamentals of a state-of-the art ultrasound imaging technique. The project should include a written report and scientific analysis of a landmark paper related to the imaging technique of choice.
Grading: One Midterm Exam (20%); One Final Exam (30 %), Homework (20 %), Project (20%), Class participation (10%). The letter grades will be assigned according to the following standard:
A 90-100%
B 80-89%
C 70-79%
D 60-69%
F 59 and lower

Policies
Late homework or projects and make-up exams will not be accepted except in the case of documented illness or emergency.

Americans with disabilities act (ADA) policy statement
The American with disabilities act (ADA) is a federal anti-discrimination statue 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 Disability Services office, Cain Hall, Rm. B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

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

1. This request is submitted by the Department of Industrial and Systems Engineering

2. Course prefix, number and complete title of course: ISEN 604. Competing on Information Flows in Supply Chains

3. Catalog course description (not to exceed 50 words): Review, evaluate, and contribute to the existing knowledge base regarding the management of information flows from automatic identification systems such as RFID.

4. Prerequisite(s): ISEN 615 and Ph.D. students or Masters students with a thesis degree plan 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.

7. Will this course be repeated within the same semester? □ Yes □ No

8. This course will be:
   a. required for students enrolled in the following degree programs(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) M.S., Ph.D. in Industrial Engineering or related fields.

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

   Prefix Course # Title (excluding punctuation) Admin. Unit Acad. Year FICE Code
   ISEN 604 INFO FLOW SUPPLY CHAINS
   Lect. Lab SCH CIP and Fund Code 1622 10 - 1 10 0363 2
   Approval recommended by: Brett A. Peters
   Department Head - Type Name & Sign Date
   Chair, College Review Committee Date
   Dean of College Date
   Submitted to Coordinating Board by: Date
   Associate Director, Curricular Services Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu
Curricular Services – 3/09
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

Number and Title of Course: ISEN 664  Competing on Information Flows in Supply Chains
Hours: Lecture 3, Lab 0, Credits 3
Prerequisites: ISEN 615 and Ph.D. students or Masters students with a thesis degree plan.

Course Description: Review, evaluate, and contribute to the existing knowledge base regarding the management of information flows from automatic identification systems such as RFID.

Learning Outcomes: Students will become familiar with the supply chain research literature and the impact of identification technologies on supply chains, and will gain experience writing a research paper in this field.

Course Instructor: Gary M. Gaukler  Email address: gaukler@tamu.edu
Telephone number: 845-3574  Office location: 239A Zachry Engineering Center
Office hours: MW 2-3 p.m.

Textbook(s): None required; but "Foundations of Stochastic Inventory Theory" by Evan Porteus is strongly recommended. Additional references provided during first lecture.

Grading Policy: Participation and homework 20% (20 points), presentations 30% (30 points), research project 50% (50 points).

Project paper and presentation will be graded based on how good of a review you provide for your selected topic, how logical, innovative, and feasible your proposed idea is, and how well you present your work to the class.

Your grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standard.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points (out of 100)</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
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<td>B</td>
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<td>60-69</td>
</tr>
<tr>
<td>F</td>
<td>59 and lower</td>
</tr>
</tbody>
</table>

Course Outline by Major Topics and Approximate Time Assigned to Each:

1. The supply chain as a system 1
2. Review of standard inventory control models 1
3. Value of advance demand information 1
4. Value of information sharing 1
5. Automatic identification technologies / RFID 1
6. Adoption and proliferation issues of RFID 1
7. Improved inventory control policies 1
8. Product visibility in retail 1
9. Guided information management research 3
10. Research presentations 3

Total 14

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

1. This request is submitted by the Department of Industrial and Systems Engineering

2. Course prefix, number and complete title of course: ISEN 611. Foundations of Technology Evaluation and Assessment

3. Catalog course description (not to exceed 50 words): Quantifying gambles arising in engineering activities associated with the design, deployment, and operations of technology; analytical foundations of technology evaluation and assessment from an engineering perspective; focus on examination of probability models supporting quantification of value and risk.

4. Prerequisite(s): ISEN 609 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)

   M.Eng., M.S., Ph.D. in Industrial Engineering or related fields

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: ISEN
    Course #: 611
    Title (excluding punctuation): Foundations of Technology Evaluation and Assessment

    Lect. Lab SCH CIP and Fund Code Admin. Unit Acad. Year FICE Code
    0 3 0 0 0 3 1 4 2 7 0 1 0 0 6 1 6 2 2 1 0 - 1 1 0 0 3 6 3 2

    Approval recommended by:

    Brett A. Peters
    Department Head - Type Name & Sign Date
    G. T. Curry

    Department Head - Type Name & Sign (if cross-listed course) 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 of 130 B Curricular Services – 3/09
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

Number and Title of Course: ISEN 611 Foundations of Technology Evaluation and Assessment
Hours: Lecture 3, Lab 0, Credits 3
Prerequisites: ISEN 609 or consent of instructor

Course Description: Quantifying gambles arising in engineering activities associated with the design, deployment, and operation of technology. Analytical foundations of technology evaluation and assessment from an engineering perspective. Focus on examination of probability models supporting quantification of value and risk.

Learning Outcomes:
- Understand the uncertainty of quantifying gambles in engineering systems
- Learn the foundation of technology performance evaluation and value assessment
- Learn to compare technology on the basis of value and risk

Course Instructor: Martin A. Wortman
Email address: wortman@tamu.edu
Office location: 237C Zachry Engineering Center
Telephone number: 845-5772
Office hours: TR 10-11:55 AM

Textbook(s): Instructor notes

Grade Basis:
- Homework: 33%
- Take home mid-term exam: 33%
- Final exam: 34%

Your grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standards.

A = 90-100 (out of 100)
B = 80-89 (out of 100)
C = 70-79 (out of 100)
D = 60-69 (out of 100)
F = 59 and lower (out of 100)

Course Outline by Major Topics and Approximate Time Assigned to Each:

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<th>Weeks</th>
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<tbody>
<tr>
<td>1. gambling processes and wagers</td>
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<td>2. high-stakes wagers</td>
</tr>
<tr>
<td>3. wagering under incomplete information</td>
</tr>
<tr>
<td>4. stochastic valuation processes and random value streams</td>
</tr>
<tr>
<td>5. value dynamics directed by quality, reliability and operational risk</td>
</tr>
<tr>
<td>6. comparative analysis of operational risk in technology intensive system</td>
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<td>7. operational risk modeling for safety critical technologies</td>
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<tr>
<td>8. operational risk assessment in the revitalization of mature technologies</td>
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<td>9. operational risk assessment in emerging technologies</td>
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<tr>
<td>10. technology assessment under the risk of counterfeit components</td>
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<tr>
<td>11. operational risk mitigated by warranty and insurance</td>
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<tr>
<td>12. risk based technology portfolio analysis</td>
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<tr>
<td>13. assessment priority aggregation and voting theory</td>
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<tr>
<td>14. strategic planning supported by operational assessment</td>
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<td>Total</td>
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</tbody>
</table>

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(http://www.tamu.edu/aggiehonor)
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Industrial and Systems Engineering

2. Course prefix, number and complete title of course: ISEN 637. Stochastic Dynamic Programming

3. Catalog course description (not to exceed 50 words): Methodologies for stage-wise stochastic-decision processes; includes finite-horizon models, infinite-horizon discounted total cost models, and average cost models; applications of methods to various situations.

4. Prerequisite(s): ISEN 609 and ISEN 622, or approval of the 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 programs(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)

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)

<table>
<thead>
<tr>
<th>Lect.</th>
<th>Lab</th>
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<th>Admin. Unit</th>
<th>Acad. Year</th>
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Approval recommended by:

Brett A. Peters
Department Head - Type Name & Sign

Date: 10/23/09

Chair, College Review Committee
Robin Autenrieth
Date: 11/13/09

Dean of College
David W. Reed
Date: DEC 3 2009

Question regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu
Curricular Services – 3/09
DEPARTMENT OF INDUSTRIAL ENGINEERING

Number and Title of Course: ISEN 637 Stochastic Dynamic Programming
Hours: Lecture 3, Lab 0, Credits 3
Prerequisites: ISEN 609 and ISEN 622, or approval of the instructor.

Course Description: Methodologies for stage-wise stochastic-decision processes. Includes finite-horizon models, infinite-horizon discounted total cost models, and average cost models. Applications of methods to various situations.

Learning Outcomes: Understand Markov decision processes and apply them to formulate and analyze problems.

Course Instructor: Sila Cetinkaya
Telephone number: 845-5597 E-mail address: sila@tamu.edu
Office hours: TR 3-4 pm Office location: 237L Zachry Engineering Center

Textbook: Class notes

References:

Grade policy: Homework 25%
Midterm 25%
Project 20%
Final Exam 30%

Project paper will be graded based on how complete of a review you provide for your selected topic, how logical, innovative, and feasible your proposed idea is. Your grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standards.

A = 90-100 (out of 100)
B = 80-89 (out of 100)
C = 70-79 (out of 100)
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Total | 14

52 of 130 B
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Texas A&M University

Departmental Request for a New Course
Undergraduate • Graduate • Professional

1. This request is submitted by the Department of Industrial and Systems Engineering.

2. Course prefix, number and complete title of course: ISEN 638. Polyhedral Theory and Valid Inequalities

3. Catalog course description (not to exceed 50 words): Advanced knowledge of polyhedral theory and valid inequalities for (mixed) integer programming; introduction to fundamental concepts in polyhedral theory and several approaches to generation of valid inequalities; includes state-of-the-art advancements and current avenues of research.

4. Prerequisite(s): ISEN 668

5. Is this a variable credit course? ☒ Yes ☐ No

6. Is this a repeatable course? ☐ Yes ☒ No

7. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)

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

9. Approval recommended by:

   Brett A. Peters
   Department Head - Type Name & Sign
   Date

   Department Head - Type Name & Sign
   (if cross-listed course)

   Submitted to Coordinating Board by:

   Associate Director, Curricular Services

   Original

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu

Curricular Services – 3/09
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

Number and Title of Course: ISEN 638 Polyhedral Theory and Valid Inequalities
Hours: Lecture 3, Lab 0, Credits 3
Prerequisites: ISEN 668

Course Description: Advanced knowledge of polyhedral theory and valid inequalities for (mixed) integer programming. Introduction to fundamental concepts in polyhedral theory and several approaches to generation of valid inequalities. Includes state-of-the-art advancements and current avenues of research.

Learning Outcomes:
- Deep understanding of properties of polyhedra and main theorems related to them
- Learning the fundamental relationship between integer programming and polyhedral theory
- Acquiring advanced knowledge of theoretical concepts underpinning several valid inequality techniques including mixed integer rounding, group theoretic inequalities, lift-and-project, split cuts, and lifting

Course Instructor: Kiavash Kianfar
Telephone number: 862-8567
Email address: kianfar@tamu.edu
Office location: 239B Zachry Engineering Center
Office hours: TR 4-5pm

Textbook(s): Instructor's notes

Set of journal papers.

Grading Policy:
- Homework 25%
- 2 Exams 50%
- Project 25%

Project paper will be graded based on how complete of a review you provide for your selected topic, how logical, innovative, and feasible your proposed idea is. Your grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standards.

A = 90-100 (out of 100)
B = 80-89 (out of 100)
C = 70-79 (out of 100)
D = 60-69 (out of 100)
F = 59 and lower (out of 100)

Course Outline by Major Topics and Approximate Time Assigned to Each:

<table>
<thead>
<tr>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. fundamentals concepts on polyhedral and linear inequalities</td>
</tr>
<tr>
<td>2. structure of polyhedra</td>
</tr>
<tr>
<td>3. polarity, blocking and anti-blocking polyhedra</td>
</tr>
<tr>
<td>4. integer hull using cutting planes</td>
</tr>
<tr>
<td>5. chvatal closure and rank</td>
</tr>
<tr>
<td>6. mixed integer rounding and its generalizations</td>
</tr>
<tr>
<td>7. mingling inequalities</td>
</tr>
<tr>
<td>8. integer group problems</td>
</tr>
<tr>
<td>9. superaditive lifting</td>
</tr>
<tr>
<td>10. lift and project closure and rank</td>
</tr>
<tr>
<td>11. sequential convexification results</td>
</tr>
<tr>
<td>12. split and lattice-free inequalities</td>
</tr>
</tbody>
</table>

Total 14

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 Cain Hall, Room B118, or call 845-1637.
Academic Integrity: "Aggies do not lie, cheat, or steal, nor do they tolerate those who do." It is the responsibility of students and instructors to help maintain scholastic integrity at the university by refusing to participate in or tolerate scholastic dishonesty. (http://www.tamu.edu/aggiehonor)
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Industrial and Systems Engineering

2. Course prefix, number and complete title of course: ISEN 639. Methods Improvement for Construction Engineers

3. Catalog course description (not to exceed 50 words): Application of work methods and measurements to civil engineering construction; examination of factors that affect productivity in construction; study of motivational factors; review of the principles of accident prevention.

4. Prerequisite(s): CVEN 405 and 473 or approval of instructor

5. Is this a variable credit course? ☑ No

6. Is this a repeatable course? ☑ Yes

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)

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: ISEN 639

   Course # Title (excluding punctuation) METHODS IMPR CONSTR ENG
   Lec. Lab SCH CIP and Fund Code Admin. Unit Acad. Year IICE Code
   0 3 0 0 0 3 1 4 0 8 0 1 0 0 6 1 6 2 2 1 0 1 1 0 0 3 6 3 2

   Approval recommended by: Brett A. Peters

   Department Head - Name & Sign Date Mark Busis
   John Niedzwiecki

   Department Head - Name & Sign Date Mark Busis
   (if cross-listed course)

   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 of 130 B Curricular Services – 3/09

   RECEIVED
   NOV 16 2009
   R. AUTENRIETH

   Attachment B

   OCT 27 2009
   ORIGINAL

   DEC 3 2009
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

Number and Title of Course: ISEN 639. Methods Improvement for Construction Engineers
Hours: Lecture 3, Lab 0, Credits 3
Prerequisites: CVEN 405 and 473 or approval of instructor

Course Description: Application of work methods and measurements to civil engineering construction; examination of factors that affect productivity in construction; study of motivational factors; review of the principles of accident prevention.

Learning Outcomes:
• Model elementary construction project operations
• Develop linear multivariate regression models from project data
• Develop stochastic (Monte Carlo) models for project simulation
• Use models to compare alternate methods
• Develop conclusions and decisions based on these models
• Distinguish trends from variability in the presence of uncertain and inadequate data
• Forecast activity, job, and project completion times and costs based on job progress to date
• Engage in project controls for on-going projects
• Understand construction project dynamics and the effects of feedback, recycling, and rework

Course Instructor: Kenneth F. Reinschmidt
Email address: kreinschmidt@civil.tamu.edu
Telephone number: 845-8599
Office hours: MWF 8-12
Office location: CE/TTI Building, Room 702A

Textbook: None

Grading:
Class Team Exercises: Participation and discussion
  Written presentations 25%
  Oral presentations 25%
Midterm Examination 10%
Term project
  Oral presentation 15%
  Written presentation 15%
Final Examination 10%

Project paper and presentation will be graded based on how good of a review you provide for your selected topic, how logical, innovative, and feasible your proposed idea is, and how well you present your work to the class. Grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standard.
A  90-100
B  80-89
C  70-79
D  60-69
F  59 and lower

Course Outline
Week 1: Review present worth analysis
Week 2: Statistical Process Control; Six-Sigma; control charts, reliability
Week 3: Regression analysis
Week 4: Simulation models
Week 5: Bayesian inference
Week 6: Class presentations
Week 7: Mid-term exam
Week 8: Simulation models
Week 9: Sigmoid curves – regression fit  
Week 1: Sigmoid curves – Bayesian fit  
Week 11: Learning curves; site layout  
Week 12: Class presentations  
Week 13: Term project oral presentations  
Week 14: Final examination

**Attendance and Make-up Policy:** Only University excused absences will be accepted for makeup exams/quizzes. It is the student’s responsibility to make arrangements to reschedule exams/quizzes. Make up exams will be given in accordance with University Rules (see Rule 7 at http://student-rules.tamu.edu).

**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 in Cain Hall, Room B118, or call 845-1637.

**Academic Integrity Statement**

"Aggies do not lie, cheat, or steal, nor do they tolerate those who do." It is the responsibility of students and instructors to help maintain scholastic integrity at the university by refusing to participate in or tolerate scholastic dishonesty. (Please see the Honor Council Rules and Procedures at http://www.tamu.edu/aggiehonor)
Texas A&M University

Departmental Request for a New Course

Undergraduate • Graduate • Professional

- Submit original form and attach a course syllabus.

1. This request is submitted by the Department of

   Industrial and Systems Engineering

2. Course prefix, number and complete title of course:

   ISEN 641. Systems Engineering Methods and Frameworks

3. Catalog course description (not to exceed 50 words):

   Concepts, methodology, methods and tools for discovery, definition, analysis, design, creation, and sustainment of systems involving information, physical, and human elements; architecture modeling methods include IDEF/UPDM; systems engineering frameworks include DoDAF/MeDAF, and Zachman; analysis tools include executable architectures to assess consistency, interoperability and performance.

4. Prerequisite(s):

   MATH 304 or approval of instructor

5. Is this a variable credit course?

   ☑ No

   If yes, from ___ to ___

6. Is this a repeatable course?

   ☑ Yes

   ☑ No

   If yes, this course may be taken ___ times.

7. Will this course be repeated within the same semester?

   ☑ Yes

   ☑ No

8. This course will be:

   a. required for students enrolled in the following degree programs(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)

   M.Eng., M.S., Ph.D. in Industrial Engineering or related fields

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

   Attach approval letters.

   Approval recommended by:

   Brett A. Peters
   Department Head - Type Name & Sign
   Date

   Department Head - Type Name & Sign
   (if cross-listed course)

   Submitted to Coordinating Board by:

   Associate Director, Curricular Services

   ORIGINAL

   Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu of 130 B
   Curricular Services – 3/09
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

Number and Title of Course: ISEN 641 Systems Engineering Methods and Frameworks
Hours: Lecture 3, Lab 0, Credits 3
Prerequisites: MATH 304 or consent of instructor

Course Description: Concepts, methodology, methods and tools for discovery, definition, analysis, design, creation, and sustainment of systems of systems involving information, physical, and human elements. Architecture modeling methods include IDEF/UPDM. Systems engineering frameworks include DoDAF/MoDAF, and Zachman. Analysis tools include executable architectures to assess consistency, interoperability and performance.

Learning Outcomes: Proficiency in methods and techniques to define and analyze the as-is system, develop and communicate the to-be system requirements, transition these requirements into the design specification of a new or modified system and to evaluate the interoperability and performance of a system design.

Course Instructor: Richard J. Mayer  Email address: rmayer@kbsi.com
Telephone number: 260-5274  Office location: 236 Zachry Engineering Center
Office hours: 5-7 p.m. Monday evenings


Grading Policy: Article/Topic Reviews 20%
Take home mid-term exam 20%
Final exam 20%
Course Project 40%

Project paper will be graded based on how complete of a review you provide for your selected topic, how logical, innovative, and feasible your proposed idea is. Your grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standards.

A = 90-100 (out of 100)
B = 80-89 (out of 100)
C = 70-79 (out of 100)
D = 60-69 (out of 100)
F = 59 and lower (out of 100)

Course Outline by Major Topics and Approximate Time Assigned to Each:

1. System Types and the System Evolution Process 2 weeks
2. System Discovery, Definition, Design, Development & Sustainment 2 weeks
3. System Architecture Methods 4 weeks
4. System Discovery and Analysis Tools & Executable Architectures 3 weeks
5. Frameworks for structuring the engineering of systems 2 weeks
6. Project Presentations 1 week

Total 14 weeks

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

1. This request is submitted by the Department of
   Industrial and Systems Engineering
   \underline{\text{As Corrected}}
   \underline{\text{(Date)}}

2. \underline{Graduate Studies}
   \underline{\text{Date}}
   \underline{\text{Nov \text{ 16, 2009}}}
   \underline{\text{R. Autenrieth}}

3. Catalog course description (not to exceed 50 words):
   Develop an understanding of the analytical and
   empirical techniques required to conduct an analysis of the magnitude and
   the sources of productivity change; programming and regression approaches
   to analyze industries include manufacturing, energy,
   and service systems.

4. Prerequisite(s):
   ISEN 303 and ISEN 620 or approval of instructor
   \underline{\text{Cross-listed with:}}
   \underline{\text{Cross-listed courses require the signature of both department heads.}}

5. Is this a variable credit course? \underline{\text{No}}
   If yes, from ________ to ________

6. Is this a repeatable course? \underline{\text{No}}
   If yes, this course may be taken ________ times.
   Will this course be repeated within the same semester? \underline{\text{No}}

7. This course will be:
   a. \underline{\text{required for students enrolled in the following degree program(s) (e.g., B.A. in history)}}
   b. \underline{\text{an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)}}
   \underline{\text{M.Eng., M.S., Ph.D. in Industrial Engineering or related fields.}}

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

9. Prefix | Course # | Title (excluding punctuation)
-----------|-----------|----------------------------------
ISEN | 662 | PRODUCTION ECONOMICS

Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code
0 | 3 | 0 | 0 | 0 | 1 | 6 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 3 | 6 | 3 | 2

\begin{tabular}{|l|l|l|l|l|l|l|l|l|l|}
\hline
\text{Approval recommended by:} & \text{Date} \\
Brett A. Peters & 10-23-09 \\
Department Head - Type Name & Sign & Date \\
Gaye C. Querry & Date \\
\hline
\text{Department Head - Type Name & Sign (if cross-listed course)} & Date \\
\hline
\text{Submitted to Coordinating Board by:} & \\
\text{Associate Director, Curricular Services} & \\
\hline
\end{tabular}

\underline{\text{Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu of 130 B Curricular Services – 3/09}}
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

Number and Title of Course: ISEN 662 Production Economics
Hours: Lecture 3, Lab 0, Credits 3
Prerequisites: ISEN 303 and ISEN 620 or approval of instructor

Course Description: Develop an understanding of the analytical and empirical techniques required to conduct an analysis of the magnitude and the sources of productivity change; programming and regression approaches to analyze industries include manufacturing, energy, and service systems.

Learning Outcomes:
- State and motivate the axioms of performance measurement.
- Implement the axioms in linear programming, nonlinear programming and regression approaches for the purposes of identify production frontiers and measuring relative performance.

Course Instructor: Andrew L. Johnson
Email address: ajohnson@tamu.edu
Office Location: 237K Zachry Engineering Center
Telephone number: 845-9025
Office Hours: Tuesday 11am or by appointment


References: The Economics of Production, Beattie, Bruce R. and Robert Taylor.
Microeconomic Analysis, Hal R. Varian

Grading Policy: Homework and class participation 33% (33 points), exams 34% (34 points), projects 33% (33 points). Project paper and presentation will be graded based on how complete of a review you provide for your selected topic, how logical, innovative, and feasible your proposed idea is, and how well you present your work to the class.
Your grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standards.

A = 90-100 (out of 100)
B = 80-89 (out of 100)
C = 70-79 (out of 100)
D = 60-69 (out of 100)
F = 59 and lower (out of 100)

Course Outline by Major Topics and Approximate Time Assigned to Each:

<table>
<thead>
<tr>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
</tr>
<tr>
<td>2. Technology</td>
</tr>
<tr>
<td>3. Profit Maximization</td>
</tr>
<tr>
<td>4. Profit Function</td>
</tr>
<tr>
<td>5. Cost Minimization</td>
</tr>
<tr>
<td>6. Cost Function</td>
</tr>
<tr>
<td>7. Duality</td>
</tr>
<tr>
<td>9. Econometrics</td>
</tr>
<tr>
<td>10. Stochastic Frontier Analysis</td>
</tr>
<tr>
<td>11. Data Envelopment Analysis</td>
</tr>
</tbody>
</table>

Total 14
Course Calendar

We will conform to the University Academic Calendar (http://www.tamu.edu/admissions/records/academic_calendar.html). Consideration for University Authorized Absences will be made. Please see http://student-rules.tamu.edu/ for the guidelines. Out of respect for your professor and fellow students, please give advance notice of any absences if possible.

If a class needs to be canceled for any other reason, you will be notified at least 1 week in advance—if at all possible.

Course Website

All course material will be posted on the course website via elearning.

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

1. This request is submitted by the Department of
   Plant Pathology & Microbiology
   GRADUATE STUDIES

2. Course prefix, number and complete title of course:
   PLPA 657 Biotechnology for Biofuels and Bioproducts

3. Catalog course description (not to exceed 50 words):
   Biotechnology issues in developing bioenergy as a renewable energy source;
   emphasis on the three generations of bioenergy and enabling technologies;
   special topics include recent advances in bioenergy research,
   government policy, and industrial development.

4. Prerequisite(s):
   Graduate Classification
   Cross-listed with:
   Not cross-listed
   Cross-listed courses require the signature of both department heads.

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)

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)
         |          | PLPA 657 Biotechnology for Biofuels and Bioproducts

   Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code
   0 | 3 | 0 | 0 | 0 | 3 | 2 | 6 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 8 | 1 | 0 | 0 | 3 | 6 | 3 | 2

   Approval recommended by:
   Department Head - Type Name & Sign
   Leland S. Pierson III
   Date
   Chair, College Review Committee
   David W. Reed
   Date
   Dean of College
   David W. Reed
   Date
   Dean of College
   David W. Reed
   Date
   Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu
Curricular Services – 3/09

65 of 130 B

NOV 20 2009
Syllabus
BESC 357 - PLPA 657
Biotechnology for Biofuels and Bioproducts
Spring 2011

Time: MWF 9:10 – 10:00
Location: WCBA 107

Instructor Information
Instructor: Joshua S. Yuan, Assistant Professor, IPGB and PLPM
Office: Borlaug Center 139A
Phone: 845-3016
Email: syuan@tamu.edu

Office Hours
Monday and Friday, 10:10am to 11:00am, Borlaug Center (Institute for Plant Genomics and Biotechnology) 139A.

Course Prerequisites
Graduate Classification

Course Description
Biotechnology issues in developing bioenergy as a renewable energy source; emphasis on the three generations of bioenergy and enabling technologies; special topics include recent advances in bioenergy research, government policy, and industrial development

The course will present biotechnology issues involved for developing bioenergy as a renewable energy source. The course has a strong focus on biotechnology rather than environmental and ecological issues. Comprehensive coverage of the enabling biotechnology involved in three generation of biofuels will be provided. The first generation bioenergy mainly refers to the ethanol production for corn or sugar; the second-generation bioenergy mainly refers to the lignocellulosic ethanol production from biomass; and the third generation bioenergy is yet to be developed with the new biomolecules and species for biofuel and bioproduct production. In addition, special topics will be included to discuss the recent advances in bioenergy research. Current developments in research, government policy, and industrial approaches to bioenergy will also be addressed.

Textbook
No textbook is required. Instructor will provide copies of presentations and the latest literature for references both as PDF files and as in-class handouts.

Learning Outcomes and Goals
1. Have a comprehensive knowledge of biotechnology issues, solutions, and topics related to bioenergy;
2. Realize the research needs of the field;
3. Develop ideas to provide solutions for the next generation of bioenergy;
4. Strengthen the capacity to present and communicate scientific plan;
5. Provide an awareness of the biotech industry development for biofuel, intellectual property in bioenergy, and potential job/business opportunities related to bioenergy.

**Additional Learning Outcomes and Goals for Graduate Students**
1. Graduate students will be expected to be able to summarize recent developments of the field and develop hypothesis and application for research plans.

**Grading Policy**
1. 40% will be based on the mid-term take home exam.
2. 10% will be based on the quizzes. I expect to give about 12 quizzes during the semester and student performance will be evaluated based on the top ten scores they receive. In case of absence.
3. For undergraduates, 50% will be based on student presentation as final exam. The students are expected to review the latest literature on the topics assigned and present their findings as a group.

**Additional Grading Policy for Graduate Students**
1. For graduate students, the final exam will include both a presentation (25%) and a final term paper as a review of the assigned topics (25%). The essay is a graduate student-specific assignment aiming to assess the graduate students’ capacity to review literature and develop a research plan that addresses the issues of the field.

**Grading Scale**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;90</td>
<td>A</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
</tr>
<tr>
<td>70-79</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>≤59</td>
<td>F</td>
</tr>
</tbody>
</table>

**Course Topics**

<table>
<thead>
<tr>
<th>Lecture Period</th>
<th>Topics</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Bioenergy – Sustainable Future and Current Status</td>
<td>JSY – Joshua S. Yuan</td>
</tr>
<tr>
<td>Week 1</td>
<td>Special Topic: Overview for Bioenergy Research</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>Week 2</td>
<td>First Generation Bioenergy – Processing and enzymes</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 2</td>
<td>First Generation Bioenergy – Processing and enzymes</td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>improvement</td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>Second Generation Bioenergy – Lignocellulosic Ethanol</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 3</td>
<td>Second Generation Bioenergy – Overview of Biorefinery and Biomass Process</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 3</td>
<td>Second Generation Bioenergy – Thermal conversion</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 3</td>
<td>Second Generation Bioenergy – Pretreatment and Hydrolysis for Chemical and Enzymatic Conversion</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 4</td>
<td>Special Topic: Second Generation Bioenergy – MixAlco Pretreatment</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>Week 4</td>
<td>Second Generation Bioenergy – Cell wall structure and recalcitrance</td>
<td>JSY</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------</td>
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</tr>
<tr>
<td>Week 4</td>
<td>Second Generation Bioenergy – Metabolic engineering</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 5</td>
<td>Second Generation Bioenergy – Introduction to Cell Wall Digestion Enzymes</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 5</td>
<td>Second Generation Bioenergy – Enzyme Discovery</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 5</td>
<td>Second Generation Bioenergy – Enzyme Modification – Rational Design and Direct Evolution</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 6</td>
<td>Second Generation Bioenergy Research – Integrated biorefinery process</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 6</td>
<td>Special topic – structure dynamics-guided enzyme improvement</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>Week 6</td>
<td>Biodiesel – Processing Technology for FAME</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 7</td>
<td>Biodiesel – Metabolic Engineering of Feedstock</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 7</td>
<td>Special Topics on Sorghum and Energycane</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>Week 7</td>
<td>Third Generation Bioenergy – Hydrogen and Biological Processes for Hydrogen Production</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 8</td>
<td>Third Generation Bioenergy – Algae-based Hydrogen Production and Water Splitting</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 8</td>
<td>Special Topic: Third Generation Bioenergy – Algae and Microalgae for Biomass and Lipid</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>Week 8</td>
<td>Special Topic: Analytical Techniques for Bioenergy Research</td>
<td>Guest Speaker</td>
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<td>Spring Holiday</td>
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<td>Spring Holiday</td>
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<tr>
<td>Week 9</td>
<td>Third Generation Bioenergy – Algae and Hydrocarbon</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 9</td>
<td>Third Generation Bioenergy – Hydrocarbon and Hydrocarbon-like Molecules Third Generation</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 9</td>
<td>Bioenergy – Other Options</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 10</td>
<td>Microbe Fuel Cells and Other Aspects of Bioenergy</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 10</td>
<td>Mid-term Exam Preparation, Take Home Exam</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 10</td>
<td>Reading Day</td>
<td></td>
</tr>
<tr>
<td>Week 11</td>
<td>Introduction to Bioproducts and Byproducts for Biorefinery</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 11</td>
<td>Bioproducts like plastic and other polymers</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 11</td>
<td>Special Topic: Bioenergy: the Green Industry – Status and Future</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>Week 12</td>
<td>Reading Day, No Class, Prepare Presentations</td>
<td>JSY</td>
</tr>
<tr>
<td>Week 12</td>
<td>Special Topic: Intellectual Property and Commercialization</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>Week 12</td>
<td>Student Presentation on Special Topics (Topics includes Cellulosome, Bio-hydrogen, Carbon Balance, Net Energy Gain, Biorefinery, Algae, Energycane, hydrocarbon, diesel tree, and Others)</td>
<td></td>
</tr>
<tr>
<td>Week 13</td>
<td>Student Presentation on Special Topics</td>
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<tr>
<td>Week 14</td>
<td>Student Presentation on Special Topics</td>
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<tr>
<td>Week 15</td>
<td>Student Presentation on Special Topics</td>
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<tr>
<td>Week 15</td>
<td>Reading Day</td>
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</tr>
<tr>
<td>Week 15</td>
<td>Graduate Student Term Paper Due</td>
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**Americans with Disabilities Act (ADA) Policy Statement**
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**Academic Integrity Statement**
Aggie Honor Code “An Aggie does not lie, cheat, or steal or tolerate those who do.” Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit: [www.tamu.edu/aggiehonor/](http://www.tamu.edu/aggiehonor/)

**Class Attendance**: Students are expected to attend class unless satisfactory evidence is presented to substantiate the reason for absence [http://student-rules.tamu.edu/rule07](http://student-rules.tamu.edu/rule07)
26 October 2009

Dr. Charles Kenerley
Plant Pathology and Microbiology
Campus

Dear Chuck:

I have visited with Dr. Terry Gentry who has worked with Joshua Yuan relative to concerns about overlap between Dr. Gentry's course (Biofuels and the Environment) and Dr. Yuan's courses (Biotechnology for Biofuels and Bioproducts). We believe that the courses do not conflict and do not object to the proposed courses, BESC 357 and PLPA 657, individually or stacked.

Best regards,

Wayne Smith
Professor and Associate Head
1. This request is submitted by the Department of Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course: VTPP 610 Physiology I

3. Catalog course description (not to exceed 50 words): Introduction to physiology: cell physiology, cell signaling, cell cycle, body fluids, translocation of materials, membrane potentials, neurophysiology, autonomic nervous system, thermoregulation, cardiovascular, and muscle physiology

4. Prerequisite(s): Enrollment in MS/PhD program in Veterinary Physiology & Pharmacology - Instructor Approval

5. Is this a variable credit course? ☒ No

6. Is this a repeatable course? ☒ No
   If yes, this course may be taken _____ times.
   Will this course be repeated within the same semester? YES

7. This course will be:
   a. required for students enrolled in the following degree programs(s) (e.g., B.A. in history)
      MS, PhD in Biomedical Sciences Veterinary Physiology and Pharmacology
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      MS, PhD in Biomedical Sciences

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)

<table>
<thead>
<tr>
<th>Lect.</th>
<th>Lab</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin. Unit</th>
<th>Acad. Year</th>
<th>FICE Code</th>
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<td>5</td>
<td>2</td>
<td>0 6 1 0 PHYSIOLOGY</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Approval recommended by:

Glen A. Laine
Department Head - Type Name & Sign Date

Chair, College Review Committee Date

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 – 3/09
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course: VTPP 610 Physiology I

3. Catalog course description (not to exceed 50 words): Introduction to physiology: cell physiology, cell signaling, cell cycle, body fluids, translocation of materials, membrane potentials, neurophysiology, autonomic nervous system, thermoregulation, cardiovascular, and muscle physiology.

4. Prerequisite(s): Enrollment in MS/PhD program in Veterinary Physiology & Pharmacology - Instructor Approval

Cross-listed with:

Cross-listed courses require the signature of both department heads.

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 programs(s) (e.g., B.A. in history)
      MS, PhD in Biomedical Sciences Veterinary Physiology and Pharmacology
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      MS, PhD in Biomedical Sciences

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)
   VTPP 610 Physiology I

   Lect. Lab SCH CIP and Fund Code Admin. Unit Acad. Year FICE Code
   0 5 0 2 0 6 5 1 2 5 0 3 0 0 0 2 9 2 0 1 0 - 1 1 0 0 3 6 3 2

   Approval recommended by:
   Glen A. Laine
   Department Head - Type Name & Sign Date

   Janie Weeks
   Chair, College Review Committee Date

   Department Head - Type Name & Sign
   (if cross-listed course)
   Date

   Department Head - Type Name & Sign
   (if cross-listed course) Date

   Submitted to Coordinating Board by:
   Dean of College Date

   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.
Course Syllabus
Physiology I, VTPP 610, Fall 2010
Credit (5-2)6

Course Instructor            Tel               Email                        Office
Dr. Tim Cudd                862-1972           tcudd@cvm.tamu.edu           300I VMA
Dr. Cristine Heaps          458-0753           cheaps@cvm.tamu.edu          300B VMA
Dr. Randy Stewart           862-7764           rstewart@cvm.tamu.edu        326D VMA
Dr. Jeremy S. Wasser        862-4655           jwasser@cvm.tamu.edu         326I VMA
Dr. Shannon E. Wilson       862-1971           swilson@cvm.tamu.edu         105A Vivarium III, Bld 1020

Notes: Office hours are by appointment. Questions regarding specific material should be directed to the instructor responsible for that material. Questions concerning the laboratory or laboratory grades should be directed to Dr. Stewart. Questions regarding the overall course and overall course grade should be directed to the course coordinator, Dr. Cudd. Should an instructor not be immediately available to answer your questions, you are encouraged to contact them by email.

COURSE DESCRIPTION - PHYSIOLOGY LEARNING OBJECTIVES

The breadth of this course is the study of the function of the mammalian body from the molecular to the cellular to the organ system and finally to the whole body level of organization. At the end of this course you should be able to explain how the body functions and, if told of a specific defect in body function (acute renal failure for example), you should be able to explain the consequences of that defect on kidney function and on other organ system functions. The understanding of normal function is the basis for understanding abnormal function. Understanding normal and abnormal function is the basis for diagnosis and the institution of successful therapy. You need to know what is wrong, the consequences of the problem on related functions and how therapy will correct the problems while not creating negative consequences. Mastering this course will require you to study the material on several levels. The first level is the “parts” level. For each lesson, learn the names, details, figures, pathways and formulas to the level provided in the lecture. Second, learn the relationships of the components; be sure you know which component influences which component (which one is dependent). For example, a driver stops his/her car by stepping on the brake pedal which increases the hydraulic fluid pressure which forces the brake pads against the brake rotors which stops the car. If you did not know anything about brakes or how to drive a car and you casually looked at a schematic diagram of a brake system you might mistakenly think that the brake pedal causes the driver’s foot to move towards the floorboard, rather the opposite. Don’t laugh, if you were not familiar with cars and this relationship and had to learn this arrangement through texts and lectures along with a lot of other new and foreign stuff at the same time (think vet school) you might make this type of mistake in a moment of haste, during an exam for example. And finally, you will need to think about how more removed systems are affected by changes in the system/component under consideration. For example, kidney malfunction may cause changes in hydration, electrolyte composition of the blood, nutritional requirements, appetite, bone strength, the ability of the blood to carry oxygen and other functions. With each lesson, ask yourself what else will be affected by changes in the function under consideration and follow each change/influence as far as it leads.

The course is designed to provide the student with the minimum required background in mammalian function. The required reading is designed to provide the student with the minimum reading assignment necessary to achieve this end. That said, students have different backgrounds and different optimal learning strategies. Therefore, what is necessary and sufficient in terms of readings that will lead to
success in this course will vary somewhat among students. For example, in past years successful approaches have ranged from reading nothing outside of handouts and lecture notes (the rare student) to reading extensively from unassigned texts (rare as well, most fall in between). You must take the responsibility to find an approach that is effective for you.

**Why do we teach this way?** In this course, we present the principles of mammalian physiology for each organ system (how they work in health) and the interactions between organ systems. Mammals are complex organisms. Any component, process or combination of components or processes can go wrong and can malfunction to a variable extent. There isn’t time in your lifetime to catalog all possible problems and all possible combinations of presenting symptoms, abnormalities, and all possible responses to therapy. Instead, you must learn how each component works alone and in symphony with all components and how to utilize this knowledge to reason through all possible presentations and responses to dysfunction and therapy. If you understand the principles of normal physiological function, then you can predict the repercussions of abnormal function. This will be what you will do as a clinician to make diagnoses and to appropriately guide therapy. Responses to therapy are not always predictable so you must be able to continuously reassess function and dysfunction. An understanding of physiology is fundamental to the understanding of the practice of veterinary medicine.

**Practical advice:** 1) go to class, 2) study the lesson as soon as you can after it is delivered, 3) do not dismiss any component of the lesson (assume it is important), 4) for each organ system, create a list of important concepts, just a few words or a phrase for each, that you can utilize to quiz yourself (by the time of the exam, you should be able to explain each concept from this prompt sheet), 5) take responsibility for learning and understanding the material completely. Taking responsibility means that you will endeavor to learn the material at all levels; know the parts, their relationships, how (and if) each component influences other components/systems. Be inquisitive and skeptical of the completeness of your depth of understanding. We try to make each lecture a cohesive lesson or small group of lessons. Each lesson has been stripped to the essentials. Therefore, you should not attempt to further reduce what you are responsible for from what is presented in class. Be responsible for developing an appropriately in-depth understanding of each lesson. Utilize the required reading to complete and test your understanding of the lecture material. When your understanding is insufficient (everything does not yet make complete sense, be skeptical here), take the initiative to complete your understanding utilizing other resources whenever necessary. And finally, each lesson is designed to prepare you for the tasks ahead, to give you the necessary background to master the rest of the course, to be able to master future courses and finally, to prepare you to be a veterinary clinician qualified to handle the spectrum of disorders you will encounter in practice. And finally, for each lesson, be able to identify the relevance to veterinary medicine.

**PREREQUISITES:** Enrollment in MS (Thesis) or PhD program in Veterinary Physiology and Pharmacology. Instructor approval.

**Meeting times**

<table>
<thead>
<tr>
<th></th>
<th>M/W/F 10:00 am, T/Th 9:00 am</th>
<th>201 VMS</th>
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</thead>
<tbody>
<tr>
<td>Lecture</td>
<td></td>
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<tr>
<td>Lab A</td>
<td>T 10:00 am</td>
<td>316 VMS</td>
</tr>
<tr>
<td>Lab B</td>
<td>Th 10:00 am</td>
<td>316 VMS</td>
</tr>
</tbody>
</table>
**Required texts and materials**

*Lippincott’s Illustrated Reviews: Biochemistry*, Champe, Harvey, Ferrier, 4th ed
*Human Physiology*, L Sherwood, 7th ed, Brooks/Cole

Lecture and laboratory content, class notes, lab manual and distributed reading materials.

*Berne and Levy is the authoritative resource*

**Examinations**

- Examinations will cover laboratory and lecture content, are comprehensive and will occur during scheduled class time (except for the final).
- Each examination will consist of 20 to 30 multiple choice questions except that the final will consist of roughly twice as many multiple choice questions. The number of questions on a particular exam that will test learning in a particular content area will be roughly proportionate to the amount of lecture time dedicated to that content area (review and laboratory questions will be excluded from this general rule).
- Questions requiring significant calculations will not be asked on the four “in class” examinations but will be asked on the final exam. Quizzes will be given during the laboratory period that will test concepts that require calculations. The quiz average will account for 10% of the final grade.
- Following each examination, a review will be held where students will have an opportunity to review the exam questions and their responses. The time and location of the exam reviews are listed below. These will be the only reviews offered unless you have an excused absence for that day.
- During exam reviews, students may only write on paper that is provided by the instructor for the purpose of the review. Students may take notes on learning issues that they would like to remember to study following the exam review. Students may not record exam questions or catalog the nature/subjects of the questions. Questions will be fielded during the review only for the purpose of improving student understanding; students wishing to challenge questions may do so but only in writing. **No challenges will be considered unless they are signed.** Please endeavor to interact with faculty whether verbally, by email or by written challenge with courtesy. At the end of the review, all notes and challenges must be signed and submitted to the instructor. Notes and challenges will be returned to the student after review by the faculty. The faculty member responsible for teaching the tested concept in question will rule on the challenge and will inform the student who authored the challenge of the outcome. In the case of a challenge that results in an alteration in grading, all examinations will be rescored electronically and the entire class will be notified of the change in grading. Students must return the examinations after the review. The rationale: 1) utilizing questions that are known to students prevents the testing of a student’s ability to apply learned physiological concepts to solve a novel problem (evidence of comprehensive understanding of the tested concept) and is unfair to students who may not have been exposed to that question before the exam, 2) retaining and reusing questions permits the faculty to improve examination quality through a process of continuous review and refinement based on student performance and comments during reviews, 3) having to write entirely new exams each year inevitably, over time, would result in the creation of questions that are less straightforward or that explore less central aspects of physiology. Students are expected to honor the confidentiality of the questions and deliberate violation of exam confidentiality will be considered a violation of the honor code.
- Unexcused absence from an exam or laboratory quiz will result in a grade of 0%. In the event that a student is absent from a scheduled exam or quiz and the absence is officially excused (this will require documentation from the dean’s office), then the student will be permitted to take a makeup exam at a later date. The date, time and format of the makeup exam will be at the discretion of the instructor.
• The dates of scheduled exams will not be changed except under extraordinary circumstances and then only at the discretion of the instructor.

**Posting of Grades**
Grades will be posted on WebCT. Final exam grades will not be available until after the completion of all final exams.

**Class Communication and E-mail**
At times during the semester, it may be necessary for the faculty to communicate course information to students. This will be done in class or by email so please come to class and please read your email. Either mechanism will be considered an official class communications.

**Exams/Credit Distribution**

<table>
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<tr>
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<tr>
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<td>90-100</td>
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<td>80-89.9</td>
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<td>70-79.9</td>
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<td>65-69.9</td>
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<td>&lt; 65</td>
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<tr>
<td>Exam 1</td>
<td>A</td>
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<td>Exam 2</td>
<td>B</td>
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<td>Exam 3</td>
<td>C</td>
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<td>Exam 4</td>
<td>D</td>
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<td>Final Exam</td>
<td>F</td>
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<td>Laboratory Homework</td>
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<td>Laboratory Quizzes</td>
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<tr>
<td>In Class Quizzes</td>
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<tr>
<td>Case project</td>
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<tr>
<td>Total</td>
<td>100%</td>
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</table>

Note: The instructor reserves the right to reduce a student’s final course average by up to 15% for committing behaviors that are discouraged under “Classroom and Laboratory Teaching Environment” (see below).

**Classroom and Laboratory Teaching Environment**
Students are expected to arrive to class on time, avoid distracting classmates through the creation of unnecessary noise (turn off and do not use cell phones during class) and to always interact with classmates, faculty and staff with courtesy. If you are unable to arrive on time then please do not enter the classroom late (do not attend class that day) as entering the classroom during class is disruptive. Failure to conduct oneself with professionalism and consideration for others can result in penalty in the form of a course grade reduction (see above under “Exam dates and credit distribution”) and or formal complaint being made to the Student Honor Code Council.

**Classroom Communication Concerns**
The university has established a formal process for the handling of student grievances associated with any course. If there are major concerns about the conduct of this course that cannot be resolved by meeting with the instructor, a Classroom Communication Concerns form available in the departmental office (Rm 332, VMA) should be completed and submitted to head of the Department of Veterinary Physiology and Pharmacology, Dr. Glen Laine.

**Attendance**
“The university views class attendance as an individual student responsibility. Students are expected to
attend class and to complete all assignments” (from the Texas A&M University Regulations). Make-up examinations will only be given for excused absences. Even if a student has an excused absence on the day of a lab, the lab homework assignment, due the following week, is not excused. The format, date and time of make-up examinations is at the instructor’s discretion – within university guidelines.

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“*An Aggie does not lie, cheat or steal, or tolerate those who do.*”
The following will appear on assignments and examinations:

“*On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work.*”

________________________
Signature of Student

This pledge is primarily meant to serve as a reminder that the College has an Honor Code. A student who does not sign the pledge will be asked to do so before the examination is graded. Absence of a signed pledge does not exempt an examination from coverage by the Honor Code.

**Course evaluation**
All students are requested to complete the CVM Course Evaluation form on the website near the end of the semester. Students will be notified in class and by email when the evaluation forms are to be completed.

**Note:**  Unforeseen circumstances during the semester may require an alteration in syllabus guidelines. Instructors may add, delete or modify the objectives and reading assignments distributed at the beginning of the semester. Any changes will be announced in class (an important reason to attend class and to arrive on time).
<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Lab</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Water, salts, proteins</td>
<td>Proteins, enzymes</td>
<td>Cell membrane, carrier proteins</td>
<td>Osmosis, specific gravity, tonicity</td>
<td>Phys data</td>
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<tr>
<td>2</td>
<td>Internal environment, body fluid compartments</td>
<td>Membrane potential</td>
<td>Epithelial transport 2nd messengers</td>
<td>Communications between cells</td>
<td>CNS organization CSF, BBB, Case 1</td>
<td>Collection of blood/plasma</td>
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<td>3</td>
<td>Action potential, neuronal conduction, excitability</td>
<td>Synaptic transmission</td>
<td>Sensory, pain, pain modification</td>
<td>Motor,</td>
<td>Spinal reflexes</td>
<td>Excitable cells</td>
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<tr>
<td>4</td>
<td>EXAM 1</td>
<td>ANS</td>
<td>ANS</td>
<td>Temp reg</td>
<td>Case 2</td>
<td>Properties of blood and plasma</td>
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<td>Temp reg</td>
<td>Skin</td>
<td>Skeletal muscle</td>
<td>Skeletal muscle</td>
<td>Skeletal muscle</td>
<td>Neuro</td>
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<td>Smooth muscle (Yom Kippur reschedule 10/1)</td>
<td>Smooth muscle</td>
<td>Vision</td>
<td>Vision</td>
<td>Case 3</td>
<td>Muscle</td>
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<tr>
<td>7</td>
<td>EXAM 2</td>
<td>Hearing</td>
<td>Olfaction gustation</td>
<td>Cardiac Cycle</td>
<td>Cardiac depol</td>
<td>Plumbers guide</td>
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<td>8</td>
<td>Cardiac electrical cycle</td>
<td>Interpretation of ECGs</td>
<td>Cardiac myocyte biology 1</td>
<td>Cardiac myocyte biology 2</td>
<td>Cardiac mechanics Case 3 con't</td>
<td>Turtle heart</td>
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<td>9</td>
<td>Cardiac rate and rhythm</td>
<td>Heart sounds and and auscultion</td>
<td>Con't</td>
<td>Principles of flow, local mechanisms</td>
<td>Arterial structure, function, Case 4</td>
<td>ECG</td>
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<tr>
<td>10</td>
<td>EXAM 3</td>
<td>Arterial structure and function</td>
<td>Cell signaling</td>
<td>Cell signaling</td>
<td>Capillaries</td>
<td>Arrhythmias</td>
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<td>11</td>
<td>Venous and lymphatics</td>
<td>Hemostasis</td>
<td>Pressure regulation</td>
<td>Pressure regulation</td>
<td>Exam rev 1 pm</td>
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<tr>
<td>12</td>
<td>Heart failure</td>
<td>Interstitial fluid vol regulation</td>
<td>Endocrine intro</td>
<td>Calcium phosphate regulation</td>
<td>Calcium phosphate regulation, Case 5</td>
<td>Heart sounds</td>
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<td>EXAM 4</td>
<td>Intermediary metabolism</td>
<td>Lipid metabolism</td>
<td>Intermediary metabolism</td>
<td>Calcium phos</td>
<td>Integrated CV</td>
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<td>14</td>
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<td>Hypothalamus pituitary</td>
<td>Hypothalamus pituitary</td>
<td>Hypothalamus pituitary</td>
<td>Thanksgiving</td>
<td>Glucose homeostasis</td>
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<td>Thyroid Case 5 con't</td>
<td>Adrenal</td>
<td>Adrenal, steroidogenesis, AA metabolism</td>
<td>Integration of salt, water regulation</td>
<td>Fetal and neonatal physiology</td>
<td>Rat adrenal</td>
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</table>
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course: VTPP 612 Physiology II

3. Catalog course description (not to exceed 50 words): Blood and lymph, respiration, renal physiology, and acid-based balance, gastrointestinal physiology, metabolism, endocrinology, and reproduction.

4. Prerequisite(s): Enrollment in MS/PhD program in Veterinary Physiology and Pharmacology - Instructor Approval.

Cross-listed with:

Cross-listed courses require the signature of both department heads.

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)
      MS, PhD in Biomedical Sciences - Veterinary Physiology and Pharmacology
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      MS, PhD in Biomedical Sciences

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) | V | T | P | P | 6 | 1 | 2 | PHYSIOLOGY I I
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<th>Admin. Unit</th>
<th>Acad. Year</th>
<th>FICE Code</th>
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Approval recommended by:
Glen A. Laine
Department Head - Type Name & Sign Date

Jane Walsh
Chair, College Review Committee Date

Dean of College
Kenita Rogers Date

Submitted to Coordinating Board by:

Associate Director, Curricular Services
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
- Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course: VTPP 612 Physiology II

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4. Prerequisite(s): Enrollment in MS/PhD program in Veterinary Physiology and Pharmacology – Instructor Approval.
   Cross-listed with:
   Cross-listed courses require the signature of both department heads.

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)
      MS, PhD in Biomedical Sciences - Veterinary Physiology and Pharmacology
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      MS, PhD in Biomedical Sciences

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) | Lect. | Lab | SChL | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code
---|---|---|---|---|---|---|---|---|---
V | T | P | P | 6 | 1 | 2 | PHYSIOLOGY | Y | I | I

Approval recommended by:
Glen A. Laine
Department Head - Type Name & Sign
Date 10-28-09

Chair, College Review Committee
Jane Walsh
Date 11-20-07

Dean of College
David W. Reed
Date DEC 3 2009

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

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Curricular Services – 3/09
Course Syllabus  
**Physiology II, VTPP 612, Spring 2011**  
Credit (5-2)6

<table>
<thead>
<tr>
<th>Course Instructor</th>
<th>Tel</th>
<th>Email</th>
<th>Office</th>
</tr>
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<tbody>
<tr>
<td>Dr. Tim Cudd</td>
<td>862-1972</td>
<td><a href="mailto:tcudd@cvm.tamu.edu">tcudd@cvm.tamu.edu</a></td>
<td>300I VMA</td>
</tr>
<tr>
<td>Dr. Katrin Hinrichs</td>
<td>862-1338</td>
<td><a href="mailto:khinrichs@cvm.tamu.edu">khinrichs@cvm.tamu.edu</a></td>
<td>326G VMA</td>
</tr>
<tr>
<td>Dr. Charles Long</td>
<td>845-2331</td>
<td><a href="mailto:clong@cvm.tamu.edu">clong@cvm.tamu.edu</a></td>
<td>121 RSL</td>
</tr>
<tr>
<td>Dr. Randy Stewart</td>
<td>862-7764</td>
<td><a href="mailto:rstewart@cvm.tamu.edu">rstewart@cvm.tamu.edu</a></td>
<td>300H VMA</td>
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<tr>
<td>Dr. Jeremy S. Wasser</td>
<td>862-4655</td>
<td><a href="mailto:jwasser@cvm.tamu.edu">jwasser@cvm.tamu.edu</a></td>
<td>326l VMA</td>
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<tr>
<td>Dr. Shannon Wilson</td>
<td>862-1971</td>
<td><a href="mailto:swilson@cvm.tamu.edu">swilson@cvm.tamu.edu</a></td>
<td>Vivarium III</td>
</tr>
</tbody>
</table>

**Notes:** Office hours are by appointment. Questions regarding specific material or examination questions should be directed to the instructor responsible for that material. Questions concerning the laboratory or laboratory grades should be directed to Dr. Stewart. Questions regarding the overall course and overall course grade should be directed to the course coordinator, Dr. Cudd. Should an instructor not be immediately available to answer your questions, you are encouraged to contact them by email.

**COURSE DESCRIPTION - PHYSIOLOGY LEARNING OBJECTIVES**

The breadth of this course is the study of the function of the mammalian body from the molecular to the cellular to the organ system and finally to the whole body level of organization. At the end of this course you should be able to explain how the body functions and, if told of a specific defect in body function (acute renal failure for example), you should be able to explain the consequences of that defect on kidney function and on our organ system functions. The understanding of normal function is the basis for understanding abnormal function. Understanding normal and abnormal function is the basis for the institution of successful therapy. You need to know what is wrong, the consequences of the problem on related functions and how therapy will correct the problems while not creating negative consequences. Mastering this course will require you to study the material on several levels. The first level is the “parts” level. For each lesson, learn the names, details, figures, pathways and formulas to the level provided in the lecture. Second, learn the relationships of the components; be sure you know which component influences which component (which one is dependent). For example, a driver stops his/her car by stepping on the brake pedal which increases the hydraulic fluid pressure which forces the brake pads against the brake rotors which stops the car. The brake pedal does not cause the driver’s foot to move towards the floorboard, rather the opposite. Don’t laugh, if you were not familiar with cars and this relationship and had to learn this arrangement through texts and lectures along with a lot of other new and foreign stuff at the same time (think vet school) you might make this type of mistake in a moment of haste, during an exam for example. And finally, you will need to think about how more removed systems are affected by changes in the system/component under consideration. For example, kidney malfunction may cause changes in hydration, electrolyte composition of the blood, nutritional requirements, appetite, bone strength, the ability of the blood to carry oxygen and other functions. With each lesson, ask yourself what else will be affected by changes in the function under consideration and follow each change/influence as far as it leads.

The course is designed to provide the student with the minimum required background in mammalian function. The required reading is designed to provide the student with the minimum reading assignment necessary to achieve this end. That said, students have different backgrounds and different optimal learning strategies. Therefore, what is necessary and sufficient in terms of readings that will lead to success in this course will vary somewhat among students. For example, in past years successful approaches have ranged from reading nothing outside of handouts and lecture notes (the rare student) to reading extensively from unassigned texts (rare as well, most fall in between). You must take the responsibility to find an approach that is effective for you.
Why do we teach this way? In this course, we present the principles of mammalian physiology for each organ system (how they work in health) and the interactions between organ systems. Mammals are complex organisms. Any component, process or combination of components or processes can go wrong and can malfunction to a variable extent. There isn’t time in your lifetime to catalog all possible problems and all possible combinations of presenting symptoms, abnormalities, and all possible responses to therapy. Instead, you must learn how each component works alone and in symphony with all components and how to utilize this knowledge to reason through all possible presentations and responses to dysfunction and therapy. If you understand the principles of normal physiological function, then you can predict the repercussions of abnormal function. This will be what you will do as a clinician to make diagnoses and to appropriately guide therapy. Responses to therapy are not always predictable so you must be able to continuously reassess function and dysfunction. An understanding of physiology is fundamental to the understanding of the practice of veterinary medicine.

Practical advice: 1) go to class, 2) study the lesson as soon as you can after it is delivered, 3) do not dismiss any component of the lesson (assume it is important), 4) take responsibility for learning and understanding the material completely. Taking responsibility means that you will endeavor to learn the material at all levels; know the parts, their relationships, how (and if) each component influences other components/systems. Be inquisitive and skeptical of the completeness of your depth of understanding. We try to make each lecture a cohesive lesson or small group of lessons. Each lesson has been stripped to the essentials. Therefore, you should not attempt to further reduce what you are responsible for from what is presented in class. Be responsible for developing an appropriately in-depth understanding of each lesson. Utilize the required reading to complete and test your understanding of the lecture material. When your understanding is insufficient (everything does not yet make complete sense, be skeptical here), take the initiative to complete your understanding utilizing other resources whenever necessary. And finally, each lesson is designed to prepare you for the tasks ahead, to give you the necessary background to master the rest of the course, to be able to master future courses and finally, to prepare you to be a veterinary clinician qualified to handle the spectrum of disorders you will encounter in practice. For each lesson, be able to identify the relevance to veterinary medicine.

PREREQUISITES: Enrollment in MS (Thesis) or PhD program in Veterinary Physiology and Pharmacology. Instructor Approval.

Meeting times

<table>
<thead>
<tr>
<th>Meeting</th>
<th>MTWThF</th>
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<th>201 VMS</th>
</tr>
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<tr>
<td>Lecture</td>
<td>T or Th</td>
<td>10:00 am</td>
<td>316 VMS</td>
</tr>
</tbody>
</table>

Required texts and materials (authoritative resource)

- *Lippincott’s Illustrated Reviews: Biochemistry*, Champe, Harvey, Ferrier, 3rd ed, Lippincott Williams &Wilkins, 0-7817-2265-9
- *Respiration Physiology: The Essentials*, 7th Ed., West, Williams and Wilkins
- Lecture and laboratory content, class notes, lab manual and distributed reading materials.

Examinations

- Examinations will cover laboratory and lecture content, are comprehensive (both semesters) and will occur during scheduled class time (except for the final).
- Each examination will consist of 20 to 30 multiple choice questions except that the final will consist of
roughly twice as many multiple choice questions. The number of questions on a particular exam that will test learning in a particular content area will be roughly proportionate to the amount of lecture time dedicated to that content area (review and laboratory questions will be excepted from this general rule).

- Examinations are not returned. The rationale: 1) retaining and reusing questions permits the faculty to improve examination quality through a process of continuous review and refinement based on student performance and comments during reviews, 2) utilizing questions that are known to students prevents the testing of a student’s ability to apply learned physiological concepts to solve a novel problem (evidence of comprehensive understanding of the tested concept) and is unfair to students who may not have been exposed to that question before the exam, 3) having to write entirely new exams each year inevitably, over time, would result in the creation of questions that are less straightforward or that explore less central aspects of physiology.

- Students are expected to honor the confidentiality of the questions and deliberate violation of exam confidentiality will be considered a violation of the honor code.

- Following each examination, a review will be held where students will have an opportunity to review the exam questions and their responses. During exam reviews, students may only write on paper that is provided by the instructor for the purpose of the review. Questions will be fielded during the review only for the purpose of improving student understanding; students wishing to challenge questions may do so but only in writing. No challenges will be considered unless they are signed. Endeavor to interact with faculty whether verbally, by email or by written challenge with courtesy. At the end of the review, all notes and challenges must be signed and submitted to the instructor. The faculty member responsible for teaching the tested concept in question will rule on the challenge and will inform the student who authored the challenge of the outcome. In the case of a challenge that results in an alteration in grading, all examinations will be rescored electronically and the entire class will be notified of the change in grading.

- Unexcused absence from an exam or laboratory quiz will result in a grade of 0%. In the event that a student is absent from a scheduled exam or quiz and the absence is officially excused (this will require documentation from the dean’s office), then the student will be permitted to take a makeup exam at a later date. The date, time and format of the makeup exam will be at the discretion of the instructor.

- The dates of scheduled exams will not be changed except under extraordinary circumstances and then only at the discretion of the instructor.

**Posting of Grades**
Grades will be posted on WebCT. Final exam grades will not be available until after the completion of all final exams.

**Class Communication and E-mail**
At times during the semester, it may be necessary for the faculty to communicate course information to students. This will be done in class or by email so please come to class and please read your email. Either mechanism will be considered an official class communications.
Exams/Credit Distribution

<table>
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<td>Exam 3</td>
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<td>Final Exam</td>
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<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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Note: The instructor reserves the right to reduce a student’s final course average by up to 10% for committing behaviors that are discouraged under “Classroom and Laboratory Teaching Environment” (see below).

Classroom and Laboratory Teaching Environment

It is the instructor’s obligation to maintain a teaching environment where students are free from distractions. Students are expected to arrive to class on time, avoid distracting classmates through the creation of unnecessary noise and to always interact with classmates, faculty and staff with tolerance and graciousness. If you are unable to arrive on time then please do not enter the classroom late (do not attend class that day) as entering the classroom during class is disruptive to all those who found their way to class on time. Failure to conduct oneself with professionalism and consideration for others can result in penalty in the form of a course grade reduction (see above under “Exam dates and credit distribution”) and or formal complaint being made to the Student Honor Code Council.

Classroom Communication Concerns

The university has established a formal process for the handling of student grievances associated with any course. If there are major concerns about the conduct of this course that cannot be resolved by meeting with the instructor, a Classroom Communication Concerns form available in the departmental office (Rm 332, VMA) should be completed and submitted to head of the Department of Veterinary Physiology and Pharmacology, Dr. Glen Laine.

Attendance

“The university views class attendance as an individual student responsibility. Students are expected to attend class and to complete all assignments” (from the Texas A&M University Regulations). Make-up examinations will only be given for excused absences. Even if a student has an excused absence on the day of a lab, the lab homework assignment, due the following week, is not excused. The format, date and time of make-up examinations is at the instructor’s discretion – within university guidelines.

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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu).
Academic Integrity Statement and Policy  (Aggie Honor Code/Honor Council Rules and Procedures are found on the web @ http://www.tamu.edu/aggiehonor.

“An Aggie does not lie, cheat or steal, or tolerate those who do.”
The following will appear on assignments and examinations:
“On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work.”

______________________________
Signature of Student

This pledge is primarily meant to serve as a reminder that the College has an Honor Code. A student who does not sign the pledge will be asked to do so before the examination is graded. Absence of a signed pledge does not exempt an examination from coverage by the Honor Code.

Course evaluation
All students are requested to complete the CVM Course Evaluation form on the website near the end of the semester. Students will be notified in class and by email when the evaluation forms are to be completed.

Note: Unforeseen circumstances during the semester may require an alteration in syllabus guidelines. Instructors may add, delete or modify the objectives and reading assignments distributed at the beginning of the semester. Any changes will be announced at the beginning of class (an important reason to attend class and to arrive on time).
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**VTIP 612 - Schedule of Topics**

86 of 130 B
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course: VTPP 628 Pharmacology I

3. Catalog course description (not to exceed 50 words): Pharmacokinetics, pharmacodynamics, CNS pharmacology, autonomic pharmacology, antineoplastic agents, immunopharmacology, recombinant products, fluid and electrolyte therapy, diuretics, pharmacology of the integument.

4. Prerequisite(s): Instructor approval.

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)

   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)

   MS, PhD in Biomedical Sciences

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)

   V T P P 6 2 8 P H A R M A C O L O G Y I

   Lect. Lab SCH CIP and Fund Code Admin. Unit Acad. Year FICE Code
   0 4 0 2 0 5 5 1 2 5 0 3 0 0 2 2 9 2 0 1 0 - 1 1 0 0 3 6 3 2

   Approval recommended by:

   Glen A. Laine
   Department Head - Type Name & Sign Date

   Department Head - Type Name & Sign Date

   (if cross-listed course)  

   Submitted to Coordinating Board by:

   Associate Director, Curricular Services

   Jane Welsh, Chair, College Review Committee
   Date

   Dean of College
   Date

   Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu
Curricular Services – 3/09
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of
   Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course:
   VTPP 628 Pharmacology I

3. Catalog course description (not to exceed 50 words):
   Pharmacokinetics, pharmacodynamics, CNS pharmacology, autonomic
   pharmacology, antineoplastic agents, immunopharmacology, recombinant products, fluid and electrolyte therapy, diuretics, pharmacology of
   the integument.

4. Prerequisite(s):
   Instructor approval.

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)
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      MS, PhD in Biomedical Sciences

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)
   VTPP 624  Pharmacology I
   Lec.  Lab  SCH  CIP and Fund Code  Admin. Unit  Acad. Year  FICE Code
   0  4  0  2  0  5  1  2  5  0  3  0  0  2  2  9  2  0  1  0  -  1  1  0  0  3  6  3  2

   Approval recommended by:
   Glen A. Laine
   Department Head - Type Name & Sign Date
   Chair, College Review Committee Date
   Dean of College Date
   David W. Reed
   Date
   Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Curricular Services – 3/09
COURSE SYLLABUS
Veterinary Pharmacology (VTPP) 628
Fall Semester 2010

Lectures: Mon 10 - 10:50 AM
Wed 9 - 10:50 AM
Fri 10 - 10:50 AM
Room 5 VTH

Laboratory: Mon. 1 - 3 PM (Groups B, D)
Mon. 3 - 5 PM (Groups A, C)
Room 316, VMS

Credit Hours: 5

Course Description: Pharmacokinetics, pharmacodynamics, CNS pharmacology, autonomic pharmacology, antineoplastic agents, immunopharmacology, recombinant products, fluid and electrolyte therapy, diuretics, pharmacology of the integument.

Prerequisites: Instructor approval

Required:
VTPP 624 Class notes – AVAILABLE IN MEDIA RESOURCES
Veterinary Pharmacology and Therapeutics, 9th edition; Jim E. Riviere and Mark G. Papich, eds;
USP Monograph – Anti-inflammatories – AVAILABLE IN MEDIA RESOURCES
USB Flash Drive – for saving lab assignments

Resources:
Blackboard Vista (WebCT) site. Additional instructions will be provided.
Goodman and Gilman’s The Pharmacological Basis of Therapeutics, 11th edition; L.L. Brunton, J.S.
(available online via the Medical Sciences Library)
Medical Mathematics and Dosage Calculations for Veterinary Professionals, 2nd Edition; Robert
Louis Bill, 2009

Instructors:
<table>
<thead>
<tr>
<th>Name</th>
<th>Dept.</th>
<th>Office</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Dr. Maya Scott</td>
<td>VTPP</td>
<td>326E VMA</td>
<td>8-3510</td>
</tr>
<tr>
<td>Dr. Virginia Fajt</td>
<td>VTPP</td>
<td>326C VMA</td>
<td>5-7299</td>
</tr>
<tr>
<td>Dr. S.M. Hartsfield</td>
<td>VSAM</td>
<td>2034 SAH</td>
<td>5-9053</td>
</tr>
<tr>
<td>Dr. John Stallone</td>
<td>VTPP</td>
<td>307D VMS</td>
<td>2-3065</td>
</tr>
<tr>
<td>Dr. M.A. Crist</td>
<td>VSAM</td>
<td>2054 SAH</td>
<td>5-9030</td>
</tr>
</tbody>
</table>

*Course coordinator. Please feel free to contact Dr. Scott at her office in person, by phone or by e-
mail (mscott@cvm.tamu.edu) as needed. Ms. Cathy Green (5-7261, Rm 332, VMA Bldg.) is also
available to take phone numbers and messages.

If you have questions pertaining to the material presented in lecture, please direct your questions to
the appropriate instructor.
# Calendar of activities:

| Week 1 | Learning Goals related to the dimensions of “Foundational Knowledge” and “Integration”  
| INTRODUCTORY SECTION  
| Introduction to class and syllabus  
| Introduction to Pharmacology  
| How Drugs Enter and Leave the Body  
| Lab: Pharmacy Concepts and Calculations Lab |
| Week 2 | How Drugs Enter and Leave the Body  
| How Drugs Work  
| Lab: Team-building |
| Week 3 | Principles of Drug Selection  
| QUIZ 1  
| Adverse Reactions/Drug Toxicities  
| Learning Goals related to the dimensions of “Foundational Knowledge,” “Application,” and “Human Dimension”  
| SECTION I. ALTERATIONS OF PHYSIOLOGY  
| Antineoplastics  
| Lab: PK Exercises |
| Week 4 | Antineoplastics  
| NSAIDs  
| Lab: Antineoplastic Cases  
| EXAM I |
| Week 5 | NSAIDs  
| Peripheral Nervous System  
| Lab: NSAIDs Cases |
| Week 6 | Peripheral Nervous System  
| QUIZ 2  
| Central Nervous System  
| Lab: TVMA Peer Assistance Program or Euthanasia |
| Week 7 | EXAM II  
| Central Nervous System  
| Lab: Euthanasia or TVMA Peer Assistance Program |
| Week 8 | Principles of Anesthesia  
| Inhalant Anesthesia  
| Barbiturates  
| Lab: Strange Sleep Video |
| Week 9 | Dissociative Anesthetics  
| Propofol/Etomidate  
| Guaifenesin  
| Diuretics  
| Lab: Anesthetic Equipment |
| Week 10 | Diuretics/Cardiovascular  
Cardiovascular  
Lab: Pharmacology Case Based Lab I |
|--------|---------------------------------------------------------------------|
| Week 11| EXAM III  
Cardiovascular  
Fluid Therapy  
Lab: Pharmacology Case Based Lab II |
| Week 12| Fluid Therapy  
QUIZ 3  
Urinary Tract  
Respiratory  
Lab: Cardiovascular/Fluid Therapy Cases I |
| Week 13| Immune system: Glucocorticoids  
Immune system: other drugs  
QUIZ 4  
Lab: Cardiovascular/Fluid Therapy Cases II |
| Week 14| Pain Management  
Alternative and Complementary Medicine  
Lab: Alternative and Complementary Medicine  
Thanksgiving Holiday |
| Week 15| Musculoskeletal  
Gastrointestinal  
Lab: Growth Promotants |
| Week 16| FINAL EXAM |

**Student Responsibilities:**

**Preparation for Class:**
All reading from text or notes should be completed before class time on the day a given topic will be discussed. Class note information, including reading guides, will be the basis for participatory classroom discussion. Focus your initial efforts on understanding the characteristics of a prototype drug in each class. Additional drugs of importance in a given area will be highlighted in objectives for that class period.

**Laboratories:**
Please be sure you are prepared for each laboratory period by reading the information provided in the laboratory section.
Lab attire: For your safety, always wear close-toed shoes to lab and wear a lab coat for labs where you will be handling dogs.

**Grading for labs:**
1. In lab you will work in assigned teams. Each lab will be graded, rather than just receiving points for completing the assignment. Since many of the projects will be team-based, we will use the following method for assigning individual grades:
The instructors will assign a grade to the assignment. All team members who participated in the assignment will complete a peer evaluation indicating the percent of effort applied by each team member on the assignment. The assignment grade will be adjusted for each student according to the peer evaluation.

2. Further information on this process will be handed out during the first team-based lab.

**Blackboard Vista (WebCT):**
Course information will be posted to Blackboard Vista. Students are expected to check Blackboard Vista postings regularly.

**Electronic devices in class:**
Laptop computers, cell phones, personal communication devices, personal digital assistants, MP3 players, and all other electronic devices (with the exception of dedicated calculators) should be turned off and in your backpacks or under your desks at all times during class. Research has shown that their use is extremely distracting to you and your classmates. Electronic devices found in use during class will be confiscated.

**Hats and caps:**
We request that hats and caps not be worn during pharmacology lecture or lab. Please remove hats and caps prior to the start of class.

**Exam Schedule/estimated:**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
<th>Estimate of Information Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Friday, September 18</td>
<td>August 24 – September 14</td>
</tr>
<tr>
<td>#2</td>
<td>Monday, October 5</td>
<td>September 16 – October 1</td>
</tr>
<tr>
<td>#3</td>
<td>Monday, November 2</td>
<td>October 7 – October 26</td>
</tr>
<tr>
<td>Final</td>
<td>Thursday, December 10</td>
<td>October 28 – December 4 &amp; August 24 – September 9</td>
</tr>
<tr>
<td></td>
<td>8 AM</td>
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</tbody>
</table>

**Quiz Schedule:**

<table>
<thead>
<tr>
<th>Quiz</th>
<th>Date</th>
<th>Estimate of Information Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Monday, September 7</td>
<td>ADME and PK/PD</td>
</tr>
<tr>
<td>#2</td>
<td>Monday, September 28</td>
<td>NSAIDs and Autonomic Nervous System Principles</td>
</tr>
<tr>
<td>#3</td>
<td>Monday, November 9</td>
<td>Cardiovascular (excluding Fluid Therapy)</td>
</tr>
<tr>
<td>#4</td>
<td>Friday, November 20</td>
<td>Glucocorticoids</td>
</tr>
</tbody>
</table>

**Grade Composition:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>110 pts</td>
<td>562-625 points = A</td>
</tr>
<tr>
<td>Exam 2</td>
<td>80 pts</td>
<td>500-561 points = B</td>
</tr>
<tr>
<td>Exam 3</td>
<td>100 pts</td>
<td>437-499 points = C</td>
</tr>
<tr>
<td>Final Exam</td>
<td>200 pts</td>
<td>406-436 points = D</td>
</tr>
<tr>
<td>Quizzes (announced)</td>
<td>40 pts</td>
<td>0-405 points = F</td>
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<tr>
<td>Exercises (in-class exercises, clicker questions, pop quizzes, etc)</td>
<td>50 pts</td>
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<tr>
<td>Lab write-ups (3pts/lab)</td>
<td>45 pts</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>625 pts</td>
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</tbody>
</table>
[To assist you in allocating study time, we have determined that each lecture will be worth approximately 7 points on exams and each lab will be worth approximately 5 points.]

1. If, at any point in the course, a student’s average is below 72%, we strongly encourage the student to speak with the course coordinator and other instructors to seek assistance in mastering course concepts. Waiting until late in the semester to seek assistance often does not yield the mastery required to be successful in the course.

2. 406.25 out of 625 points will be required to pass the course with a grade of “D”. A student receiving fewer than 406.25 points will be assigned a grade of “F” for VTPP 628.

**Exam Policies:**

1. Learning objectives and reading guides for the course should be taken as the best guide for focusing your study efforts. Please do not try to indiscriminately memorize all the information in the class notes or presented on slides in class. Some information is provided as a resource and is not intended for memorization. Using the MEDIC checklist as a study aid will go a long way toward preparing you to make clinical decisions about pharmaceutical products.

2. Please note: Responsibility for drug names will be limited to generic, not proprietary, names unless you are told otherwise by a given instructor. For example, the drug xylazine (generic name) is marketed under several proprietary names including Rompun®, Gemini®, AnaSed®, and Sedazine®. Students are only responsible for the generic name unless the instructor indicates otherwise.

3. Should an exam be missed for an excused absence, a make-up exam will be provided. Excused absences should be documented through the Dean’s Office according to CVM and University policy. Oral make up exams are commonly used. The student should contact the instructor within one week of return to classes to schedule the make-up exam.

**General Course Policies:**

1. **Academic Integrity Statement and Policy**  (Aggie Honor Code/Honor Council Rules and Procedures are found on the web @ [http://www.tamu.edu/aggiehonor](http://www.tamu.edu/aggiehonor).

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

   The following will appear on assignments and examinations:

   “On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work.”

   ____________________________

   Signature of Student

This pledge is primarily meant to serve as a reminder that the College has an Honor Code. A student who does not sign the pledge will be asked to do so before the examination is graded. Absence of a signed pledge does not exempt an examination from coverage by the Honor Code.
2. Students are responsible for monitoring their e-mail in a way that assures that course communications are appropriately reviewed.

3. If there is a difference in the stated mechanism of action of a drug in *Veterinary Pharmacology and Therapeutics* and *Plumb's Veterinary Drug Handbook*, you should rely on the information in *Veterinary Pharmacology and Therapeutics* for your studies.

4. Drs. Scott and Fajt have a policy of refusing requests for authorized absences. We contend that as adult students, you can make your own decisions about when to attend class. We do not take attendance, and we reserve the right to administer pop quizzes at any time during the course. We recognize that there are many opportunities aside from your courses to improve your skills or enhance your professional education, and we applaud any and all efforts on your part to participate in those opportunities. However, we require you to make your own choices about which activities are more important than class time. If you have questions about the difference between authorized and excused absences, see the Professional Student Handbook.

5. **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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

6. All students are requested and expected to complete the web-based CVM Course Evaluation form near the end of the semester. Students will be notified by e-mail and in class when the evaluation forms are to be completed. Information gathered from these evaluations is critical to quality control of the veterinary curriculum.

7. The University has established a formal process for handling of student grievances associated with any course. A "Classroom Communication Form" is available from the VTPP departmental office that may be completed and submitted to the department head should there be major concerns about the conduct of the course.
1. This request is submitted by the Department of Veterinary Physiology & Pharmacology.

2. Course prefix, number and complete title of course: VTPP 629 Pharmacology II

3. Catalog course description (not to exceed 50 words): Antimicrobials, endocrine pharmacology, eicosanoids, antiinflammatory agents, respiratory pharmacology, anticoagulants and hematinics, GI pharmacology, cardiovascular pharmacology.

4. Prerequisite(s): Instructor Approval

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)
      MS, PhD in Biomedical Sciences Veterinary Physiology and Pharmacology
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in Geography)
      MD, PhD in Biomedical Sciences

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) VTPP 629 Pharmacology II

<table>
<thead>
<tr>
<th>Lect.</th>
<th>Lab</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin. Unit</th>
<th>Acad. Year</th>
<th>FICE Code</th>
</tr>
</thead>
<tbody>
<tr>
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<td>05</td>
<td>51</td>
<td>125030002</td>
<td>29201011</td>
<td>003632</td>
<td></td>
</tr>
</tbody>
</table>

Approval recommended by: Glen A. Laine Date 11/18/09

Chair, College Review Committee: Jane Welsh Date 11/20/09

Dean of College: Kenita Rogers Date 12/8/09

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

Questions regarding this form should be directed to Sandra Williams at 845-0201 or sandra.williams@tamu.edu.
Curricular Services – 3/09
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of
   Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course: VTPP 629 Pharmacology II

3. Catalog course description (not to exceed 50 words):
   Antimicrobials, endocrine pharmacology, eicosanoids, anti-inflammatory agents,
   respiratory pharmacology, anticoagulants and hematinics, GI pharmacology, cardiovascular pharmacology.

4. Prerequisite(s): Instructor Approval
   Cross-listed with:

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)
      MS, PhD in Biomedical Sciences Veterinary Physiology and Pharmacology
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      MD, PhD in Biomedical Sciences

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) | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code
   VTPP | 629 | PHARMACOLOGY  / II |
   Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code
   0 | 2 | 0 | 2 | 0 | 5 | 1 | 2 | 5 | 0 | 3 | 0 | 0 | 2 | 2 | 9 | 2 | 0 | 1 | 0 | - | 1 | 1 | 0 | 0 | 3 | 6 | 3 | 2

Approval recommended by:

Glen A. Lane
Department Head - Type Name & Sign Date

Chair, College Review Committee:
Jane Walsh
Date

Dean of College:
David W. Reed
Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Curricular Services – 3/09
COURSE SYLLABUS
Veterinary Pharmacology (VTTP) 629
Spring Semester 20XX

Lectures: M: 10 - 10:50 a.m. T: 3 - 4:20 p.m. R: 3 - 4:20 p.m.
Laboratory: M: 1 - 3 p.m. (Groups B, D, F) M: 3 - 5 p.m. (Groups A, C, E)
Room 5 VTH

Credit Hours: 3

Course Description: Antimicrobials, endocrine pharmacology, eicosanoids, antiinflammatory agents, respiratory pharmacology, anticoagulants and hematinics, GI pharmacology, cardiovascular pharmacology.

Prerequisites: Instructor approval.

Required:
VTTP 629 Class notes – AVAILABLE IN MEDIA RESOURCES
USP Monograph – Anti-inflammatories – AVAILABLE IN MEDIA RESOURCES
USB Flash Drive – for saving lab assignments

Resources:
Blackboard Vista (WebCT) site. Additional instructions will be provided.
(available online via the Medical Sciences Library)
Medical Mathematics and Dosage Calculations for Veterinary Professionals, 2nd Edition; Robert Louis Bill, 2009

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<td>VTTP</td>
<td>307C VMS</td>
<td>2-7765</td>
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<tr>
<td>Dr. Katrin Hinrichs</td>
<td>VTTP</td>
<td>326G VMA</td>
<td>2-1338</td>
</tr>
<tr>
<td>Dr. John Stallone</td>
<td>VTTP</td>
<td>307 VMS</td>
<td>2-3065</td>
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If you have questions pertaining to the material presented in lecture, please direct your questions to the appropriate instructor.
Calendar of activities:

<table>
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<tr>
<th>Week</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Reproduction&lt;br&gt;Endocrine&lt;br&gt;Lab: Reproduction Drugs</td>
</tr>
<tr>
<td>Week 2</td>
<td>Endocrine&lt;br&gt;No lab</td>
</tr>
<tr>
<td>Week 3</td>
<td>Parasiticides&lt;br&gt;EXAM 1&lt;br&gt;Lab: Endocrine cases</td>
</tr>
<tr>
<td>Week 4</td>
<td>Parasiticides&lt;br&gt;Antifungals, antivirals, antiprotozoals&lt;br&gt;Antimicrobials&lt;br&gt;Lab: Parasite cases</td>
</tr>
<tr>
<td>Week 5</td>
<td>Antimicrobials&lt;br&gt;Lab: Antimicrobial cases</td>
</tr>
<tr>
<td>Week 6</td>
<td>Antimicrobials&lt;br&gt;Lab: Antimicrobial cases</td>
</tr>
<tr>
<td>Week 7</td>
<td>Regulations and pharmacy operations&lt;br&gt;Lab: Regulations and pharmacy operations</td>
</tr>
<tr>
<td>Week 8</td>
<td>Evidence-based medicine&lt;br&gt;FINAL EXAM</td>
</tr>
</tbody>
</table>

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Preparation for Class:
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Exam Schedule – estimated dates:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
<th>Estimate of Information Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tuesday, Jan 27 3 p.m. Room 5</td>
<td>Jan. 12 – Jan. 22</td>
</tr>
<tr>
<td>2</td>
<td>Monday, Feb. 16 10 a.m. Room 5</td>
<td>Jan. 26 – Feb. 12</td>
</tr>
<tr>
<td>3</td>
<td>Tuesday, Mar. 3 3 p.m. Room 5</td>
<td>Feb. 17 – Mar. 2</td>
</tr>
</tbody>
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Grade Composition:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>45 pts</td>
</tr>
<tr>
<td>Exam 2</td>
<td>75 pts</td>
</tr>
<tr>
<td>Exam 3</td>
<td>65 pts</td>
</tr>
<tr>
<td>Lab exercises (4 pts/lab)</td>
<td>24 pts</td>
</tr>
<tr>
<td>In-class exercises</td>
<td>26 pts</td>
</tr>
<tr>
<td>TOTAL</td>
<td>235 pts</td>
</tr>
</tbody>
</table>

Grading Scale:

- 211-235 points = A
- 187-210 points = B
- 164-186 points = C
- 152-163 points = C
- 0-151 points = F

[To assist you in allocating study time, we have determined that each lecture will be worth approximately 7 points on exams and each lab will be worth approximately 5 points.]

1. If, at any point in the course, a student’s average is below 72%, we strongly encourage the student to speak with the course coordinator and other instructors to seek assistance in mastering course concepts. Waiting until late in the semester to seek assistance often does not yield the mastery required to be successful in the course.

2. 152 out of 235 points will be required to pass the course with a grade of “D”. A student receiving fewer than 152 points will be assigned a grade of “F” for VTPP 629.
Exam Policies:

1. Learning objectives and reading guides for the course should be taken as the best guide for focusing your study efforts. Please do not try to indiscriminately memorize all the information in the class notes or presented on slides in class. Some information is provided as a resource and is not intended for memorization. Using the MEDIC checklist as a study aid will go a long way toward preparing you to make clinical decisions about pharmaceutical products.

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   It is further recommended that instructors print the following on assignments and examinations:

   "On my honor, as an Aggie. I have neither given nor received unauthorized aid on this academic work."

---

**Signature of Student**

This pledge is primarily meant to serve as a reminder that the College has an Honor Code. A student who does not sign the pledge will be asked to do so before the examination is graded. Absence of a signed pledge does not exempt an examination from coverage by the Honor Code.

2. Students are responsible for monitoring their e-mail in a way that assures that course communications are appropriately reviewed.

3. If there is a difference in the stated mechanism of action of a drug in *Veterinary Pharmacology and Therapeutics* and Plumb’s *Veterinary Drug Handbook*, you should rely on the information in *Veterinary Pharmacology and Therapeutics* for your studies.

4. Drs. Scott and Fajt have a policy of refusing requests for authorized absences. We contend that as adult students, you can make your own decisions about when to attend class. We do not take attendance, and we reserve the right to administer pop quizzes at any time during the course. We recognize that there are many opportunities aside from your courses to improve your skills or enhance your professional education, and we applaud any and all efforts on your part to participate in
those opportunities. However, we require you to make your own choices about which activities are more important than class time. If you have questions about the difference between authorized and excused absences, see the Professional Student Handbook.

5. 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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

6. All students are requested and expected to complete the web-based CVM Course Evaluation form near the end of the semester. Students will be notified by e-mail and in class when the evaluation forms are to be completed. Information gathered from these evaluations is critical to quality control of the veterinary curriculum.

7. The University has established a formal process for handling of student grievances associated with any course. A “Classroom Communication Form“ is available from the VTPP departmental office that may be completed and submitted to the department head should there be major concerns about the conduct of the course.
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Veterinary Physiology & Pharmacology.

2. Course prefix, number and complete title of course: VTPP 630 Pharmacology/Toxicology

3. Catalog course description (not to exceed 50 words): Management and treatment of toxicosis, antidotal pharmacology, toxic plants, mycotoxins, chemical toxicants, metals, euthanasia.

4. Prerequisite(s): Instructor approval.

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)

   MS, PhD in Biomedical Sciences

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) | Level
---|---|---|---
VTPP | 630 | Pharmacology/Toxicology | 6

Admin. Unit | Acad. Year | FICE Code
22920 | 10-11 | 003632

Approval recommended by:

Glen A. Laine
Department Head - Type Name & Sign
11/18/09

Jane Welsh
Chair, College Review Committee
11/20/09

Department Head - Type Name & Sign
(If cross-listed course)
12/19/09

Dean of College
Renita Rogers
Date

Submitted to Coordinating Board by:

Date

Effective Date

Associate Director, Curricular Services

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of Veterinary Physiology & Pharmacology

2. Course prefix, number and complete title of course: VTPP 630 Pharmacology/Toxicology

3. Catalog course description (not to exceed 50 words): Management and treatment of toxicosis, antidotal pharmacology, toxic plants, mycotoxins, chemical toxicants, metals, euthanasia.

4. Prerequisite(s): Instructor approval.

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 Biomedical Sciences)

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)
---|---|---
VTPP | 630 | Pharmacology/Toxicology

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<th>Lect.</th>
<th>Lab</th>
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Approval recommended by:
Glen A. Laine
Department Head - Type Name & Sign Date

Chair, College Review Committee
Jane Walsh Date

Dean of College
David W. Reed Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.

INSTRUCTORS: E. MURL BAILEY, JR., D.V.M., Ph.D.
OFFICE: 308 V.M.S. BUILDING
TELEPHONE: 845-7261/5976
EMAIL: mbailey@cvm.tamu.edu
OFFICE HOURS: VARIABLE, MUST MAKE AN APPOINTMENT

- The course instructor reserves the right to administer unannounced quizzes during any lecture or laboratory period.

- All students are requested and expected to complete the CVM Course Evaluation form on the website near the end of the semester. Students will be notified by e-mail and in class when the evaluation forms are to be completed.

NOTICE!!! The handouts 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, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts or examinations unless I expressly grant permission.

As commonly defined, plagiarism consists of passing off as one’s own ideas, words, writings, etc., which belong to another. In accordance with this 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 that 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 Student Rules, under the section "Scholastic Dishonesty."

The Americans with Disabilities Act (ADA) is a federal antidiscrimination 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.

Reading Responsibilities: All reading should be completed before class time during the week the given topics will be discussed. Class note information will be the basis for participatory class room discussions.

Policies:
1. The University has established a formal process for handling of student grievances associated with any course. A "Classroom Communication Concerns" form is available from the VTPP departmental office that may be completed and submitted to the department head should there be major concerns about the conduct of this course.
2. At least 80% of all exam material will be directly related to material found in the class notes. The remaining exam material may come from case studies or classroom discussions. Examinations may be multiple choice, true/false, fill-in-the-blank, or essay.

3. There will be approximately 350 points from Major and Minor examinations. There will be 1 Major examination worth 100 points and the Final examination will be worth 200 points. Five minor examinations (10 points) will be given during the laboratory periods. Therefore, there should be a maximum of 350 total points for the semester. Laboratory material will be covered in the major and minor examinations. Grading will be based on total points earned. (Based on 350 points) If the maximum number of points varies from 350, then an adjustment will be made in the points required for grades.) Excused absences must be obtained from the Dean's office, the Office of Student Affairs, or the Student Health Center. Those individuals who are allowed to take make-up examinations must schedule the examination with the instructor not later than the next class period. Make-up examinations may be essay-type and will be administered on a class basis, one time only, for each examination. The make-up examinations may be administered at 6:00 A.M. on the day selected for the make-up of each missed examination. Minor examinations should be expected during each laboratory period of the week. All examinations will be retroactive and the final examination will be comprehensive. (INCLUDING MATERIAL FROM VTPP 628 – PHARM I & VTPP 629 - PHARM II)  

\[ A = \frac{316}{350} \text{ points} = 90\% \]  
\[ B = \frac{280}{350} \text{ points} = 80\% \]  
\[ C = \frac{245}{350} \text{ points} = 70\% \]  
\[ D = \frac{227.5}{350} \text{ points} = 65\% \]  
\[ F = \frac{<227.5}{350} \text{ points} < 65\% \]  

4. 227.5 out of 350 points will be required to pass the course with a grade of "D." As detailed in the professional student handbook, accumulation of "any combination of two "Ds" and one remediated "F", or three "Ds," in three courses" will result in dismissal from the professional curriculum. If a failing grade is assigned to a student for this course, remediation will be considered if recommended by the Progress II committee with concurrence of the Department Head and the Associate Dean for Academic Affairs. Remediation will consist of a comprehensive essay and objective examination which must be successfully completed within 1 month of the final examination. Successful completion is defined by a grade of 70% or higher (no rounding up). The grade for remediation will be assigned to VTPP 985 at the end of the summer. The failing grade for VTPP 926 will be maintained on the student records.

5. Questions regarding grading of exams must be brought forward within one week of the return of the exam to the student. At the end of the semester, no re-evaluation of previous exams or assignments will occur. Multiple choice exams will be graded within 24 hours of the examination. Essay exams will take longer, up to 2 weeks. Keys will not be posted and exams will not be returned until all make-ups are completed. NOTICE: THE FINAL EXAMINATION WILL NOT BE RETURNED.

6. **NOTICE!!! THERE WILL NOT BE ANY RE-TESTING OR THE RE-ADMINISTRATION OF A FINAL EXAMINATION FOR THIS COURSE!!!!!**
Approved

Course Change Requests
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
Submit original form and attachments

1. This request is submitted by the Department of Agricultural Economics
2. Course prefix, number and complete title of course: AGEC 643 Applied Simulation in Agricultural Economics
3. Change requested
   a. Prerequisite(s): From: AGEC 661; ECMT 676 To: AGEC 622 and 661 or permission of instructor
   b. Withdrawal (reason):
   c. Cross-list with:
   d. Change in course title and description. Enter complete current course title and current course description in item 4; enter proposed course title and proposed course description in item 5.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 6. Attach a course syllabus.
4. Complete current course title and current course description:

5. Complete proposed course title and proposed course description (not to exceed 50 words):

6. As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
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<tbody>
<tr>
<td>AGEC</td>
<td>643</td>
<td>APPL SIMUL IN AG ECO</td>
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<th>Lect.</th>
<th>Lab</th>
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<th>Admin. Unit</th>
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<td>01 01 03 00 50 01</td>
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b. Change to:

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<tr>
<th>Prefix</th>
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<th>Title (excluding punctuation)</th>
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<th>Lect.</th>
<th>Lab</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin. Unit</th>
<th>Acad. Year</th>
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Approval recommended by:
Head of Department: John P. Nicholas
Date: 10/22/09

Dean of College: David W. Reed
Date: DEC 3 2009

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu
October 20, 2009

To Whom It May Concern:

Re: JUSTIFICATION FOR CHANGE IN PREREQUISITES FOR AGEC 643

The instructor has requested a change in the prerequisites for AGEC 643 to ensure that the students have sufficient background and skills to succeed in this course.

If you have questions regarding this change, please contact me at 845-5806.

Sincerely,

David Leatham

David J. Leatham
Associate Head for Graduate Programs

Djl/vlh
Syllabus for
Applied Simulation for Economic Analysis
Agricultural Economics 643
Tues & Thurs 11:10 - 12:25 p.m.
Blocker 457
Fall 2009

Academic Integrity Statement

"An Aggie does not lie, cheat, or steal or tolerate those who do." For more information regarding the Honor Council Rules and Procedures refer to the website at http://www.tamu.edu/aggiehonor

Purpose

The purpose of the course is to teach graduate students in agricultural economics how to design, construct, use and evaluate simulation models of economic systems. The course is designed to use a combination of class lectures and homeworks where the students get the opportunity to develop Monte Carlo simulation models of economic systems. Emphasis will be on students learning how to apply their training in economic theory, econometrics, statistics, and knowledge of real world problems to the analysis of risk for improving economic decisions. Simulation problems will be developed using Excel so the need to learn a programming language is eliminated. The mathematical functions in Excel and special stochastic simulation functions in Simetar will be used to simulate complex applied problems. Emphasis will be on learning how the pre-programmed functions work and how to apply them to perform complex stochastic simulation analyses. Simetar will be provided to each student. Parameter estimation for univariate and Multivariate distributions will be covered for both Normal and Non-Normal distributions. Special problems associated with stochastic simulation of econometric models will be covered as well as using optimal control theory techniques to optimize non-linear simulation models.

Prerequisite(s)

AGEC 622 and 661 or permission of instructor

Grades

Six homework problems will be assigned during the semester. These assignments are to be completed on your own. Collaboration with other students will be dealt with according to University policies for cheating. The last homework will be a term paper worth 20 percent of the final grade. There will be two exams with one coming in early October and the other during Finals week. The term paper will consist of an original research problem that is written in AJAE format and style. You shall identify the problem, review the literature, state the objective, describe the methodology, develop the model, estimate the parameters, present the estimated model, the simulation results, and validation statistics. Each student must work independently on their own paper. Students are encouraged to collaborate with the instructor, their academic advisor and other students, but the end product must be their own work.

Grades will be computed using the following formula:

30% Exam 1
30% Exam 2
15% Homeworks 1-5
20% Homework 6 (term paper) See last page for more information
5% Term paper proposal due November 7, see the next to the last page for more information
Textbook

Richardson, J.W. “Simulation for Applied Risk Management,” January 2008. This is the required text for the class. The book can be purchased in Blocker, Room 450 for $35. The Department Head has approved the use of this material.

Instructors: James Richardson and Henry Bryant
Office: 450 Blocker Building
Phone No.: 845-5913
e-mail: jwrichardson@tamu.edu
Office hours: Tuesday and Thursday 8 - 11 am

The Americans with Disabilities Act (ADA) is a federal antidiscrimination 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 B118 Cain Hall, or call 845-1637.

Topics and Readings: The italicized readings listed below are required. The others are for your education. Each lecture will be recorded and made available on the class website at: http://www.afpc.tamu.edu/courses/643/. A password is required to access the videos. The password will be given out in class. Publications in italics are required readings.

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Introduction, Risk, Models and Simetar</th>
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<tbody>
<tr>
<td></td>
<td>Textbook Chapters 1, 2, 4, 14, and 16 *</td>
</tr>
<tr>
<td></td>
<td>Generating Random Numbers</td>
</tr>
</tbody>
</table>
### Examples of Stochastic Simulation Models and Reviews


*Judge, Day, Johnson, Rausser, and Martin.* “Quantitative Methods in Agricultural Economics, 1940s to 1970s.” Published by the University of Minnesota Press, Minneapolis, for the American Agricultural Economics Association, pages 157-310.

### Week 2

**Univariate Probability Distribution, Parameter Estimation and Simulation**

*Textbook chapters 5, 6 and 16 (pages 3-20 and 27-29).*


### Weeks 3 & 4

**Multivariate Distributions: The Normal and Non-Normal Case Multivariate Parameter Estimation and Simulation**

*Textbook Chapters 7 and 16 (pages 20-26).*


*Clements, A.M., Jr., H.P. Mapp, Jr., and V.R. Eidman.* “A Procedure for Correlating Events in
<table>
<thead>
<tr>
<th>Week 5</th>
<th>Modeling Price and Yield Risk and Model Validation</th>
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<tbody>
<tr>
<td></td>
<td><em>Textbook Chapters 3 and 16 (pages 29-33).</em></td>
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<tr>
<td></td>
<td><strong>Intertemporal Correlation and Probabilistic Forecasting</strong></td>
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<tr>
<th>Week 6</th>
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<tr>
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<td><em>Richardson Chapter 11</em></td>
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<th>Expected Utility</th>
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<p>| Week 8 | Financial Options |</p>
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<tr>
<th>Week</th>
<th>Section</th>
<th>References</th>
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</table>
| 11   | CV Stationarity and Heteroscedasticity and Sparse Data | Textbook Chapter 9  
<p>| Weeks 11 &amp; 12 | Optimal Control of Simulation Models | Textbook Chapter 13 (pages 10-14) and Chapter 12 (pages 8-10). |</p>
<table>
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<tr>
<th>Weeks 13</th>
<th>Insurance and Portfolio Analysis</th>
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<tbody>
<tr>
<td></td>
<td>Textbook Chapter 14 (pages 3-6).</td>
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<tr>
<th>Week 14</th>
<th>Agent Based Simulation</th>
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</table>

| Week 15 | No Readings This Week |

* denotes required readings
## AGEC 643 Class Schedule

**Tues & Thurs 11:10 - 12:25 p.m.**  
**Blocker 457**  
**Fall 2009 (Revised Oct 19, 2009)**

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<thead>
<tr>
<th>Week</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
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<tr>
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<td>Aug 31</td>
<td>First Day of Class</td>
<td>Sept 1</td>
<td>Introduction/ Seminar</td>
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<td>Multivariate probability distributions</td>
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<td>23</td>
<td>MV Normal and Empirical distribution</td>
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<td>MV Distributions for Large Models</td>
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<td>5</td>
<td>27</td>
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<td>30</td>
<td>Model Validation w/ statistical tests</td>
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<td>Oct 1</td>
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<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>Test - Mid Term</td>
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<td>Nov 1</td>
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<td>4</td>
<td>Stochastic Dominance</td>
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<td>Stochastic Efficiency</td>
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<td>8</td>
<td>9</td>
<td>10</td>
<td>CV Stationarity Controlling Heteroskedastic errors</td>
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<td>Optimal Control Theory</td>
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<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>Simulation of Simultaneous Equation Models</td>
<td>19</td>
<td>Progress Report on Term Paper</td>
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<tr>
<td>12</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>Portfolio Analysis and Insurance</td>
<td>26</td>
<td>HOLIDAY</td>
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<td>Inference Simulation</td>
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<td>Agent Based Simulation</td>
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<tr>
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<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Systems Approach Copyrights HOMEWORK 6 DUE Last Day of Class</td>
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<td>No Class - Reading Day</td>
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<td>11</td>
<td>12</td>
<td>Final Exam 3-5 pm</td>
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115 of 130 B
Progress Report on Term Paper
Due November 13, 2009

Refined statement of the problem with 5+ references to support your statement of the problem. Explain why the problem is important and who has worked on the problem in the past.

Objective. Clearly state what the objective of the paper will be, based on your review of the literature and after identifying holes in the literature.

Review of literature. Briefly describe the studies you will be using to support the methodology selected for the paper.

Detailed description of the methodology you plan to use for the paper.

Describe the data you will be using for the paper and give the source(s) for the data.
Format for Term Paper – Homework 6
Due December 8, 2009

Quoted from the course Syllabus:
“The last homework will be a term paper worth 20 percent of the final grade. The term paper will consist of an original research problem that is presented in AJAE format and style. You shall identify the problem, review the literature, state the objective, describe the methodology, develop the model, estimate the parameters, present the estimated model, the simulation results, and validation statistics. Each student must work independently on their own paper. Students are encouraged to collaborate with the instructor, their academic advisor and other students, but the end product must be their own work.”

20 pts  Introduction
Introduction should consist of a 1 page description of the economic problem to be addressed. Literature must be cited to prove there is an economic problem.

10 pts  Objective
Clear should be a concise statement of the objective for the paper. This may include a hypothesis to be tested. One paragraph should be sufficient.

20pts  Methodology
Methodology should be a 1 to 2 page description of the methodology used for the paper. The methodology must be based on the literature in the field and must be well documented with adequate references to the literature. The methodology must be based on or use concepts presented in AGEC 643. Describe the methodology using statistical procedures, mathematics, and economic theory. Indicate how the methodology will enable you to achieve the objective and test the hypothesis.

5 pts  Data
Describe the data used for the analysis, including the source, and how it will be used with the methodology.

25 pts  Model and Results
Describe your model, your parameter estimates and present the results. The results should address the problem in the introduction and achieve the objective stated for the paper.

10 pts  Summary and Conclusions
Prepare a ½ page summary of the research and draw conclusions from the results.

10 pts  References
Include only the publications you cited in the paper. Use AJAE format.

Example of a Term Paper
See Richardson and Mapp – the SJAЕ (1976) Ice Plant model on your reading list.
Texas A&M University  
Departmental Request for a Change in Course  
Undergraduate • Graduate • Professional  
• Submit original form and attachments •

1. This request is submitted by the Department of  
   Computer Science and Engineering

2. Course prefix, number and complete title of course:  
   CSCE 655 Human-Centered Systems and Information

3. Change requested
   a. Prerequisite(s):  
      From:  
      To:  
   b. Withdrawal (reason):  
   c. Cross-list with:

   Cross-listed courses require the signature of both department heads.
   d. Change in course title and description. Enter complete current course title and current course description in item 4; enter proposed course title and proposed course description in item 5.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 6. Attach a course syllabus.

4. Complete current course title and current catalog course description:  
   Human-Centered Systems and Information

5. Complete proposed course title and proposed catalog course description (not to exceed 50 words):  
   Human-Centered Computing

6. a. As currently in course inventory:
   
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   Approval recommended by:  
   Duncan M. Walker  
   Department Head – Type Name & Sign  
   Date  

   Chair, College Review Committee  
   Date  

   Dean of College  
   Date  

   Curricular Services – 12/08

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Course title and number

CSCE 655 Human-Centered Computing

Course Description and Prerequisites


Learning Outcomes or Course Objectives

Students learn:

- to engage in iterative design;
- programming methods for graphical user interfaces and mobile computing;
- visual design and color theory;
- data gathering methods;
- evaluation methods;
- to read research papers;
- to write research papers; and
- to work in teams.

Instructor Information

Name: Andruid Kerne
Telephone number: 845-7104
Email address: andruid@cse.tamu.edu
Office: HRBB 402A
Office Hours: By appointment

Textbook and/or Resource Material

http://ecologylab.cse.tamu.edu

Grading Policies

Grading: assignments (33%) + midterm exam (22%), class participation (10%) + final project cycle, including paper (35%).
Grading scale: 90-100% - A, 80-89% - B, 70-79% - C, 60-69% - D, 59% or less - F
Course Topics

Understanding and conceptualizing human computer interaction – conceptual models, interface metaphors, paradigms of interaction, social protocols, affordances, mappings 5
Design methodologies - user-centered, iterative, interactive, collaborative, participatory, conceptual, physical 5
Prototyping methodologies – task and activity analysis, speed, fidelity, construction 5
Evaluation frameworks: data collection protocols, usability testing, heuristic analysis, field studies, experimental design and analysis 6
Visual design – color, space, layering, media 3
Information structuring 3
Information visualization – 2D and 3D, static and streaming data, interactivity and user interfaces 3
Context-aware, location-aware, and tangible interaction 4.5
Student presentations 6

Exam 1.5

42

Assignments

Week 1 disconnected interaction design
2 - 4 portable media player simulation
6 interactive color study
8-13 final project cycle: location-aware interaction

Americans with Disabilities Act (ADA)

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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu

Academic Integrity

For additional information please visit: http://www.tamu.edu/aggiehonor

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

This title change reflects the more general nature of the course as currently taught.
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
Submit original form and attachments

1. This request is submitted by the Department of Civil Engineering.
2. Course prefix, number, and complete title of course: CVEN 639 Methods Improvement for Construction Engineers
   Attach a brief supporting statement for changes made to items 3a thru 3d, and 5 below.
3. Change requested:
   a. Prerequisite(s): From: ___________________ To: ___________________
   b. Withdrawal (reason): ___________________
   c. Cross-list with: ISEN 639
      Cross-listed courses require the signature of both department heads.
   d. Change in course title and description. Enter complete current course title and current course description in item 4; enter proposed course title and proposed course description in item 5.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 6. Attach a course syllabus.
4. Complete current course title and current catalog course description:

5. Complete proposed course title and proposed catalog course description (not to exceed 50 words):

6. a. As currently in course inventory:

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Approval recommended by: Mark Burris
Date: 11/17/09

John Niedzwiecki
Department Head – Type Name Design (if cross-listed course)

Brett A. Peters
Date: 11/18/09

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.
Zachry Department of Civil Engineering

Number and Title of Course: CVEN 639  Methods Improvement for Construction Engineers
Hours: Lecture 3,  Lab 0,  Credits 3
Prerequisites: CVEN 405 and 473 or approval of instructor

Course Description: Application of work methods and measurements to civil engineering construction; examination of factors that affect productivity in construction; study of motivational factors; review of the principles of accident prevention.

Learning Outcomes:
- Model elementary construction project operations
- Develop linear multivariate regression models from project data
- Develop stochastic (Monte Carlo) models for project simulation
- Use models to compare alternate methods
- Develop conclusions and decisions based on these models
- Distinguish trends from variability in the presence of uncertain and inadequate data
- Forecast activity, job, and project completion times and costs based on job progress to date
- Engage in project controls for on-going projects
- Understand construction project dynamics and the effects of feedback, recycling, and rework

Course Instructor: Kenneth F. Reinschmidt  Email address: kreinschmidt@civil.tamu.edu
Telephone number: 845-8599  Office location: CE/TTI Building, Room 702A
Office hours: MWF 8-12

Textbook: None

Grading: Class Team Exercises: Participation and discussion
- Written presentations 25%
- Oral presentations 25%
Midterm Examination 10%
Term project
- Oral presentation 15%
- Written presentation 15%
Final Examination 10%

Project paper and presentation will be graded based on how good of a review you provide for your selected topic, how logical, innovative, and feasible your proposed idea is, and how well you present your work to the class. Grades will be calculated on the basis of total points earned. The points can be curved based on class average and may lower the following standard.

A  90-100
B  80-89
C  70-79
D  60-69
F  59 and lower

Course Outline

Week 1: Review present worth analysis
Week 2: Statistical Process Control; Six-Sigma; control charts, reliability
Week 3: Regression analysis
Week 4: Simulation models
Week 5: Bayesian inference
Week 6: Class presentations
Week 7: Mid-term exam
Week 8: Simulation models
Week 9: Sigmoid curves – regression fit
Week 10: Sigmoid curves – Bayesian fit
Week 11: Learning curves; site layout
Week 12: Class presentations
Week 13: Term project oral presentations
Week 14: Final examination

Attendance and Make-up Policy: Only University excused absences will be accepted for makeup exams/quizzes. It is the student's responsibility to make arrangements to reschedule exams/quizzes. Make up exams will be given in accordance with University Rules (see Rule 7 at http://student-rules.tamu.edu).

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 in Cain Hall, Room B118, or call 845-1637.

Academic Integrity Statement
"Aggies do not lie, cheat, or steal, nor do they tolerate those who do." It is the responsibility of students and instructors to help maintain scholastic integrity at the university by refusing to participate in or tolerate scholastic dishonesty. (Please see the Honor Council Rules and Procedures at http://www.tamu.edu/aggiehonor)
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

1. This request is submitted by the Department of  
   HISPANIC STUDIES

2. Course prefix, number and complete title of course:  
   HIS675 Methods of Teaching Spanish to Native Speakers

3. Change requested  
   a. Prerequisite(s): From:  
      HISP 602 or approval of instructor.  
      To:  
      Graduate classification and approval of instructor.
   b. Withdrawal (reason):
   c. Cross-list with:
   d. Change in course title and description. Enter complete current course title and current course description in item 4; enter proposed course title and proposed course description in item 5.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 6. Attach a course syllabus.

4. Complete current course title and current catalog course description:  
   675. Methods of Teaching Spanish to Native Speakers. (3-0). Credit
   3. Presentation of the various theories and methods for the teaching of Spanish to students of Spanish-speaking backgrounds in the United States. Prerequisite: HISP 602 or approval of instructor.

5. Complete proposed course title and proposed catalog course description (not to exceed 50 words):  
   HIS675. Spanish Language Teaching Methods. (3-0). Credit 3. Overview of the current language methodology as it applies to the teaching of Spanish to native and non-native speakers; pedagogical and professional issues related to teaching Spanish at the college level. Prerequisites: Graduate classification and approval of instructor.

6. a. As currently in course inventory:
   Prefix  | Course #  | Title (excluding punctuation)  
   HISP   | 675       | METHODS OF TEACHING SPANISH
   Lect.  | Lab        | SCH | CIP and Fund Code | Admin. Unit | FICE Code | Level  
   0     | 3          | 0   | 0                 | 1           | 4          | 7 | 5 |

   b. Change to:
   Prefix  | Course #  | Title (excluding punctuation)  
   HISP   | 675       | SPANGLISH METHODS
   Lect.  | Lab        | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code | Level  
   0     | 3          | 0   | 0                 | 1           | 4          | 7 | 5 |

   Approval recommended by:
   Larry Mitchell  
   Department Head – Type Name & Sign Date
   Department Head – Type Name & Sign (if cross-listed course) Date

   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 – 12/08
HISP675: SPANISH LANGUAGE TEACHING METHODS

COURSE DESCRIPTION.
This course seeks to familiarize graduate students with the major aspects of the current language teaching theory and techniques as it applies to the teaching of Spanish to native and non-native speakers at the college level. This course is designed to provide graduate students with the knowledge, skills, tools and pedagogical expertise and training to be effective, competent and competitive professionals.

PRE-REQUISITES.
Graduate classification and approval of instructor.

OBJECTIVES.
In specific terms, graduate students will learn:

- How to reflect about themselves as learners and teachers.
- About current approaches to Spanish (as a foreign and heritage language) instruction informed by research.
- How to implement communicative, content-oriented and task-based language teaching.
- How to recognize and design language learning practices and tasks.
- How to create thorough and well-thought-out instructional sequences in lesson planning.
- How to differentiate between practices based on beliefs, myths and assumptions about language learning and practices informed by research related to language learning.
- How to design effective language assessments that parallel pedagogical teaching practices.

ASSESSMENT.

| Class discussion/participation | 10% |
| Language class observation reports (5) | 15% |
| Presentations (3) | 15% |
| Teaching portfolio | 20% |
| Mid-term Exam | 15% |
| Final Exam | 25% |

Class discussion/participation: All students are expected to be prepared (i.e. completion of reading and homework assignments) and attentive and participate actively in class. This is very important because this course is not based on a lecture format. Content of in-class activities will be based on the readings. Lack of participation may imply lack of preparation.

Language class observation reports: During the semester, students will observe five Spanish language classes and will write a report on their observation in the classroom. Reports will focus on lesson structure and language teaching methods/techniques.

Presentations: Each graduate student will have the opportunity to lead two class discussions over a reading, linking theory to practice. Students will also give an individual micro-teaching demonstration.

Teaching Portfolio: At the end of the semester, students will turn in a teaching portfolio containing the following materials: (1) teaching philosophy statement, (2) two input/grammar activities, (3) two task-based activities, and (4) two reading/writing activities.

Exams: A midterm exam and a final exam with varying formats will comprise 40% of the total grade. Exams will cover both
the text readings as well as the class discussions.

**Grading Scale.** (http://student-rules.tamu.edu/rule10)

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

**Bibliography.**


**Recommended Useful Readings.**


**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, in Cain Hall or call 845-1637.

**Academic Integrity Statement**

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

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. For additional information please visit: http://www.tamu.edu/aggiehonor/
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Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

1. This request is submitted by the Department of Hispanic Studies
2. Course prefix, number and complete title of course: MODL697 Seminar on Foreign Language Teaching

3. Change requested
   a. Prerequisite(s): From: Needs to be professionalized. MODL697 and HISP673 ("Methods of Teaching Spanish to native Speakers") will be combined into a new 3-credit course entitled "Spanish Language Teaching Methods"
   b. Withdrawal (reason): Cross-list with:
   c. Cross-list with:

   Cross-listed courses require the signature of both department heads.

d. Change in course title and description. Enter complete current course title and current course description in item 4; enter proposed course title and proposed course description in item 5.

e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 6. Attach a course syllabus.

4. Complete current course title and current catalog course description: 697. Seminar on Foreign Language Teaching. (1-0). Credit 1. Pedagogical and professional issues related to foreign language teaching; methodologies, strategies and activities. Prerequisites: Graduate classification and approval of instructor.

5. Complete proposed course title and proposed catalog course description (not to exceed 50 words):

6. a. As currently in course inventory:

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   Approval recommended by:
   Larry Mitchell
   Department Head – Type Name & Sign

   Chair College Review Committee
   Date
   Dean of College
   Date
   Date
   Date
   Date

   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 – 12/08