Agenda
1. Approval of December minutes.

2. New Course Requests:
   a. AFST 601 Methods of Inquiry into Africana Studies
   b. BIOL 610 Evolution
   c. BMEN 625 Biophotonics
   d. CHEM 670 Physical Methods in Biological Chemistry
   e. CSCE 664 Wireless and Mobile Systems
   f. HIST 635 Writing History
   g. HORT 645 World Agriculture and International Plant Breeding
   h. ISEN 643 Strategic Construction and Engineering Management
   i. MSEN 603 Fundamentals of Soft and Biomaterials
   j. OCEN 677 Environmental Fluid Mechanics
   k. SCSC 645 World Agriculture and International Plant Breeding

3. Course Change Requests:
   a. CHEM 660 Nuclear Chemistry
   b. CVEN 654 Strategic Construction and Engineering Management
   c. HISP 606 Spanish for the Southwest
   d. HISP 614 Hispanic Dialectology
   e. NUEN 618 Nuclear Control Systems
   f. NUEN 630 Monte Carlo Methods for Particle Support

4. Special Consideration Item:
   College of Liberal Arts proposed Graduate Certificate in Africana Studies.
Minutes
Graduate Council Meeting Minutes  
December 2, 2010  
Email Vote Taken

1. Approval of October/November 2010 Graduate Council minutes. Minutes were approved as read.

2. Graduate Council approved the below listed New Course requests with friendly amendments.  
New Course Requests:  
   a. ANTH 644 Classical Archaeology  
   b. BUSH 636 Quantitative Methods II: Game Theory Emphasis  
   c. PSAA 670 Public Information Systems Management  
   d. CVEN 752 Smart Structures  
   e. HLTH 641 Foundations in Health Education  
   f. HLTH 642 Health Education Ethics  
   g. HLTH 643 Introduction to Epidemiology  
   h. MGMT 663 International Transfer Pricing

3. Graduate Council approved the below listed Course Change Requests.  
Course Change Requests:  
   a. INTA 603 American Diplomacy  
   b. PHIL 661 Seminar in the History of Philosophy  
   c. PHIL 662 Seminar in Ethics and Value Theory  
   d. PHIL 663 Seminar in Metaphysics and Epistemology  
   e. PHIL 664 Seminar in Applied Philosophy

4. Graduate Council approved the below listed Special Consideration Item.  
College of Architecture, Department of Visualization, proposed Master of Fine Arts in Visualization.
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 [The Africana Studies Program]

2. Course prefix, number and complete title of course: [AFST 601 Methods of Inquiry Into Africana Studies]

3. Catalog course description (not to exceed 50 words): [Familiarization with the methodological tradition of African-centered thinking and its relationship to the more popular term Afro-centricity; representation of the thoughts of notable African centered and Afrocentric scholars throughout history as a means to center African descended people throughout history, social analysis and theoretical accounts.]

4. Prerequisite(s): [Graduate classification]

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)
   [The Africana Studies Program Graduate Certificate]
   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)  
   AFST 601 METHODS INQUIRY AFR ST D Y  
   Lect. Lab SCH CIP and Fund Code Admin. Unit Acad. Year FINCE Code  
   0 3 0 0 0 3 0 5 0 2 0 1 0 0 0 1 1 3 5 1 1 2 0 0 3 6 3 2  
   Approval recommended by: [Kimberly N. Brown, Ph.D.]
   Department Head - Type Name & Sign [Date]

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

   Submitted to Coordinating Board by: [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
AFST 601: METHODS OF INQUIRY INTO AFRICANA STUDIES

INSTRUCTOR: DR. TOMMY J. CURRY

OFFICE: 305B BOLTON HALL

OFFICE HOURS: BY APPT

CLASS TIME: BOLTON HALL—ROOM 213

COURSE DESCRIPTION: For many scholars interested in the study of African descended people, Black Studies, or its more contemporary label, Africana Studies, has become a thematic pursuit primarily interested in descriptively cataloguing the various expression of African descended peoples’ culture throughout the Diaspora. By contrast, this course is interested in familiarizing the student with the long developed methodological tradition of African-centered thinking and its relationship to the more popular term Afro-centricity. Echoing the long written words of Dr. Daudi ya Azibo (1992), this class is a testament to the position that “what make Black Studies ‘Black’ is the usage of the conceptual universe afforded by the African worldview in studying any and all manner of phenomena.” Whereas various theoretical approaches to “Black” experience have utilized the “ideologically revised” philosophy of modernity’s white dissenters (Derrida, Deleuze, Foucault, and Marx) as the basis of post-colonizing “African descended peoples’” experience, this course thinks about theory as originating from Africana peoples with their positionality at the center of this thinking—an anti-colonial disposition that affirms first and foremost the humanity and historical integrity of African descended peoples. In short, this graduate seminar will represent the thoughts of notable African centered and Afrocentric scholars throughout history as a means to center African descended people throughout history, social analysis and theoretical accounts.

COURSE PREREQUISITES:

Graduate Classification

COURSE OBJECTIVES:

- By the end of the course students should be versed in the various schools of thought with relation to African-centered thinking.
- Participants in this seminar will learn, compare and contrast the various thoughts of the Chicago School of African centered thought popularized by Jacob Carruthers and the more popular understood term “Afrocentricity” popularized by Molefi Asante.
- Students will be encouraged to view Black Studies as an emergent school of thought with a particular approach to the study of African descended people highlighted in the debates between notable scholars like W.E.B. Du Bois, E. Franklin Frazier, and Harold Cruse at the end of the Civil Rights Movement.

COURSE REQUIREMENTS:

1. CLASS ATTENDANCE: Regular class attendance and participation in discussions is required and factored into the evaluation of the student’s position papers;
2. **6 Position Papers:** These papers will be 3+ page papers that summarize, analyze, and advocate a position in relation to the readings. These papers should be conceptualized as written responses that accomplish three things. 1) A summarization of the author's position and argument in the articles assigned, 2) the cumulative understanding of how the various arguments throughout the course and in the assigned readings inter-relate, 3) and lastly, these papers demonstrate a serious engagement with the texts that can serve as a basis of debate and discussion in the class.

3. **Final Paper:** This paper will be 15-20 page papers developed from the methods and descriptions of African-centered thought and/or Afrocentricity. It is expected that this paper would be of a publishable quality. It is expected that the students will follow Chicago 15th ed. Style guidelines.

**Grading Schedule and Point Value:**
Class Participation 10% -- Throughout the course.
Six (6) Papers 60% -- Week 2, 4, 6, 8, 10, and 12
Final Paper (Final Exam) 30% -- Week 14

**Grading Scale:** A = 90-100%; B = 80-89%; C = 70-79%; D = 60-69%; F = 0-59%

**Attendance Policy**
"The University views class attendance as the responsibility of an individual student. Attendance is essential to complete the course successfully. University rules related to excused and unexcused absences are located on-line at http://student-rules.tamu.edu/rule07."

**American 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**
The Aggie Code of Honor states that "Aggies do not lie, cheat, or steal, nor do they tolerate those who do." Please familiarize yourself with the booklet entitled Student Rules, Part I, Section 20, A Scholastic Dishonesty, which offers a clear, concise explanation of what constitutes plagiarism (it also discusses other violations of academic integrity). Possession of this syllabus means that you understand that you are required to comply with Texas A&M University's policies on this manner.

**Required Texts (tentative):**


**Tenative Syllabus:**

**Week 1: Understanding the Paradigmatic Origins of Black Studies / African-centered Thinking as the Basis of Disciplinarity.**


Daniel, Philip “Black Studies: Discipline or Field of Study,” *The African American Studies Reader*


**Week 2: The Historical Documenting of the African Personality: Theoretical Concerns.**

*First Position Paper Due.*

Blyden, Edward. Selected Readings

DuBois, W.E.B. Selected Readings from the *World and Africa*


Cruse, Harold. “The Integrationist Ethic as the Basis of Scholarly Endeavors.”


**Week 3 & 4: Reading Cruse as an Inspiration of the Afrocentric Paradigm**

*Second Position Paper Due – Week 4.*


**Week 5: Afrocentricity—Asante-ism**


**WEEK 6: AFROCENTRICITY CONTINUED**

*Third Position Paper Due.*


**WEEK 7 & 8: THE AFRICAN WORLDVIEW ANALYSIS OF EUROPEAN CULTURE**

*Fourth Position Paper Due – Week 8.*


**WEEK 9 & 10: AFRICAN CENTERED PSYCHOLOGY: THE IMPACT OF WORLDVIEW ANALYSIS FOR AFRICAN DESCENDED PEOPLES.**

*Fifth Position Paper Due – Week 10.*


**WEEK 11: APPLYING AFRICAN CENTERED THINKING: PARADIGMATIC ISSUES AND SOCIAL THOUGHT**


Wilson, Amos. The Falsification of African Consciousness

**WEEK 12: APPLYING AFRICAN CENTERED THINKING: GENDER/SексISM**

*Sixth Position Paper Due.*


**WEEK 13: APPLYING AFRICAN CENTERED THINKING: EDUCATION**


**WEEK 14: PARADIGMATIC CRITICISMS: W.C. BANKS**

*Final Paper Due.*


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

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

2. Course prefix, number and complete title of course:
   BIOL 610: Evolution

3. Catalog course description (not to exceed 50 words):
   Fundamentals of evolutionary biology, with an emphasis on evolutionary theory.

4. Prerequisite(s):
   Graduate classification or approval of instructor.

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? ☑ 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.S., Ph.D. in Biology

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 | Level |
---|---|---|---|---|---|---|---|---|---|---|

404 | 610 | EVOLUTION | 0 | 3 | 0 | 0 | 3 | 2 | 6 | 1 | 3 | 0 | 0 | 2 | 0 | 0 | 3 | 6 | 3 | 2

Approval recommended by:
Thomas D. McKnight
11/8/10

Chair, College Review Committee
11-30-10

Dean of College
11-30-10

Chair, GC or UCC

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 – 3/10
BIOL 610 Evolution

Spring 2009, TR 2:20-3:35

Adam Jones
BSBE 118D, 5-7774
agjones@tamu.edu

Week 1: Review of Mathematical Principles
Week 2: A Short Introduction to Probability Theory
Week 3: Evolutionary Models: Difference Equations
Week 4: Solving Evolutionary Models
Week 5: The Mixed Mating Model
Week 6: Genetic Drift and Selection
Week 7: Selection and Fixation Indices
Week 8: Migration, Exam I
Week 9: Quantitative Genetics
Week 10: Natural Selection on Quantitative Traits
Week 11: Sexual Selection
Week 12: Parentage Analysis and Maximum Likelihood
Week 13: Bayesian Techniques and MCMC in Evolution
Week 14: The State of Evolutionary Biology

This course will focus on the fundamentals of evolutionary biology, with an emphasis on evolutionary theory. Grades in the class will be determined by ten homework assignments (50%) and two exams (50%). While there are no formal prerequisites for this course, students will be expected to obtain the necessary background from supplementary readings in textbooks and other sources. Required readings will be primary research articles, which will be announced during class. This course has no required textbook. However, books that may provide useful background include Evolutionary Biology by Douglas Futuyma, Principles of Population Genetics by Hartl and Clark, and Introduction to Quantitative Genetics by Falconer and Mackay. The grading scale will be 90-100: A; 80-89: B; 70-79: C; 60-69: D; 0-59: F.

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 TAMU 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/).

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

2. Course prefix, number and complete title of course: BMEN 625, Biophotonics

3. Catalog course description (not to exceed 50 words):
   Theory and application of optical instrumentation, including light sources, lasers, detectors, and optical fibers; instrumentation and engineering in biomedical applications of optics in therapeutics, diagnostics, and biosensing.

4. Prerequisite(s):

   Cross-listed with: BMEN 425

   Stacked 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)

   MS, MEng, and PhD degrees in Biomedical 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)
   BMEN 625 Biophotonics

   Lect. Lab SCH CH# and Fund Code Admin. Unit Acad. Year FICE Code
   0 3 0 0 0 3 1 4 0 5 0 1 0 0 0 6 0 4 5 0 1 1 2 0 0 3 6 3 2

   Approval recommended by:

   Gerard L. Cone, Department Head or Program Chair (Type Name & Sign) Date

   Chair, College Review Committee Date

   Robin Autenrieth, Dean of College Date

   David Reed, Chair, GC or UCC Date

   Submitted to Coordinating Board by:

   Effective Date

   Date

   Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
   Curricular Services – 3/0
Course number and title: BMEN 425 Biophotonics
Term: TBA
Meeting times and location: TBA

Course Description and Prerequisites

Theory and application of optical instrumentation, including light sources, lasers, detectors, and optical fibers; instrumentation and engineering in biomedical applications of optics in therapeutics, diagnostics, and biosensing.

Prerequisites: Admitted into the major degree sequence in Biomedical Engineering and junior or senior classification.

Instructor Information

Name: Kristen Maitland
Telephone number: (979) 845-1864
Email address: kmaitland@tamu.edu
Office hours: TBA
Office location: Zachry 335G

Textbook and/or Resource Material

Reference Text: Optics, by Eugene Hecht

Grading Policies

Work missed due to absences will only be excused for University-approved activities in accordance with Texas A&M University Student Rules (http://student-rules.tamu.edu/). Specific arrangements for make-up work in such instances will be handled on a case-by-case basis. Homework is due at the beginning of class period. Unexcused late homework will be marked down by 50%.

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<tr>
<th>Component</th>
<th>Weight</th>
<th>Range</th>
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<tbody>
<tr>
<td>Homework</td>
<td>10%</td>
<td>90-100%</td>
<td>A</td>
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<tr>
<td>Design Project/Presentation</td>
<td>20%</td>
<td>80-89%</td>
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<td>2 Exams</td>
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<td>70-79%</td>
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<td>Final Exam</td>
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<td>100%</td>
<td>&lt;60%</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>Course Introduction, Ray Optics</td>
<td>Ch. 1</td>
</tr>
<tr>
<td>2</td>
<td>Wave Optics</td>
<td>Ch. 2</td>
</tr>
<tr>
<td>3</td>
<td>Gaussian Beams</td>
<td>Ch. 3</td>
</tr>
<tr>
<td>4, 5</td>
<td>Fourier Optics</td>
<td>Ch. 4</td>
</tr>
<tr>
<td>6</td>
<td>EM Optics</td>
<td>Ch. 5</td>
</tr>
<tr>
<td>7</td>
<td>Polarization</td>
<td>Ch. 6</td>
</tr>
<tr>
<td>8</td>
<td>Photonic Crystal Optics, Waveguides</td>
<td>Ch. 7, 8</td>
</tr>
<tr>
<td>9</td>
<td>Optical Fibers</td>
<td>Ch. 9</td>
</tr>
<tr>
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<td>Topic</td>
<td>Required Reading</td>
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</tr>
<tr>
<td>10</td>
<td>Photon Optics, Light-Matter Interactions</td>
<td>Ch. 12, 13</td>
</tr>
<tr>
<td>11</td>
<td>Resonator Optics, Laser Amplifiers</td>
<td>Ch. 10, 14</td>
</tr>
<tr>
<td>12</td>
<td>Lasers</td>
<td>Ch. 15</td>
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<tr>
<td>13</td>
<td>Semiconductor Optics, Semiconductor Photon Sources</td>
<td>Ch. 16, 17</td>
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<tr>
<td>14</td>
<td>Presentations</td>
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**Academic Integrity**

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

2. Course prefix, number and complete title of course:
   CHEM-670: Physical Methods in Biological Chemistry

3. Catalog course description (not to exceed 50 words):
   Overview of current methods for the characterization of biological macromolecules, including protein structure, protein-ligand interactions, protein folding. Techniques discussed include nuclear magnetic resonance, optical spectroscopy, calorimetry, electron paramagnetic resonance, Mössbauer spectroscopy, X-ray crystallography, electron microscopy, and mass spectrometry.

4. Prerequisite(s):
   Graduate Standing or Approval of Instructor
   Cross-listed with:
   Stacked with:

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 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.S., PhD in Chemistry

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)
   CHEM 670 PHYS METH IN B I O L C H E M

   Lect. Lab SCI CIP and Fund Code Admin. Unit Acad. Year EGE Code
   0 3 0 0 0 3 4 0 0 5 0 6 0 0 0 2 0 6 0 0 1 0 1 1 0 0 3 6 3 2

   Approval recommended by:
   Department Head or Program Chair (Type Name & Sign) Date
   Chair, College Review Committee Date
   Dean of College Date
   Chair, GC or UCC 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 – 3/10
Texas A&M University
Department of Chemistry

Syllabus
CHEM-670: Physical Methods in Biological Chemistry

Instructors: Dr. Christian Hilty (chilty@mailchem.tamu.edu) - Module I
Phone: (979) 862-3099
Office: CHEM 1227 (2nd floor, "72-wing")

Dr. Paul Lindahl (lindahl@mailchem.tamu.edu) - Instructor of Record, Module II
Phone: (979) 845-0956
Office: CHEM 1129

Dr. David Barondeau (barondeau@mailchem.tamu.edu) - Module III
Phone: (979) 458-0735
Office: ILSB 1196 (Integrated Life Sciences Building)

Course Hours: Monday, Wednesday, Friday TBD

Location: TBD

Prerequisites: Graduate standing. Exceptions may be made - students who are not graduate students please contact the instructor prior to registration.

Required Textbook: None

Office Hours: By appointment with the instructor of the pertinent module. For general questions please see Dr. Lindahl.

On-line: Additional course information and grades may be posted at http://elearning.tamu.edu/

Topics covered: The course constitutes an overview of the current methods for the characterization of biological macromolecules, including protein structure, protein-ligand interactions, protein folding. Techniques discussed are: Module 1 - nuclear magnetic resonance, optical spectroscopy, circular dichroism, fluorescence, surface plasmon resonance; module 2 - isothermal titration calorimetry, electron paramagnetic resonance, Mössbauer spectroscopy; module 3 - X-ray crystallography, electron microscopy, small-angle X-ray scattering, mass spectrometry.
<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Nuclear Magnetic Resonance</td>
</tr>
<tr>
<td>2</td>
<td>Semiclassical Description of NMR</td>
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<tr>
<td>3</td>
<td>Fourier Transform, Chemical Shift</td>
</tr>
<tr>
<td>4</td>
<td>Quantum Description of NMR</td>
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<td>5</td>
<td>Scalar couplings, product operators</td>
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<tr>
<td>6</td>
<td>Instrumentation</td>
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<td>7</td>
<td>NMR of Macromolecules, Multidimensional NMR</td>
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<td>8</td>
<td>Nuclear Overhauser Effect and Structure Calculation</td>
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<tr>
<td>9</td>
<td>Optical Spectroscopy, Molecular Orbitals</td>
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<tr>
<td>10</td>
<td>Transition Probabilities, Selection Rules</td>
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<tr>
<td>11</td>
<td>Spectroscopy of Biological Molecules, Circular Dichroism</td>
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<tr>
<td>12</td>
<td>Fluorescence, Forster Resonance Energy Transfer</td>
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<tr>
<td>13</td>
<td>Surface Plasmon Resonance, Fourier Transform Infra</td>
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<td>14</td>
<td>Exam I</td>
</tr>
<tr>
<td>15</td>
<td>Isothermal titration calorimetry</td>
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<tr>
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<td>Isothermal titration calorimetry</td>
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<tr>
<td>17</td>
<td>Electron paramagnetic resonance: Introduction</td>
</tr>
<tr>
<td>18</td>
<td>Electron paramagnetic resonance: Theory and applications</td>
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<tr>
<td>19</td>
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<td>22</td>
<td>Electron Nuclear Double Magnetic Resonance</td>
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<tr>
<td>23</td>
<td>Mössbauer spectroscopy: Theory and application</td>
</tr>
<tr>
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<td>Mössbauer spectroscopy: Theory and application</td>
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<td>Protein crystallography: Symmetry</td>
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<td>30</td>
<td>Protein crystallography: Data collection</td>
</tr>
<tr>
<td>31</td>
<td>Protein crystallography: Principles of diffraction</td>
</tr>
<tr>
<td>32</td>
<td>Protein crystallography: Principles of diffraction</td>
</tr>
<tr>
<td>33</td>
<td>Protein crystallography: Diffraction data to electron density</td>
</tr>
<tr>
<td>34</td>
<td>Protein crystallography: Diffraction data to electron density</td>
</tr>
<tr>
<td>35</td>
<td>Protein crystallography: Obtaining phases</td>
</tr>
<tr>
<td>36</td>
<td>Protein crystallography: Model building</td>
</tr>
<tr>
<td>37</td>
<td>Protein crystallography: Refinement and validation</td>
</tr>
<tr>
<td>38</td>
<td>Electron microscopy</td>
</tr>
<tr>
<td>39</td>
<td>Small angle X-ray scattering</td>
</tr>
<tr>
<td>40</td>
<td>Small angle X-ray scattering</td>
</tr>
<tr>
<td>41</td>
<td>Mass spectrometry</td>
</tr>
<tr>
<td>42</td>
<td>Mass spectrometry</td>
</tr>
</tbody>
</table>

**Exams:**

For each of the three modules, a separate written exam will be given. The exams in general cover the materials contained both in the class and in the homework. This class does not contain a comprehensive final exam, but the exam for the last module is given during the final examination period.
For all exams, a graphing or non-graphing calculator is required. All reference materials are prohibited, except if expressly authorized prior to the exam. Exams are individual exercises, and the scholastic dishonesty policies of the University will be enforced. For further information, please consult the Texas A&M University Student Rules.

**Homework:**
Reading assignments and exercises will be provided periodically. Exercises will be graded if turned in, but do not count towards the course grade.

**Course Grade:**
The course grade is composed in equal parts of the grades from the three written exams.

<table>
<thead>
<tr>
<th>Module</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>33.3%</td>
</tr>
<tr>
<td>Module 2</td>
<td>33.3%</td>
</tr>
<tr>
<td>Module 3</td>
<td>33.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The following letter grades and percentages will be applied:
- A - 100.0%-90.0%
- B - 89.9%-80%
- C - 79.9%-70.0%
- D - 69.9%-60%
- F - 59.9%-0%

**Attendance:**
In case of an absence from an exam, a makeup exam will be given only if the absence is University-excused. To claim an excused absence, you must provide appropriate documentation within the time frame specified in the TAMU Student Rule 7. Specifically, you must notify the instructor prior to an absence if known in advance, or by the end of the second working day after the absence in case of an emergency. In case of injury or illness, you must provide confirmation of a visit to a health care professional. The TAMU Explanatory Statement for Absence from Class will not be accepted as an excuse from attending exams.

**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 TAMU community from the requirements or the processes of the Honor System. For additional information please visit: [http://www.tamu.edu/aggiehonor/](http://www.tamu.edu/aggiehonor/)

**Support Services:**
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.
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 664: Wireless and Mobile Systems

3. Catalog course description (not to exceed 50 words):
   Wireless and mobile systems; wireless communication fundamentals; wireless medium access control design; transmission scheduling; network and transport protocols over wireless design, simulation and evaluation; wireless capacity; telecommunication systems; vehicular, adhoc, and sensor network systems; wireless security; mobile applications.

4. Prerequisite(s):
   CSCE 463 or CSCE 464 or approval of instructor

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

6. Is this a repeatable course?      ☑ No
   Will this course be repeated within the same semester?    ☑ 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)

   M.S. in Computer Science, M.S. in Computer Engineering, Ph.D. in Computer Science, Ph.D. in 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) |
          |          | CSCE 664 Wireless and Mobile Systems |
  Lecture | Lab      | SCI | CIP and Fund Code | Admin. Unit | Acad. Year | HCE Code |
          |          | 0  3 | 0  0 | 1  1 | 0  7 | 0  1 | 0  0 | 0  6 | 0  0 | 7  1 | 1  1 | -  1 | 2  0 | 0  0 | 3  6 | 3  2 |
          |          | 0 3 00 03 1 1 07 0 1 0 0 0 6 0 0 7 1 1 1 - 1 2 0 0 3 6 3 2 |
          |          | 0 3 0 0 0 3 1 1 0 7 0 1 0 0 0 6 0 0 7 1 1 1 - 1 2 |
          |          | 0 3 0 0 0 3 1 1 0 7 0 1 0 0 0 6 0 0 7 1 1 1 - 1 2 |

Approval recommended by:

Donald R. Friesen

Date

Dean of College

Date

Chair, College Review Committee

Date

Robin Autenrieth

Robin Autenrieth

Date

Robin Autenrieth

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
Course title and number: CSCE 664: Wireless and Mobile Systems
Term: Spring 2012
Meeting times and location: TBD

Course Description and Prerequisites
Wireless and mobile systems; wireless communication fundamentals; wireless medium access control design; transmission scheduling; network and transport protocols over wireless design, simulation and evaluation; wireless capacity; telecommunication systems; vehicular, adhoc, and sensor network systems; wireless security; mobile applications.
Prerequisites: CSCE 463 or CSCE 464 or approval of instructor

Learning Outcomes or Course Objectives
Students will acquire background knowledge on wireless propagation, multiple access control and network/transport protocols for wireless. Students will learn how to design algorithms for wireless networks and how to simulate wireless network protocols. Students will become familiar with the current research topics in vehicular, mobile adhoc and sensor networks and wireless security, and will develop, implement and evaluate their own ideas.

Students will implement in a network simulator wireless networking algorithms and protocols. Students will evaluate the performance of their algorithm/protocol design by comparing it, in simulator, with the state of art solutions. Students will read literature on recent research topics in cellular, vehicular, adhoc and sensor networking and wireless security, and make a presentation on a research topic of their interest. Students will develop their own research idea, as a class project.

Instructor Information
Name: Radu Stoleru
Telephone number: (979) 862-8349
Email address: stoleru@cse.tamu.edu
Office hours: TBD
Office location: HRBB 330B

Textbook and/or Resource Material
Nitin H. Vaidya, "Wireless Networks", UIUC ECE/CS 439 lecture notes, 2010. Research papers from premier wireless networking conferences and journals will be distributed in class.

Grading Policies
Assignments 15%
Midterm 25%
Class Project 45%
Paper critique: 10%
Participation 5%
The grading scale will be: A ≥ 90% > B ≥ 80% > C ≥ 70% > D ≥ 60% > F.

Assignments: there will be three homework assignments, each including paper-and-pencil problems from the textbook and/or programming problems.
Paper critique: there will be twelve paper summaries/critiques due, covering the papers presented in class.

Attendance

The attendance policy for this class will be administered in accordance with Student Rule #7 - http://student-rules.tamu.edu/rule07

Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required Reading/Homework</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>2</td>
<td>Wireless transmission</td>
<td>Chapter 2; HW#1 due</td>
</tr>
<tr>
<td>3</td>
<td>Medium Access Control in wireless networks</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>4</td>
<td>Routing in wireless networks</td>
<td>Chapter 5; HW#2 due</td>
</tr>
<tr>
<td>5</td>
<td>Mobile IP, TCP over wireless</td>
<td>Chapter 6</td>
</tr>
<tr>
<td>6</td>
<td>Address assignment in wireless networks</td>
<td>Chapter 7; HW#3 due</td>
</tr>
<tr>
<td>7</td>
<td>Transport capacity of wireless networks</td>
<td>Chapter 9</td>
</tr>
<tr>
<td>8</td>
<td>Midterm</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Topics in cellular and satellite networking</td>
<td>Hand-outs; Paper critique due</td>
</tr>
<tr>
<td>10</td>
<td>Topics in vehicular networking</td>
<td>Hand-outs; Paper critique due</td>
</tr>
<tr>
<td>11</td>
<td>Topics in wireless adhoc networking</td>
<td>Hand-outs; Paper critique due</td>
</tr>
<tr>
<td>12</td>
<td>Topics in wireless sensor networking</td>
<td>Hand-outs; Paper critique due</td>
</tr>
<tr>
<td>13</td>
<td>Topics in wireless sensor networking</td>
<td>Hand-outs; Paper critique due</td>
</tr>
<tr>
<td>14</td>
<td>Topics in wireless security</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Project Presentations</td>
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</tbody>
</table>

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

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

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

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

Development of writing skills for graduate students in history; preparation of publishable-quality article-length essays based on primary sources; peer review and criticism.

4. Prerequisite(s): graduate standing, approval of instructor

Cross-listed with: Stacked with:

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

5. Is this a variable credit course? [ ] Yes [X] No

If yes, from _______ to _______.

6. Is this a repeatable course? [ ] Yes [X] 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)

M.A., Ph.D. in history

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>Hist</th>
<th>635</th>
<th>Writing History</th>
</tr>
</thead>
</table>

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<th>Lab</th>
<th>SCH</th>
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<th>Admin. Unit</th>
<th>Acad. Year</th>
<th>FICE Code</th>
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<td>035 40 01 01 00 01 14 50 10</td>
<td>11</td>
<td>00 36 32</td>
<td></td>
</tr>
</tbody>
</table>

Approval recommended by:

Walter L. Bueger
Department Head or Program Chair (Type Name & Sign) Date

Chair, College Review Committee Date

Department Head or Program Chair (Type Name & Sign) Date

Dean of College

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 – 2/10
Writing History

Instructor: Sylvia D. Hoffert
Office: Glasscock 210 B
Office Hours: Tues and Thurs. 11-1 and by appointment
Email: shoffert@tamu.edu
Phone: 979-845-8583

Course Description: This class is designed to strengthen students’ historical writing skills by systematically analyzing the ways in which historians present their research to other scholars and the general public. In order to do so we will spend the first few weeks reading and discussing literature that outlines and analyzes the writing process. The rest of the semester will be devoted to writing a manuscript of using primary resources.

Responsibility of Class Members: This course provides you the opportunity to systematically engage in scholarly writing and to refine your skills in that area. Those who sign up for this class should come prepared to begin writing. That means that you should already have done the bulk of your research for your particular project.

I also expect you to take your responsibilities as a member of a writing group seriously. It will be your job not only to work on your own project but help the members of your writing group by providing them with thoughtful advice concerning their work.

Responsibility of Graduate Student Advisors: Because I claim no expertise beyond the field of American women’s history and nineteenth century social history, I will depend upon your advisor to monitor the progress you are making on your project in terms of content. Therefore, I will expect you to turn each stage of your writing project in to your advisor as well as to me and your writing group for comment. I will depend on him or her to evaluate what you have written and submit a grade to me regarding what you have turned in. It is imperative, therefore, that you discuss taking this class with your advisor to make sure that he or she is willing to devote the time necessary to fulfill this expectation.

Prerequisites: Graduate Standing; approval of instructor.

Required Books
Anne Lamott, Bird by Bird: Some Instructions on Writing and Life (New York: Anchor, 1994)
Course Requirements:

You will be required to participate in discussions of the reading assignments, systematically critique the work of those in your writing group both verbally and in writing, and produce a conference paper, thesis or dissertation chapter, or publishable article.

Grades:

You will be graded on your class participation, the thoroughness of the critiques that you will provide to the other members of your writing group, and the quality of your final project.

Class participation: 20%
Writing group critiques: 20%
Writing assignment: 60%

Grading Scale: 90-100 = A
80-89 = B
70-79 = C
60-69 = D
Below 60 = F

Students with Disabilities: The Americans with Disabilities Act is a federal anti-discrimination law that provides civil rights protection for persons with disabilities. Among other things, this law requires that students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If a student believes that he or she has a disability requiring accommodation, he or she should contact the Office of Support Services for Students with Disabilities Room B-118 in Cain Hall (845-1637). It is the responsibility of the student to discuss this matter with the professor.

Academic Dishonesty/Plagiarism: “An Aggie does not lie, cheat, or steal, or tolerate those who do.” You are expected to be aware of the Aggie Honor Code, the Honor Council Rules and Procedures, and the University’s information regarding plagiarism, stated at (www.tamu.edu/aggiehonor). Plagiarism is a form of cheating. According to the aggiehonor web site it is “the appropriation of another person’s ideas, processes, results or words without giving appropriate credit.” Plagiarism occurs when a student uses materials taken in whole or in part from someone else’s research or writing including that which may be found on web sites, books, magazines, journals, newspapers, or other students’ papers. If you are unsure of the meaning of plagiarism, please see the professor. The academic community takes plagiarism very seriously. Committing plagiarism will result in receiving an F for the assignment, may lead to an F in the course, and may result in expulsion from the university.
Reading and Writing Schedule

Week I

Introduction to the Class
#1 We will explore your research topics in class. Your discussion of your topic should center on the following issues: What question are you trying to answer? Why is this question important? And what sources do you have available? What problems do you foresee in writing up your research?

#2 Come to class prepared to discuss the historical text you admire the most and analyze why you think it is well-written.

Week II

#1 Read and Discuss Lamont

#2 Come to class prepared to turn in a 100 - 150 word statement of your research topic/question as well as a working bibliography of secondary and primary sources on your topic. The bibliography is intended to serve as the basis for the review of the literature in your paper, article, or dissertation.

#3 We will set up our writing groups this week.

Week III

#1 Read and Discuss Belcher

#2 Discuss Organizational Principles Related to Writing Introductions
A good introduction is essential for any piece of historical writing. This week we will analyze the introduction to Shawn Johansen’s Family Men and establish a criteria for evaluating each other’s introductions.

#3 As a professional historian you will be asked to write critiques of article manuscripts, book manuscripts, and text books at the request of editors. We will also discuss what should be included in such critiques.

#4 Discuss documentation (footnotes/endnotes).

Week IV

#1 Read and Discuss Bolker
#2 Send introductions via email attachment to me, your advisor, and to the members of your writing group to be critiqued. Critiques will be made verbally and in writing in class on Feb. 18.

**Week V**

#1 We will provide each other with feedback on our introductions.


**Week VI -- Writing and Conferences**

**Week VII**

#1 Read Ernesto Chavez, Miroslava Chavez-Garcia and Luis Alvarez, “Preparing a Successful Fellowship or Grant Application,” *OAH Newsletter*, August, 2009, 7, 14; David Oshinsky, “No Thanks, Mr. Nabokov” -- handouts.

#2 At some point in your research and writing process, you will need to consider applying for fellowships or grants. This week we will discuss the process of grant writing.

#3 Once you have produced what you consider to be a publishable manuscript, you will have to choose a place to send it and write a letter to the editor of the journal or publisher you have selected. If an editor is interested in your project, he or she will ask you to submit all or part of it for consideration. If he or she is interested in its publication, he or she will send it off to readers who will send in reports evaluating the text. They will usually demand revisions. We will discuss these matters as well.

**ON MONDAY of this week** – send a draft of your paper to me, your advisor, and your writing group. Critiques will be made in class both verbally and in written form on Thurs., March 25.

**-- Spring Break**

**Week VIII** -- Critiques of first drafts due in class

**Week IX -- Writing and Conferences**

**Week X -- Writing and Conferences**
ON MONDAY of this week — Send second draft of your paper to me, your advisor, and your writing group. Critiques will be made both verbally and in written form on Thurs., April 15.

**Week XI** -- Critiques of second drafts due in class

**Week XII** -- Writing

**Week XIII** -- Writing

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

Form Instructions

1. Request submitted by (Department or Program Name): Horticulture Science

2. Course prefix, number and complete title of course: HORT 645 World Agriculture and International Plant Breeding

3. Catalog course description (not to exceed 50 words): Evolution of world agriculture; plant breeding and improved varieties; international agricultural research centers and green revolution; population growth; environmental challenges; IPR; role of plant breeding and biotechnology in meeting world food needs.

4. Prerequisite(s): SCSC 304, HORT 404 or consent of instructor

Cross-listed with: SCSC 645
Stacked 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)

   M.S. or Ph.D. status

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)
      H       O       R       T          6       4       5
      W       O       R       L       D          A       G       &       I
      A       N       T       L          P       L       T       B       R       E       E       D

Lect. Lab SCH CIP and Fund Code Admin. Unit Acad. Year HCE Code
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Approval recommended by:

Tim Davis
Department Head or Program Chair (Type Name & Sign) Date

David Baltenberger
Department Head or Program Chair (Type Name & Sign) Date

Submitted to Coordinating Board by:

Associate Director, Curricular Services Date

Chair, GC or UCC Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Curricular Services – 3/10
1. **Course description and pre-requisite**
   Pre-requisite – SCSC.304 or Hort.404 or consent of the instructor
   Evolution of world agriculture; plant breeding and improved varieties; international agricultural research centers and green revolution; CGIAR and other Non-CGIAR programs for international agricultural research and development; future population growth and food needs; environmental challenges, IPR issues and the role of plant breeding and biotechnology in feeding the world in 21st century.

2. **Learning outcomes (course objectives)**
   At the end of the course, the students would be aware of the current situation in world agriculture, international agriculture and plant breeding programs, green revolution and related issues, Consultative Group on International Agricultural Research (CGIAR) and non-CGIAR programs for international agriculture, future challenges and opportunities to achieve global food security in the wake of growing population, global warming, declining water availability, IPR issues and environmental concerns.

3. **Instructor information**
   Name – Dr. B.B. Singh, Tel. 845-3066, bsingh@ag.tamu.edu, 8am-5pm, Rm.428, Heep Building

4. **Text book and resource materials**
   No text book. Web based references and relevant publications:
   www.cipotato.org; www.agra.org; websites of relevant countries, and others from time to time.
   Handouts would be given for major topics.

5. **Grading policies**
   Attendance - 10%
   One hour exam – 20%
   Two assignments – 30%
   Final examination – 40%

Grade: A = 90 and above
   B = 80-89
   C = 70-79
   D = 60-69
   F = 50-59
6. Class Schedule

1. Evolution of world agriculture – a historical perspective.
2. Origin, spread and economic importance of major crops in different regions.
3. Birth of genetics and science-based plant breeding.
4. Success in developing high yielding hybrid maize varieties in USA
5. US initiative to improve agriculture in Mexico and India
6. International Agricultural Research Centres established by Rockefeller and Ford Foundations in Asia, Africa and Central and South America.
7. Green Revolution – an unprecedented success story in India and other countries.
8. Consultative Group on International Agricultural Research (CGIAR) and other Non-CGIAR programs to support international agricultural research, training and development activities.
9. CGIAR sponsored International Agricultural Research Centres and their mandates.
10. Breeding programs for major crops at CIMMYT, IRRI, IITA, CIAT, CIP, ICRISAT, WARDA and ICARDA and international variety trials.
11. Recent successes in plant biotechnology and its role in national and international plant breeding programs.
12. Reasons for ‘No Green Revolution’ in Africa and efforts to achieve it.

Attendance Policy

The University views class attendance as the responsibility of an individual student. Attendance is essential to complete the course successfully. University rules related to excused and unexcused absences are located on-line at http://student-rules.tamu.edu/rule07.

Academic Integrity Statement

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For more information, read the Honor Council Rules and Procedures at
http://www.tamu.edu/aggiehonor

Americans with Disabilities Act (ADA)

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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.

Form Instructions:

1. Request submitted by (Department or Program Name): Industrial and Systems Engineering

2. Course prefix, number and complete title of course: ISEN 643. Strategic Construction and Engineering Management

3. Catalog course description (not to exceed 50 words): Strategic and systems perspectives applied to construction and engineering management projects, organizations, and industries; system dynamics methodology to model construction and engineering systems; understanding drivers of performance; feedback and high leverage points for performance improvement.

4. Prerequisite(s): Graduate classification or permission of the instructor

Cross-listed with: CVEN 654

Stacked 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)

6. 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 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)

| ISEN | 643 | Strategic Construction Engineering Management |

<table>
<thead>
<tr>
<th>Lect.</th>
<th>Lab</th>
<th>SCH</th>
<th>COP and Fund Code</th>
<th>Admin. Unit</th>
<th>Acad. Year</th>
<th>FICE Code</th>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Approval recommended by:

Brett A. Peters
Department Head or Program Chair Date

Robin L. Autenrieth
Chair, College Review Committee Date

Mark Burriss
Department Head or Program Chair Date

(if cross-listed course)

Robin L. Autenrieth
Dean of College Date

David Reed
Chair, GC or UCC 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 – 3/10
Number and Title of Course: ISEN 643 Strategic Construction and Engineering Management
Hours: Lecturer 3 Lab 0, Credits 3
Prerequisites: Graduate standing or permission of the instructor

Course Description: Strategic and systems perspectives applied to construction and engineering management projects, organizations, and industries; system dynamics methodology to model construction and engineering systems; understanding drivers of performance; feedback and high leverage points for performance improvement.

Learning Outcomes: Students successfully completing this course should (1) have been exposed to and explored issues in the strategic management of engineering enterprises, (2) developed skills in building models of engineering enterprises and using the strategic process and policy design and analysis for improvement, (3) gain experience in the combined use of research literature and computer simulation modelling to investigate a specific engineering management issue, and (4) gain experience in teamwork.

Course Instructor: David N. Ford
Telephone number: 845-3759 Email: davidford@tamu.edu
Office hours: 10-11 AM, Tues-Thurs Office location: 705D, CE/TTI Building


Grading Policy:

- Assignments and exercises 25%
- Midterm Examination 40%
- Term project: Presentation 10%
- Report 25%

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 by Major Topics and Approximate Time Assigned to Each:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strategic engineering management issues</td>
<td>2</td>
</tr>
<tr>
<td>2. Experiencing the management of project dynamics</td>
<td>2</td>
</tr>
<tr>
<td>3. Conceptual modelling of dynamic engineering management systems</td>
<td>3</td>
</tr>
<tr>
<td>4. Formal modelling of engineering enterprises</td>
<td>2</td>
</tr>
<tr>
<td>5. Model validation, analysis, and use for strategic management</td>
<td>3</td>
</tr>
<tr>
<td>6. Project discussion and presentations</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
</tr>
</tbody>
</table>
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.

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.

Form Instructions

1. Request submitted by (Department or Program Name): Materials Science and Engineering (MSEN)

2. Course prefix, number and complete title of course: MSEN 603 Fundamentals of Soft and Biomaterials

3. Catalog course description (not to exceed 50 words): Introductory graduate-level survey on the general areas of soft materials and biomaterials; includes basic concepts of colloidal particle physics, polymer physics and chemistry and general concepts in biomaterials.

4. Prerequisite(s): Undergraduate general chemistry course; graduate classification

Cross-listed with: NA

Stacked with: NA

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)

MSEN Ph.D.

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

M.S., Ph.D., Materials Science and Engineering; Aerospace, Biomedical, Chemical, Mechanical 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) | Lect | Lab | SCI | CIP and Fund Code | Admin. Unit | Acad. Year | HCE Code
--- | --- | --- | --- | --- | --- | --- | --- | ---
MSEN | 603 | FND MTL SOFT & BIOMATERIALS | 0 | 3 | 0 | 0 | 34 | 010010002 | 05901112 | 003632

Approval recommended by:

Ibrahim Karaman
Department Head or Program Chair (Type Name & Sign) Date: 11/19/2010

Chair, College Review Committee

Robin Autenrieth
Dean of College Date: 12-8-10

David Reed
Chair, GC or UCC

Date: 

Submitted to Coordinating Board by:

Associate Director, Curricular Services
Sandra Williams

Date

Effective Date

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

Curricular Services – 3/10
Fundamentals of Soft and Biomaterials

Instructor: Nicole Zacharia
E-mail: nzacharia@tamu.edu
Phone: 979-845-2204
Office: ENPH 410

Prerequisites: undergraduate general chemistry; graduate classification

Class meeting times and location: To be announced in April 2011.

Description: MSEN 603 aims to serve as an introductory level survey for graduate students to the general areas of soft materials and biomaterials. Basic concepts of colloidal particle physics, polymer physics and chemistry as well as general concepts in biomaterials will be discussed.

Texts and References
Hamley, I.W., Introduction to Soft Matter (required)
Hiemenz, P.C., and T. P. Lodge, T.P., Polymer Chemistry (recommended)
Sperling, L.H., Introduction to Physical Polymer Science (recommended)
Young, R. J. and Lovell, P.A., Introduction to Polymer Chemistry (recommended)
Hiemenz, P.C., Rajagopalan, R., Principles of Colloid & Surface Chemistry (recommended)
Evans, D.F. Wennerstrom, H., The Colloidal Domain (recommended)
Ratner, Buddy, Ed., An Introduction to Materials in Medicine (recommended)

Grading Policy

| Homework | 20% |
| Exam 1 | 25% |
| Exam 2 | 25% |
| Paper | 5% |
| Final | 25% |

Grades will be determined by a combination of tests, homework assignments/projects and a final exam. There will weekly homework assignments, as well as a five-page paper due towards the end of the semester. There will be two exams during the semester as well as a final exam.

A > =90; 80 = < B <90; 70 = < C<80; 60 = < D <70; F <60

Week | Topic
--- | ---
1 | Intro to colloids, hydrodynamics, Brownian motion
2 | Electrostatics (debye-huckel, dlvo, electrophoresis)
3 | Electrostatics, surfaces (chemistry/monolayers)
4 | Aggregation/dispersion/sedimentation
5 | Surface tension and contact angle
6 | Amphiphiles, micelles and vesicles, liquid crystals
7 | Intro to polymers, chain structure, basic synthesis
8 | Spring break
9 | MW determination, viscosity, glass transition
10 | Polymer solution thermodynamics, crystallinity
11 | Rubber elasticity, light scattering; Mechanical properties/viscoelasticity
12 | Intro to biomaterials; natural polymers, hydrogels, bioerodible/bioresorbable material
13 | Proteins and cells: adsorption and interaction with surfaces
14 | Chemical and biochemical degradation of polymers, drug delivery
**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.

**Academic Integrity Statement and Policy** "An Aggie does not lie, cheat or steal, or tolerate those who do."
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. Request submitted by (Department or Program Name): Zachry Department of Civil Engineering
2. Course prefix, number and complete title of course: OCEN 677 Environmental Fluid Mechanics
3. Catalog course description (not to exceed 50 words): Introduction to fluid and mass transport in naturally occurring flows. Topics include molecular and turbulent diffusion; dispersion; river, estuary, and ocean mixing; dissolution boundary layers; tidal mixing; offshore wastewater outfalls; introduction to environmental quality numerical modeling.

4. Prerequisite(s): CVEN 311 or equivalent

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)
      MEN, M.S., Ph.D. in Civil or Ocean 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. Phybx Course # Title, eluding punctuation
   OCEN 677 Environmental Fluid Mechanics
   Lect. Lab SCH OIP and Fund Code
   0 3 0 0 0 3 1 4 2 4 0 1 0 0 0 6 0 6 3 0 1 1 - 1 2 0 0 3 6 3 2
   Approval recommended by:
   Mark Burns 11/15/10
   Department Head or Program Chair (Type Name & Sign) Date
   Chair, College Review Committee
   Robert Autenrieth 12/8/10
   Dean of College
   Robin Autenrieth 12/8/10
   Date
   Department Head or Program Chair (Type Name & Sign) Date
   (if cross-listed course)
   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 – 3/10
OCEN 677
Environmental Fluid Mechanics

Instructor : Dr. Scott A. Socolofsky
Office    : CE/TTI 802B
Office Hours : TR 11:00 a.m. – 12:00 p.m.
Telephone : (979) 845-4517
Email      : socolofs@tamu.edu

Environmental Fluid Mechanics (3-0). Credit 3. A first course in environmental fluid mechanics: an introduction to fluid and mass transport in naturally occurring flows. Topics include molecular and turbulent diffusion; dispersion; river, estuary, and ocean mixing; dissolution boundary layers; tidal mixing; offshore wastewater outfalls; and an introduction to environmental quality numerical modeling. Pre-requisite: CVEN 311.

The objective of this course is to introduce the physics and chemistry of transport and mixing of substances in the hydrosphere by learning to:

- Understand the effects of diffusion, advection, dispersion, and chemical reactions on concentrations in the environment
- Apply the governing transport equations to solve problems with diverse boundary and initial conditions
- Evaluate the important processes affecting fate and transport in a range of problem situations
- Synthesize the analysis tools developed in the course to solve real-world transport problems

1. Textbooks and Other Resources

There is one required textbook for this course:


There is also an on-line textbook by the course instructor available from the course website (see below) under the Book index heading

- Socolofsky, S. A. and Jirka, G. H. (2005), Mixing and Transport in the Environment, available for download from the course website under the topic “Book”.

To access the other online course materials (downloads of assignments, course handouts, related resources), please see the course web pages at

- http://ceprofs.tamu.edu/ssocolofsky/OCENx89/
Among the many other good textbooks on this subject, the following reference books are also recommended:


2. Tentative Course Calendar

The following table presents a tentative course calendar.

In the following table, the sections in the Reading column marked “C” are from Chin (2006) and those marked “S” are from Socolofsky and Jirka (2005); reading should be completed before the indicated lecture.

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Introduction and Governing Equations</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Introduction, concentration, units of measure, dimensional</td>
<td>C1.1-1.4</td>
</tr>
<tr>
<td></td>
<td>analysis</td>
<td>S1.1</td>
</tr>
<tr>
<td>2</td>
<td>Fick’s law</td>
<td>C2.1-2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S1.2</td>
</tr>
<tr>
<td>3</td>
<td>Diffusion equation</td>
<td>C3.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S1.2</td>
</tr>
<tr>
<td>4</td>
<td>Instantaneous point source solution in 1D</td>
<td>C3.2.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S1.3</td>
</tr>
<tr>
<td>5</td>
<td>Point source solution continued</td>
<td>C3.2.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S1.3-1.4</td>
</tr>
<tr>
<td>6</td>
<td>Advection diffusion equation</td>
<td>C3.2.2-3.2.5</td>
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<tr>
<td></td>
<td></td>
<td>S2.1</td>
</tr>
<tr>
<td>7</td>
<td>Measuring diffusion coefficients (Introduction to Field Experiment)</td>
<td>S3.3-3.4</td>
</tr>
<tr>
<td>8</td>
<td>Initial spatial distributions; fixed concentrations</td>
<td>C3.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S2.2</td>
</tr>
<tr>
<td>9</td>
<td>Other solutions; superposition; image sources*</td>
<td>S2.3-2.4</td>
</tr>
<tr>
<td></td>
<td><strong>Riverine Mixing in the Environment (1D)</strong></td>
<td></td>
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<tr>
<td>10</td>
<td>Properties of turbulence</td>
<td>C4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S3.1</td>
</tr>
<tr>
<td>11</td>
<td>Reynolds decomposition; turbulent diffusion</td>
<td>C4.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S3.1</td>
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<tr>
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<td><strong>Exam 1: Fick’s law, diffusion equation, and basic solutions to the diffusion equation. (through lecture 9)</strong></td>
<td>C4.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S3.2</td>
</tr>
<tr>
<td>12</td>
<td>Taylor dispersion</td>
<td>C4.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S3.2</td>
</tr>
<tr>
<td>13</td>
<td>Dispersion coefficients; Cowaselon Creek dye study example</td>
<td>C4.3-4.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S3.3-3.4</td>
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<tr>
<td>14</td>
<td>Reaction kinetics</td>
<td>S4.1-4.2</td>
</tr>
<tr>
<td>15</td>
<td>Solution to the reacting advective transport equation</td>
<td>S4.3</td>
</tr>
<tr>
<td>--</td>
<td>Spring Break – no class</td>
<td></td>
</tr>
<tr>
<td>--</td>
<td>Spring Break – no class</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Open channel hydraulics</td>
<td></td>
</tr>
</tbody>
</table>

Lake, Estuary, and Ocean Mixing (2 and 3D)

<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>17</td>
<td>Boundary exchange</td>
<td>S5.1</td>
</tr>
<tr>
<td>18</td>
<td>Air/water interface</td>
<td>C4.4.2-4.4.4, S5.2</td>
</tr>
<tr>
<td>19</td>
<td>Sediment/water interface</td>
<td>S5.3</td>
</tr>
<tr>
<td>20</td>
<td>Ocean outfalls: Near field 1</td>
<td>C8.1</td>
</tr>
<tr>
<td>21</td>
<td>Ocean outfalls: Near field 2</td>
<td>C8.2</td>
</tr>
<tr>
<td>22</td>
<td>Ocean outfalls: Far field*</td>
<td>C8.3</td>
</tr>
<tr>
<td>--</td>
<td>Exam 2: River, boundary, and estuary mixing</td>
<td></td>
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</tbody>
</table>

Applications

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<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>23</td>
<td>Water quality control in estuaries</td>
<td>C8.4</td>
</tr>
<tr>
<td>24</td>
<td>Field experiment</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Field experiment debriefing</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Final project presentations</td>
<td></td>
</tr>
<tr>
<td>--</td>
<td>Final Exam: Comprehensive</td>
<td></td>
</tr>
</tbody>
</table>

*Advanced topics will be covered as time permits

3. **Grading**

Your final grade is broken down as follows:

- Homework 20%
- Group Project 20%
- Exam 1 30%
- Exam 2 30%

Letter grades will be assigned from your total course score according to ≥90% to 100%: A, ≥80% and <90%; B, ≥70% and <80%; C, ≥60% and <70%; D, below 60%; F. Please note that homework and the group project are 40% of your total grade.

4. **Homework Assignments**

Homework will be assigned periodically and the due date announced. A tentative schedule of homework assignments is posted on the course website.

**POLICY:** Homework is a substantial part of your course grade and must be completed individually. You may ask others for help at places where you have made diligent attempts and have become stumped. You may ask others for confirmation of results at significant milestones in the problem. You may not share computer programs, Word documents, or Excel files. Copying another student’s solution, even if you slightly change the presentation will be considered as cheating and given a grade of zero (see Plagiarism statement below).

Homework problems must be answered clearly, showing all your work, and should be easy to follow. Where applicable, the solution to each problem should contain:
• A brief statement of the problem
• A sketch or graph
• A list of all the important assumptions made to solve the problem
• The general form of the equations used to solve the problem
• An equation with the plugged in numbers and the highlighted solution

Failure to include one of these elements will result in lost credit for the problem. Not all homework problems may be graded. Partial credit will be given for wrong answers that demonstrate some of the correct solution method.

Homework is due at the start of class on the assigned day either in class or in my mailbox on the 8th floor of the CE/TTI building. Unless you have a university excuse (see Absences below), late assignments will not be accepted for full credit. Please do not ask for exceptions.

5. Group Project

There will be one group project that will be due on the last day of class. Different aspects of the project will be assigned throughout the semester. You will work in groups of three students each. Details will be presented in February.

6. Class Participation and Quizzes

You are expected to attend all classes, turn in all assignments, and complete all exams at their scheduled times. Exceptions are only permitted for university excused absences (see Absences below).

Classes will start on time, and pointers for the homework assignments and last-minute changes to the schedule may be announced in class. It is your responsibility to be in class to receive this information or to get the information from another student.

In-class quizzes will be counted toward up to 5% of the homework grade.

7. Exams

Two 75-minute exams are scheduled (see Course Calendar above for scheduling). The grading of the exams will be based on both the approach and the final answer. Exams will be closed book and closed notes. You may prepare notes on the front and back of one page of 8½ x 11 paper for each exam. You will need a hand-held calculator for each exam. It is your responsibility to ensure that your calculator is working and will perform in the examination.

8. Graduate-level Component

This course meets together with OCEN 475, an undergraduate-level course in Mixing and Transport in the Environment. Although the lectures for both course offerings will be the same, the assignments will be different for undergraduates compared to graduate students. To receive graduate-level credit for this course, graduate students will be expected to complete separate homework assignments from the undergraduate students and a separate, group course project. Both the graduate assignments and the course project will be assigned at a graduate level. The goal of these assignments will be to get graduate students to a level that they can easily read the journal literature in environmental fluid mechanics. Hence, assignments will be directed toward research.
9. Plagiarism and Cheating

"An Aggie does not lie, cheat, or steal or tolerate those who do." Students are expected to understand and abide by the Aggie Honor Code presented on the web at:

- [http://www.tamu.edu/aggiehonor/](http://www.tamu.edu/aggiehonor/)

No form of scholastic misconduct will be tolerated. Academic misconduct includes cheating, fabrication, falsification, multiple submissions, plagiarism, complicity, etc. These are more fully defined in the above web site. As commonly defined, plagiarism consists of passing off as one's own the 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 permission of that person. Since the homework grade for this course is a high percentage of your total grade, no plagiarism or cheating will be permitted in the homework. Violations will be handled in accordance with the Aggie Honor System Process described on the web site.

10. Absences

The university views class attendance as an individual student responsibility. Students are expected to attend class and to complete all assignments. Instructors are expected to give adequate notice of the dates on which major tests will be given and assignments will be due. This information should be provided on the course syllabus, which should be distributed at the first class meeting. For more details, please read Part I, Rule~7 of the Texas A&M University Student Rules at

- [http://student-rules.tamu.edu/](http://student-rules.tamu.edu/)

Please contact me as soon as you know you will miss a class or an exam so that a reasonable alternative can be accommodated. Unexcused absences will result in a grade of zero for the missed work. The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence.

12. Americans with Disabilities Act (ADA)

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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. Request submitted by (Department or Program Name): Soil and Crop Sciences

2. Course prefix, number and complete title of course: SCSC 645 World Agriculture and International Plant Breeding

3. Catalog course description (not to exceed 50 words): Evolution of world agriculture; plant breeding and improved varieties; international agricultural research centers and green revolution; population growth; environmental challenges; IPR; role of plant breeding and biotechnology in meeting world food needs.

4. Prerequisite(s): SCSC 304, HORT 404 or consent of instructor

Cross-listed with: HORT 645

Stacked 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. M.S. or Ph.D. status

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)

| SCSC | 645 | WORLD AG & INTL PLT BRED |

| Lect. Lab | SCH | CP and Fund Code | Admin. Unit | Acad. Year | HCE Code |

| 0 | 1 | 0 | 0 | 2 | 0 | 0 | 5 | 2 | 6 | 2 | 0 | 1 | 1 - 1 | 1 | 2 | 0 | 0 | 3 | 6 | 3 | 2 |

Approval recommended by:

David Baltesperger
Department Chair or Program Chair (Type Name & Sign) Date

Chair, College Review Committee Date

Tim Davis
Department Chair or Program Chair (Type Name & Sign) Date

Dean of College Date

Submitted to Coordinating Board by:

Chair, GC or UCC Date

Associate Director, Curricular Services Date

Effective Date

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

Curricular Services – 3/10
1. **Course description and pre-requisite**
   Pre-requisite – SCSC.304 or Hort.404 or consent of the instructor
   Evolution of world agriculture; plant breeding and improved varieties; international agricultural research centers and green revolution; CGIAR and other Non-CGIAR programs for international agricultural research and development; future population growth and food needs; environmental challenges, IPR issues and the role of plant breeding and biotechnology in feeding the world in 21st century.

2. **Learning outcomes (course objectives)**
   At the end of the course, the students would be aware of the current situation in world agriculture, international agriculture and plant breeding programs, green revolution and related issues, Consultative Group on International Agricultural Research (CGIAR) and non-CGIAR programs for international agriculture, future challenges and opportunities to achieve global food security in the wake of growing population, global warming, declining water availability, IPR issues and environmental concerns.

3. **Instructor information**
   Name – Dr. B.B. Singh, Tel. 845-3066, bsingh@eg.tamu.edu, 8am-5pm, Rm.428, Heep Building

4. **Textbook and resource materials**
   No textbook. Web based references and relevant publications:
   Handouts would be given for major topics.

5. **Grading policies**
   Attendance - 10%
   One hour exam – 20%
   Two assignments – 30%
   Final examination – 40%

   Grade: A = 90 and above
   B = 80-89
   C = 70-79
   D = 60-69
   F = 50-59
6. Class Schedule

1. Evolution of world agriculture – a historical perspective.
2. Origin, spread and economic importance of major crops in different regions.
3. Birth of genetics and science-based plant breeding.
4. Success in developing high yielding hybrid maize varieties in USA
5. US initiative to improve agriculture in Mexico and India
6. International Agricultural Research Centres established by Rockefeller and Ford Foundations in Asia, Africa and Central and South America.
7. Green Revolution – an unprecedented success story in India and other countries.
8. Consultative Group on International Agricultural Research (CGIAR) and other Non-CGIAR programs to support international agricultural research, training and development activities.
9. CGIAR sponsored International Agricultural Research Centres and their mandates.
10. Breeding programs for major crops at CIMMYT, IRRI, IITA, CIAT, CIP, ICRISAT, WARDA and ICARDA and international variety trials.
11. Recent successes in plant biotechnology and its role in national and international plant breeding programs.
12. Reasons for ‘No Green Revolution’ in Africa and efforts to achieve it.

Attendance Policy

The University views class attendance as the responsibility of an individual student. Attendance is essential to complete the course successfully. University rules related to excused and unexcused absences are located on-line at http://student-rules.tamu.edu/rule07.

Academic Integrity Statement

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

For more information, read the Honor Council Rules and Procedures at http://www.tamu.edu/aggiehonor

Americans with Disabilities Act (ADA)

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. For additional information visit http://disability.tamu.edu.
Course Change Requests
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
Submit original form and attachments •

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

2. Course prefix, number and complete title of course:
   CHEM 660

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 5; enter proposed course title and proposed course description in item 6.

e. Change in course prefix, number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description:
   Nuclear Chemistry.
   Radioactive decay, nuclear models, nuclear spectroscopy, nuclear reactions, fission and other topics of current interest in nuclear chemical research. Laboratory work to emphasize modern nuclear chemical instrumentation.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
   Nuclear Chemistry.
   Radioactive decay, nuclear models, nuclear spectroscopy, nuclear reactions, fission and other topics of current interest in nuclear chemical research.

7. a. As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
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<th>Title (excluding punctuation)</th>
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<tr>
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<td>660</td>
<td>NUCLEAR CHEMISTRY</td>
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<th>Admin. Unit</th>
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<tr>
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<td></td>
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</tr>
</tbody>
</table>

   Approval recommended by:
   Department Head or Program Chair (Type Name & Sign) Date

   Chair, College Review Committee
   Dean of College
   Chair, GC or UCC

   Submitted to Coordinating Board by:

   Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
   Curricular Services – 03/10
Nuclear Chemistry
CHEM 660

Prof. Charles M. Folden III
Office: CYCL 208
Folden@comp.tamu.edu
979-845-1411
Office Hour: Wednesdays 11:00 A.M.-12:00 P.M. and by appointment

Course Description

This course will provide a rigorous study of the theoretical basis of modern nuclear chemistry. Topics will include alpha, beta, gamma, and fission decay, neutron-induced reactions, nuclear thermodynamics, electronic instrumentation, and current readings in nuclear chemistry. By the end of the semester you should have a strong foundation with these fundamental theories, allowing you to pursue research in a number of sub-fields of nuclear chemistry.

Textbook


An additional recommended textbook is Radiation Detection and Measurement by Glenn F. Knoll. Numerous editions are available, including the fourth edition released in 2010. Several lectures will be based on this textbook.

Exams

There will be two exams in addition to the final exam. All exams are closed-book and comprehensive.

Grading

Your grade will be comprised as follows: two exams worth 20% each, final exam 20%, homework 30%, and Capstone presentation 10%. All assignments are due on the date and time specified. The clarity of a solution will be a component of your grade, and assignments handed in are expected to be a final draft of your efforts. You must have the correct answer for the correct reason to receive full credit on any assignment. Incorrect or irrelevant information will negatively impact your grade.

Your score will decrease 10% for each day an assignment is late, and no work will be accepted that is more than one week late. Homework turned in on the day an assignment is due but after the time specified is considered one day late. Students may work together in groups but each student must turn in their own work. Copying solutions from another student will be considered a violation of the Aggie Honor Code (see below). If you want to turn in work outside of class then you may give it to the receptionist at the Cyclotron Institute.

Final grades in the course will be determined by the following scale:
Software

Students are expected to be able to fit data and use the fits to determine various quantities. (Excel works well for this purpose and is available on the computers in the Open Access Labs). You are expected to have access to a PDF reader; Adobe’s free viewer is available for many operating systems at get.adobe.com/reader. Students must also have a scientific calculator.

Academic Honesty

“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. The Honor Code will apply to all work in the class even if the student is not required to write the statement above and sign it. Any assignment handed in for credit will be assumed to have been completed in accordance with the Honor Code. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. Please visit aggiehonor.tamu.edu for additional information.

Students with Disabilities

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 979-845-1637. Please visit disability.tamu.edu for additional information. The Disability Services office is very busy at the beginning of the semester, so please make an appointment with them immediately if you feel you require assistance.

Absences

Attendance is expected at all lectures even though attendance will not be taken. You are responsible for all material presented in class and in the assigned readings, even if you are absent. If you miss an exam, you will be required to provide suitable documentation that your absence should be excused according to University rules and regulations (Student Rule 7). You should discuss any upcoming absences with the professor in advance.
<table>
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<tr>
<th>Date(s)</th>
<th>Topic(s)</th>
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<tr>
<td>January 20</td>
<td>Counting Statistics</td>
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<tr>
<td>January 25</td>
<td>Alpha Decay</td>
<td>Chap. 9</td>
</tr>
<tr>
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<td>Alpha Decay</td>
<td>Chap. 9</td>
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<td>Chap. 10</td>
</tr>
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<td>Gamma Decay</td>
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<td>Fission</td>
<td>Chap. 12</td>
</tr>
<tr>
<td>February 24</td>
<td>Fission</td>
<td>Chap. 12</td>
</tr>
<tr>
<td>March 1</td>
<td>Neutron-Induced Reactions</td>
<td>Chap. 13</td>
</tr>
<tr>
<td>March 3</td>
<td>Neutron-Induced Reactions</td>
<td>Chap. 13</td>
</tr>
<tr>
<td>March 8</td>
<td>Low-Energy Heavy-Ion Reactions</td>
<td>Chap. 13</td>
</tr>
<tr>
<td>March 10</td>
<td>Low-Energy Heavy-Ion Reactions</td>
<td>Chap. 13</td>
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<tr>
<td>March 15 and 17</td>
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<td>March 22</td>
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<td>Semiconductor Detectors</td>
<td>Knoll Chap. 11</td>
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<td>April 14</td>
<td>Scintillation Detectors</td>
<td>Knoll Chaps. 8-9</td>
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<td>Miscellaneous Detectors</td>
<td>Knoll Chap. 19</td>
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Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

Form Instructions

1. Request submitted by (Department or Program Name): Zachry Department of Civil Engineering

2. Course prefix, number and complete title of course: CVEN 654 Strategic Construction and Engineering Management

3. Change requested
   a. Prerequisite(s): From: Graduate classification To: Graduate classification or permission of instructor
   b. Withdrawal (reason):
   c. Cross-list with: ISEN 643

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description: Strategic Construction and Engineering Management. Strategic and systems perspectives are applied to construction and engineering management in projects, organizations, and industries. The system dynamics methodology is used to model construction and engineering systems to improve understanding of the drivers of performance and the use of feedback and high leverage points to improve performance.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words): Strategic Construction and Engineering Management. Strategic and systems perspectives applied to construction and engineering management projects, organizations and industries; system dynamics methodology to model construction and engineering systems; understanding drivers of performance; feedback and high leverage points for performance improvement.

7. a. As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
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b. Change to:

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| Lect.  | Lab      | SCH CIP and Fund Code         |
|        |          |                               |

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<th>Admin. Unit</th>
<th>Acad. Year</th>
<th>FICE Code</th>
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</tbody>
</table>

Approval recommended by:

Mark Burris
Department Head or Program Chair (Type Name & Sign) Date 12/2/10

Brett A. Peters
Department Head or Program Chair (Type Name & Sign) Date 11/29/2010 (If cross-listed course)

Dean of College
Robin Autenrieth
Date 12-8-10

Submitted to Coordinating Board by:

Chair, GC or UCC Date

Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Curricular Services – 09/10
Brief Supporting Statement of Changes
CVEN 654. Strategic Construction and Engineering Management

The reasons for the changes are briefly listed below:

The prerequisite is changed so that the instructor can give permission to a good undergraduate student for taking the course.

This course will be taught in cooperation with the Industrial and Systems Engineering Department.

The change in description is editorial.
Number and Title of Course:  CVEN 654  Strategic Construction and Engineering Management

Hours:  Lecturer 3  Lab 0,  Credits 3

Prerequisites:  Graduate standing or permission of the instructor

Course Description:  Strategic and systems perspectives applied to construction and engineering management projects, organizations, and industries; system dynamics methodology to model construction and engineering systems; understanding drivers of performance; feedback and high leverage points for performance improvement.

Learning Outcomes:  Students successfully completing this course should (1) have been exposed to and explored issues in the strategic management of engineering enterprises, (2) developed skills in building models of engineering enterprises and using the strategic process and policy design and analysis for improvement, (3) gain experience in the combined use of research literature and computer simulation modelling to investigate a specific engineering management issue, and (4) gain experience in teamwork.

Course Instructor:  David N. Ford
Telephone number:  845-3759  Email:  davidford@tamu.edu
Office hours:  10-11 AM, Tues-Thurs  Office location:  705D, CE/TTI Building


Grading Policy:  

<table>
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<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments and exercises</td>
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</tr>
<tr>
<td>Midterm Examination</td>
<td>40%</td>
</tr>
<tr>
<td>Term project: Presentation</td>
<td>10%</td>
</tr>
<tr>
<td>Report</td>
<td>25%</td>
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</tbody>
</table>

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.

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<th>Range</th>
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<td>B</td>
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<td>D</td>
<td>60-69</td>
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<td>F</td>
<td>59 and lower</td>
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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. Strategic engineering management issues</td>
</tr>
<tr>
<td>2. Experiencing the management of project dynamics</td>
</tr>
<tr>
<td>3. Conceptual modelling of dynamic engineering management systems</td>
</tr>
<tr>
<td>4. Formal modelling of engineering enterprises</td>
</tr>
<tr>
<td>5. Model validation, analysis, and use for strategic management</td>
</tr>
<tr>
<td>6. Project discussion and presentations</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
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"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 •

Form Instructions
1. Request submitted by (Department or Program Name): HISPANIC STUDIES
2. Course prefix, number and complete title of course: HISP 606 Spanish of the Southwest

Attach a brief supporting statement for changes made to items 3a thru 3d, and 6 below.
3. Change requested
   a. Prerequisite(s): From: HISP 602 or approval of instructor To: Graduate classification and proficiency in Spanish
   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 5; enter proposed course title and proposed course description in item 6.
   e. Change in course prefix, number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.
   f. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description: Spanish of the Southwest. Descriptive analysis of written varieties of southwest Spanish from Texas, New Mexico, and Arizona. Structure and variation of (a) the sound system, (b) grammatical patterns, and (c) the lexicon. Instruction to sociolinguistic issues relevant to southwest language studies.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words): Spanish in the United States. In-depth description and analysis of Spanish varieties spoken in the United States, by both traditional and new immigrant populations, including New Mexico and Louisiana Spanish, Mexican, Cuban, Puerto Rican, Dominican, Central and South American dialects; topics include accommodation, koinéization, borrowing, code-switching, attitudes and policies related to language maintenance and shift.

7. a. As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
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<tbody>
<tr>
<td>HISP</td>
<td>606</td>
<td>SPANISH OF THE SOUTHWEST</td>
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Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | FICE Code | Level |
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b. Change to:

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<th>Title (excluding punctuation)</th>
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Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code | Level |
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Approval recommended by:

Dr. Alberto Moreinas
Department Head or Program Chair (Type Name & Sign) Date

Chair, College Review Committee

Dean of College

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 – 03/10
Justification for proposed change:

Spanish in the United States was originally a phenomenon of the Southwestern states, one of the linguistic consequences of the American expansion to the old Spanish-Mexican borderlands. However, in the course of the 20th century, new immigrant groups have arrived in the United States, bringing with them diverse new dialects. These linguistic varieties have taken root in a territory vastly larger than the original confines of the Southwest, where they are being shaped in novel ways by their contact with each other and with English. We believe that a true understanding of Spanish in the United States requires knowledge of both the traditional and the new dialects, since it is an inescapable fact of American life. Our students will benefit from the expanded course content.
HISP 606
SPANISH IN THE UNITED STATES

Instructor: María Irene Moyna
Office: ACAD 302B
Phone: 862-3282
Email: moyna@tamu.edu

Catalog description:

HISP 606. Spanish in the United States. Credit 3. In-depth description and analysis of Spanish varieties spoken in the United States by both traditional and new immigrant populations, including New Mexico and Louisiana Spanish, Mexican, Cuban, Puerto Rican, Dominican, Central and South American dialects; topics include accommodation, koinéization, borrowing, code-switching, attitudes, and policies related to language maintenance and shift.

Course description:

Spanish is not a new language in the territory of the present-day United States. In fact, it was the first European language spoken in the Southwest, and in some parts of the country, varieties related to those spoken by the early settlers can still be found. However, in the past century, the Spanish-speaking presence in the United States has become larger, more diverse and more complex, as new waves of immigrants from many different countries have settled here. It is now estimated that over 30 million people speak Spanish in the United States, making it the second most widely spoken language. This course explores the present-day diversity of this linguistic community as well as the history of the Spanish presence in the United States, from colonial times until the present. We will define what is meant by Spanish in the United States, the names that have been given to these language varieties, and their main linguistic features. We will then discuss the dialectal subgroups of Spanish speakers, including Mexicans, Puerto Ricans, Cubans, and Central and South Americans. We will also discuss the historical varieties of Spanish of New Mexico, Louisiana, Texas, and California. The data will come from large-scale tools such as the US Census, linguistic atlases, and dictionaries, and from the direct consultation of written and oral data.

Mandatory text:

Readings:
A complete bibliography for this course appears at the end of the syllabus and is available through e-reserves.

Learning outcomes:
At the end of the course, students will be able to:

- Describe the main historical events responsible for the presence of Spanish speakers in the United States and explain how these affect the relative status of each linguistic group.
- Define, describe, and identify the main common linguistic features of Spanish varieties in the US.
• Define, describe, and identify the main distinguishing features of the varieties spoken by people of various national origins.
• Evaluate the impact of different political and social measures on minority language use, with special reference to Spanish.
• Successfully search and retrieve relevant academic bibliography from databases.
• Produce a publishable paper related to the field of Spanish in the US, using scientifically sound argumentation, appropriate methodology, style, and format.
• Identify conferences where the paper could be presented, write and evaluate conference abstracts, present papers professionally, and prepare a manuscript for publication.

Prerequisites:
Graduate classification and proficiency in Spanish.

Further information: This course will be taught in its entirety through the medium of Spanish, and students are expected to express themselves competently in this language. There will also be readings in English, so excellent reading comprehension in English is required.

Course format:
The course will be taught as a seminar, with constant student participation. In general, each weekly session will be divided into three sections. In the first part, the topic of the day will be introduced with the help of PowerPoint presentations. This will allow students to have copies of the slides before class (posted on WebCT). The second part will be a discussion or exercises of topics raised in class. Finally, the third part will be based on discussions led by the students and it will deal with the readings from the reading packet that was assigned for that week.

Attendance policy:
Please do your best to attend class and arrive on time, for your own good and for the benefit of your classmates. Two unjustified absences will result in the loss of half a point in the final grade. Valid justifications are listed in the student academic rules (http://student-rules.tamu.edu/rule7.htm) and must be documented in writing.

Grading scale:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>100 - 90%</td>
<td>A</td>
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<td>D</td>
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<tr>
<td>59% or less</td>
<td>F</td>
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</table>

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Article discussions (2) 20%
Final project 30%
Final project presentation 10%
Homework assignments 15%
Portfolio 15%
Participation 10%

Article discussions
Throughout the semester, and starting on week five, each student will be in charge of leading two discussions about the articles assigned for that week. The dates for those discussions will be assigned on the second week of classes; please come prepared to choose a date. If several people want to present on the same day, dates will be given through a lottery. Before your discussion, talk to the instructor about what you would like to do. Discussions should last approximately 20 minutes. More details will be provided in due course.

Final project and presentation

Students will demonstrate their ability to carry out original research in the field. For that they will gather original data on some variety of Spanish in the US. They will interpret these data based on a theoretical model and they will present them in two different ways. First, they will do an oral presentation, which will be on the day of the final exam. Second, they will write a research paper of approximately 15 pages. More details will be provided about the format of the research and the paper. The project will be divided into several tasks, each one of which must be completed by a given date (see calendar). It will be assigned a partial grade as follows:

Abstract 2%
Bibliography search 3%
Annotated bibliography 5%
First draft 8%
Final draft 12%

As soon as possible, students must define a research topic of their interest for the final project and discuss it with the instructor. It can involve any Spanish-speaking community in the United States.

Exercises and assignments

The best way to confirm understanding of a topic is through exercises and practical applications. Every class session we will do exercises, view videos, and the like; some work may be assigned for homework. Students are expected to read the bibliography before coming to class and to participate fully if discussion threads are organized through WebCT. The most interesting ideas from these discussions will be taken up in class.

Individual portfolio

Instead of in-class tests, each student will have to complete a portfolio with individualized assignments. Three tasks will be chosen from a list of five, based on a self-evaluation of perceived needs. These tasks may include the development of oral or written skills in Spanish, review of basic linguistic notions, or experimental design. The portfolio will be collected three times in the semester.

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Participation will be measured on the basis of attendance (5 points) and attitude (5 points). Attendance points will be lost with each unexcused absence. Attitude will be based on how well prepared students come to class and how enthusiastically they participate. Apart from the exercises and assignments mentioned above, there may be pop quizzes at any time. These quizzes will count towards the participation grade, so it is important to come to class regularly.
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All assignments must be written in computer and handed in during class. Assignments sent as computer attachments will only confirm that they were completed in a timely fashion, and do not exempt the student from bringing a hard copy to class. Assignment and paper deadlines are mandatory; half a point will be docked for each day of delay. No work will be accepted a week after its deadline, unless the delay was due to an excused absence. Please attach your excuse to the assignment.

Academic honesty:

The highest standards of ethics are expected. In homework assignments, in the final project, and in any other assessment, students are expected to produce original work. Plagiarism and cheating will be penalized. Plagiarism involves the use of material taken from other authors (either in print or online) without clearly specifying the source of citations through standard punctuation conventions. Any case of dishonesty will be referred to the Aggie Honor System Office.

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It is the teacher’s responsibility to guarantee an atmosphere where all students feel comfortable and ready to learn. Therefore, mutual respect and collaboration are expected. Insulting and discriminatory comments will not be tolerated.

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Tentative calendar

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignment/Evaluation</th>
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<tbody>
<tr>
<td>1</td>
<td>Preliminaries: Course description</td>
<td>Hand in personal information page. Internet search: websites on Spanish in the US.</td>
</tr>
<tr>
<td></td>
<td>Presentation of students</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discussion of information found on the internet.</td>
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<tr>
<td>2</td>
<td>The importance of Spanish in the United States (Lipski, Chapter 1)</td>
<td>Portfolio diagnostic</td>
</tr>
<tr>
<td>Page</td>
<td>Title</td>
<td>Discussion/Video/Portfolio Notes</td>
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| 3   | **Overview of scholarship (L 2)**          | Discussion: Espinosa (1911-12), Post (1931), Sánchez (1972), Bills & Ornstein (1976)  
<pre><code> |                                            | Video: *The Bronze Screen* (selections)                              |
 |                                            | Census data analysis: Spanish in Texas.                             |
</code></pre>
<p>| 5   | <strong>Mexican Spanish in the US (L 4)</strong>         | Discussion: Green (1986), Hidalgo (2001)                            |
|                                            | Video: <em>Oaxaca in California. The Mixtecs.</em>                         |
| 6   | <strong>Cuban Spanish in the US (L 5)</strong>           | Discussion: García &amp; Otheguy (1988), Lipski (1996)                  |
|                                            | Census data analysis: Spanish in Florida.                           |
|                                            | Census data analysis: Spanish in the Northeast.                    |
| 8   | <strong>Central American Spanish in the US (Salvadoran) (L 8, 9)</strong> | Discussion: Hernández (2002, 2007)                                 |
|                                            | Census data analysis: Spanish in Los Angeles and Washington D.C.    |
|                                            | Census data: Where are the Central Americans?                       |
|                                            | Final paper bibliography due.                                      |
|                                            | Portfolio # 2                                                      |
|                                            | Final paper bibliography due.                                      |</p>
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<tr>
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<th>Video: <em>El Norte</em> (selections)</th>
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<td></td>
<td>Report: Locating minority Hispanic communities</td>
<td>Final paper due</td>
</tr>
<tr>
<td>12</td>
<td><em>Accommodation and koinéization in US Spanish</em></td>
<td>Final paper due</td>
</tr>
<tr>
<td></td>
<td>Discussion: Ghosh Johnson (2005), Otheguy et al. (2007)</td>
<td>Final paper due</td>
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<tr>
<td></td>
<td>Group work: Questionnaire discussion</td>
<td>Final paper due</td>
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<tr>
<td>13</td>
<td><em>Traditional Varieties: New Mexico and Louisiana Spanish</em> (L 12)</td>
<td>Final paper due</td>
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<td>Discussion of data from the Atlas of New Mexico and Southern Colorado.</td>
<td>Final paper due</td>
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<td>14</td>
<td>Final paper presentations</td>
<td>Final paper due</td>
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</table>
Bibliography


Form Instructions

1. Request submitted by (Department or Program Name): HISPANIC STUDIES

2. Course prefix, number and complete title of course: HISP 614 Hispanic Dialectology

3. Change requested
   a. Prerequisite(s): From: Graduate classification To: Graduate classification and proficiency in Spanish
   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 5; enter proposed course title and proposed course description in item 6.
   e. Change in course prefix, number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description: HISP 614 Hispanic Dialectology. Topics include varieties of Spanish spoken throughout the Americas. Spanish-speaking regions covered include South America, the Caribbean, Central America, and North America, including the southwestern United States. The course covers historical background, structural linguistics, and sociolinguistic issues (social and stylistic variation).

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words): HISP 614 Spanish Dialectology. Analysis of regional linguistic variation from a synchronic and diachronic perspective; topics include varieties spoken in Spain, the Americas, and worldwide, dialect diversification, contact varieties, Spanish-based pidgins and creoles.

7. a. As currently in course inventory:

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<td>614</td>
<td>HISPANIC DIALECTOLOGY</td>
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<th>Admin. Unit</th>
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b. Change to:

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<th>Title (excluding punctuation)</th>
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</thead>
<tbody>
<tr>
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<td>614</td>
<td>SPANISH DIALECTOLOGY</td>
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<th>Admin. Unit</th>
<th>Acad. Year</th>
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<td>Level 3</td>
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</table>

Approval recommended by:

Dr. Alberto Moreiras

Department Head or Program Chair (Type Name & Sign) Date

Chair, College Review Committee

Date

Dean of College PATRICIA A. HWBELY

(if cross-listed course)

Submitted to Coordinating Board by:

Chair, GCC or UCC Date

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

Curricular Services – 03/10
Justification for proposed change:

The proposed change broadens the scope of the course from the Americas to the Spanish-speaking world more generally. This is felt to be necessary for several reasons. First, the regional varieties of Spain are of interest in themselves, and up until now they had not been included in any course in our graduate program. Moreover, these varieties are historically connected to much of the variation present in the dialects of the Americas and the rest of the world. In sum, a thorough understanding of regional variation must be inclusive of all regions of the Spanish-speaking world.
HISP 614  
Spanish Dialectology

Instructor: María Irene Moyna  
Office: ACAD 302B  
Phone: 862-3282  
Email: moyna@tamu.edu

Catalog description:

HISP 614 Spanish Dialectology. Credit 3. Analysis of regional linguistic variation from a synchronic and diachronic perspective; topics include varieties spoken in Spain, the Americas, and worldwide; dialect diversification, contact varieties, Spanish-based pidgins and creoles.

Course description:
Any native speaker of Spanish who comes in contact with speakers from other areas immediately notices differences in the pronunciation, vocabulary, and even structures employed. In general, these differences do not impede communication too drastically, but they can result in misunderstandings and are often a source of hilarity in movies, literature, and everyday life. To a point, all native speakers of Spanish are dialectologists, since they use linguistic features to identify the social and regional groups to which other speakers belong.

In this course we will go beyond the anecdotal, to provide a systematic analysis of dialect variation in Spanish. We will answer some general questions such as the following: When can we say that two varieties are different dialects of the same language? How different do they have to be to be considered different languages? Why do the speech patterns of different groups become increasingly different as these groups lose contact? What influence does it have on a given variety that some of its speakers are bilingual? We will discuss basic notions such as language and dialect, dialect continuum, variation and change. We will consider different data gathering methods used in dialectology (questionnaires, dialectal maps, glossaries, etc.), applying them to the specific context of Spanish in the world. The course will end with an individual paper where students will analyze a topic of their own choice.

Required texts:

Reading packet:
The full bibliography that appears on the last page of this syllabus is available through e-reserves.

Learning outcomes:
At the end of the course, students will be able to:
  • Define, explain, and exemplify the basic notions of dialectology
• Use the standard data collection tools of the field (interviews, surveys, dialect atlases) and interpret them correctly
• Identify and provide brief descriptions of the main Peninsular and American dialects on the basis of their phonological, morphosyntactic, and lexical features
• Evaluate the influence of various internal and external factors on dialect diversification
• Summarize what they have learned in a scientific paper about a given feature of a Spanish dialect, using scientific argumentation strategies and appropriate style and format.
• Identify appropriate conferences for their work, write and evaluate conference abstracts, make professional quality presentations and prepare a manuscript for publication.

Prerequisites:
Graduate classification and proficiency in Spanish.

Further information: This course will be taught in its entirety through the medium of Spanish, and students are expected to express themselves competently in this language. There will also be readings in English, so excellent reading comprehension in English is required.

Course format:
The course will be taught as a seminar, with constant student participation. In general, each weekly session will be divided into three sections. In the first part, the topic of the day will be introduced with the help of Powerpoint presentations. This will allow students to have copies of the slides before class (posted on WebCT). The second part will be a discussion or exercises of topics raised in class. Finally, the third part will be based on discussions led by the students and it will deal with the readings from the reading packet that was assigned for that week.

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<tbody>
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<td>100 - 90%</td>
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</table>

Grade breakdown:
Article discussions (2) 30%
Final project 20%
Final project presentation 10%
Homework assignments 10%
Portfolio 20%
Participation 10%
**Article discussions**

Throughout the semester, and starting on week three, each student will be in charge of leading three discussions about the articles assigned for that week. The dates for those discussions will be assigned on the second week of classes; please come prepared to choose a date. If several people want to present on the same day, dates will be given through a lottery. Before your discussion, talk to the instructor about what you would like to do. Discussions should last approximately 20 minutes. More details will be provided in due course.

**Final project and presentation**

Students will demonstrate their ability to carry out original research in the field. For that they will gather original data on some specific variety or use data obtained by other researchers and interpret them appropriately. Although it is possible to use written data, it is preferable to use data obtained directly through interviews with native speakers of the dialect in question. The research will be presented in two different ways: (a) in an oral presentation, which will be done instead of the final exam, and (b) in writing, as a research paper of approximately 15 pages, to be handed in after the oral presentation. The project will be divided into several stages, and each one will be due on a specific date (see calendar) and will be assigned a partial grade as follows:

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<th>Task</th>
<th>Grade</th>
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<td>7%</td>
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<tr>
<td>Final draft</td>
<td>10%</td>
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</table>

As soon as possible, students must define a research topic of their interest for the final project and discuss it with the instructor. It can involve any aspect related to Spanish dialectology, Peninsular or American. Details will be forthcoming about the format of the paper and the research.

**Exercises and assignments**

The best way to confirm understanding of a topic is through exercises and practical applications. Every class session we will do exercises, view videos, and the like; some work may be assigned for homework. Students are expected to read the bibliography before coming to class and to participate fully if discussion threads are organized through WebCT. The most interesting ideas from these discussions will be taken up in class.

**Individual portfolio**

Instead of in-class tests, each student will have to complete a portfolio with individualized assignments. Three tasks will be chosen from a list of five, based on a self-evaluation of perceived needs. These tasks may include the development of oral or written skills in Spanish, review of basic linguistic notions, or experimental design. The portfolio will be collected three times in the semester.

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Participation will be measured on the basis of attendance (5 points) and attitude (5 points). Attendance points will be lost with each unexcused absence. Attitude will be based on how well prepared students come to class and how enthusiastically they participate. Apart from the exercises and assignments mentioned above, there may be pop quizzes at any time. These quizzes will count towards the participation grade, so it is important to come to class regularly.

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<tr>
<th>Week</th>
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| 2 | **Topic:** 
Language variation. Languages, dialects, varieties.  
Penny Ch 1 and 2.  
| 3 | **Topic:** 
The mechanism of language change.  
Penny Ch. 3  
| 4 | **Topic:** 
Northern Peninsular dialects.  
Penny Ch. 4, pp. 74-103  
| 5 | **Topic:** 
Southern Peninsular dialects.  
Penny Ch. 4, pp. 104-135  
Video: identification of Peninsular dialects. | Hand in bibliography list. |
| 6 | **Topic:** 
Judeo-Spanish  
Penny Ch. 6  
Quintana (2006)  
Professional development: Oral presentations. | Second portfolio |
| 7 | **Topic:** 
Spanish in the former Spanish colonies in Africa  
Lipski (1985) Ch. 1, 3 and 9  
Readings: Casado-Fresnillo (1995)  
| 8 | **Topic:** 
Origins of American Spanish  
Lipski Ch. 2  
Video: Origin of American Spanish | **Hand in annotated bibliography.** |
| 9 | **Topic:** 
Classification of American dialects  
Lipski Ch. 1, Penny Ch. 5, pp.136-163  
Video: The New World. | |
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<td>Hand in final version of the project.</td>
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**Bibliography**


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

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

2. Course prefix, number and complete title of course: NUEN 618 - Nuclear Control Systems

3. Change requested
   Attach a brief supporting statement for changes made to items 3a thru 3d. and 6 below.
   a. Prerequisite(s): From: MATH 609 and NUEN 606 or registration therein
      To: MATH 609 and NUEN 602
   b. Withdrawal (reason): not applicable
   c. Cross-list with: not applicable
   d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.
   e. Change in course prefix, number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes prefix, number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

5. Complete current course title and current catalog course description:

   Nuclear Control Systems,
   Reactor kinetics and fundamentals of servo-control developed and applied to nuclear reactors. Safety aspects of reactor control and operational problems

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

   Multiphysics computations in nuclear science and engineering.
   Tightly coupled multiphysics simulation techniques and application to typical problems arising in nuclear science and engineering (reactor dynamics and safety transients, conjugate heat transfer, radiative transfer, fluid structure interaction).

7. a. As currently in course inventory:

<table>
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<th>Prefix</th>
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Approval recommended by:

Raymond J. Jurek
Department Head or Program Chair (Type Name & Sign) Date

Robin Autenrieth
Chair, College Review Committee Date

Robin Autenrieth
Dean of College Date

David Rand
Chair, GC or UCC 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 – 09/10
Course title and Number: NUEN 618 - Multiphysics computations in nuclear science and engineering.
Term (e.g., Fall 200x): Fall 2011
Meeting times and location: TBD (3 credit-hours)

Course Description and Prerequisites

This course introduces tightly coupled multiphysic simulation techniques and their application to typical problems arising in nuclear science and engineering (e.g., reactor dynamics and safety transients, conjugate heat transfer, radiative transfer, fluid structure interaction).

Most of the numerical methods currently in use in nuclear reactor safety analysis, for instance, trace back to the late 1970’s through the late 1980’s. At that time, multiphysics phenomena were computed and analyzed through a “divide and conquer”, whereby each physic component was treated using mono-disciplinary codes and coupling among the intertwined physical processes was weak and often done a priori using envelope values. With advances in computer software and hardware (e.g., the message passing interface paradigm from the mid 1990’s), computer codes have been increasingly coupled to one another, so as to model reality with a higher degree of fidelity. However, this coupling was performed in an explicit fashion, whereby some physic components was lagged in time, a mathematical approach known as operator-splitting that resulted inconsistent coupling schemes. Over the last decade, a new approach, based on a monolithic view of the whole multiphysics problem, has successfully been applied to a wide range of problems, from plasma physics to hemodynamics. These techniques, based on a derivative-free approach to Newton’s method, are now being applied to problem of interest in nuclear science and engineering.

This course focuses on advanced numerical techniques for nonlinear coupled multiphysics applications: this includes a review of operator-splitting technique and their advantages and drawbacks, a presentation of derivative-free Newton’s technique for a monolithic approach to multiphysics simulations, a description of recent trends and issues in multiphysics code development.

Multiphysics examples treated in class or as homework will include: nuclear reactor transients and accidents (such as rod ejections and loss of pump flow), radiative transfer, conjugate heat transfer, and nuclear fuel swelling and deformation. All of these applications include several physic components and are examples where an accurate treatment of the multiphysic coupling is required. The various physic component include: neutronics, thermal-hydraulics, heat conduction, mechanics of stress and deformation.
This course is intended for second-year Master students and Ph.D. students who wish to pursue a career in computational physics and/or reactor coupled neutronics/thermal-hydraulics analyses.

The course pre-requisites are MATH 609 and NUEN 602. A brief list of the knowledge and tools acquired in the two pre-requisite courses (and their pre-requisites) is given below, for informational purposes:

1. Neutronics/thermal-hydraulics:
   a. Neutron balance equation, delayed neutrons;
   b. Point Reactor Kinetics Equations (PRKEs), in-hour equation, some simple approximations to the PRKEs such as constant delayed source, prompt jump, etc...
   c. Heat conduction in a fuel pellet;
   d. Convective heat exchange;
   e. Conservation laws of thermal-hydraulics (mass, momentum, energy);

2. Numerical analysis:
   a. Laplace transforms;
   b. solving a system of linear equations (i.e., how to invert a matrix using Gaussian elimination, LU decomposition or any iterative methods);
   c. solving a system nonlinear equations using Newton’s method;
   d. time-dependent ODEs and simple time discretizations (explicit Euler, implicit Euler, Crank-Nicholson, explicit Runge-Kutta methods);
   e. knowledge of spatial discretization schemes (e.g., finite differences);
   f. knowledge of eigenproblems.

Learning Outcomes or Course Objectives

The students will be introduced to state-of-the-art modeling of multiphysic methods development and their applications to nuclear science and engineering.

Class time will be divided between:
- understanding of the mathematical aspects of multiphysics simulation techniques,
- understanding the various physical phenomena taking place in various multiphysics applications typically found in nuclear science and engineering.

Upon completion of this course, students will be equipped with the necessary tools to continue education and pursue a career as a computational physicist, with a solid knowledge of current trends in multiphysic simulation techniques and depth in understanding coupled phenomena occurring in nuclear applications.

Instructor Information

Name: Dr. Jean C. Ragusa
Telephone Number: 979-862-2033
Email address: ragusa@ne.tamu.edu
Office Hours: TBA  
Office Location: Zachry, 122-A

Textbook and/or Resource Materials

No textbooks are required for this class. Class notes will be distributed and posted on the instructor's webpage. Recent research articles will also be given to review some of the mathematical techniques for multiphysics simulations and present some current applications of these techniques.

Supplementary Reactors Physics Texts:

- G. Keepin, "Physics of nuclear kinetics", Addison Wesley, 1965

Supplementary Numerical Methods Texts:

- W. Hackbrusch, "Iterative Solution of Large Sparse Systems of Equations”, Springer-Verlag, 1994

Also note that (1) our library (http://library.tamu.edu/) has many reactor physics/numerical methods books and (2) we have access to online journals, such a Elsevier (http://www.sciencedirect.com/).

Grading Policies

Homework assignments will be assigned every week or every other week. Homework assignments will be due at the beginning of class on their due date. The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. (see university approved list of excused absences). Late homework will be deducted 10% per day.
after the due date (in portion of 24 hours). The Aggie Honor Code will be strictly enforced: "An Aggie does not lie, cheat, or steal or tolerate those who do." The Code forbids the following:

• Cheating: Attempting to use unauthorized materials, information, notes, study aids or other devices or materials in any academic exercise.
• Fabrication: Making up data or results; submitting fabricated documents.
• Falsification: Manipulating results such that research is not accurately represented in the research record.
• Multiple Submissions: Submitting substantial portions of the same work (including oral reports) for credit more than once without authorization from instructors.
• Plagiarism: Using another person's ideas, work, processes, results, writings, words, etc. without giving appropriate credit.
• Complicity: Intentionally or knowingly helping, or attempting to help, another to commit an act of academic dishonesty.

Exams: One mid-term exam will be scheduled (in early November). A take-home final project will be given in lieu of a final exam.

The grades will be determined on the usual scale:

\[
\begin{align*}
A & \geq 90 \\
80 & \leq B < 90 \\
70 & \leq C < 80 \\
60 & \leq D < 70 \\
F & < 60 \\
\end{align*}
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Grades will be computed according to the weight distribution given below.

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<tr>
<td>Assignments</td>
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<td>Final</td>
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Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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</table>
| 1    | 1. course overview,  
2. examples of multiphysics problem in nuclear engineering,  
3. review of neutron balance equations (transport, diffusion, energy-dependent, multigroup, eigenvalue problem, extraneous source problem),  
4. review of heat conduction and single-phase fluid conservation laws |
| 2    | 1. Adjoint neutronic equations,  
2. Heuristical derivation of the PRKEs,  
3. physical basis of neutron kinetics and control (fission principle, delayed neutrons precursors, delayed neutrons, Doppler effect, moderator effect) |
|   | 1. Exact derivation of the PRKEs from the space-time equations,  
|   | 2. Choice of weighting function and flux factorization,  
|   | 3. The two notations for PRKEs,  
|   | 4. Analytical solutions of the PRKEs w/o feedback (Nordheim equation, Laplace transforms)  
| 4 | 1. Approximate solutions of the PRKEs w/o feedback (Constant precursors approx., small reactivity linearization, Prompt jump, Ramps, Periodic variations)  
| 5 | 1. Amplitude and shape equations, quasi-statics methods,  
|   | 2. Feedback effects in the PRKEs and the space-time settings  
| 6 | 1. Numerical techniques for initial value problems (IVPs)  
|   | 2. Mono- and multi steps methods,  
|   | 3. Error analysis, step size control  
| 7 | 1. Feedback physics, Doppler effect, temperature coefficients, types of reactors  
|   | 2. Analytical and numerical solution of the PRKEs w/ feedback  
| 8 | 1. Numerical methods for nonlinear system of equations and nonlinear IVPs  
|   | 2. Jacobian-free Newton Krylov techniques for non linear systems  
| 9 | 1. Coupled neutronics/heat conduction  
| 10 | 1. Conjugate heat transfer  
| 11 | 1. Radiative heat transfer  
| 12 | 1. Fuel deformation and swelling  
| 13 | 1. Space-time kinetics for reactor accidents  
| 14 | 1. Fluid structure interaction  
| 15 | 1. Review, help with the final take home exam, and wrap-up  

**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](http://disability.tamu.edu).

**Academic Integrity**

For additional information please visit: [http://www.tamu.edu/aggiehonor](http://www.tamu.edu/aggiehonor)

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

TO: University Curriculum Committee

THROUGH: Dr. Robin Autenrieth
Associate Dean for Graduate Programs

THROUGH: Dr. Raymond J. Juzaitis
Department Head

FROM: Dr. Jean Ragusa
Associate Professor

SUBJECT: Request for Change in Course – NUEN 618

November 5, 2010

I kindly request a change in title and course description for NUEN 618 (Nuclear Control Systems).

The current title and description date back from the late 1980's, when Dr. Parlos taught the course. Since then, Dr. Parlos has left the nuclear engineering department and several lecturers and visiting professors have taught that course. At that time, the topics of the course shifted to focus on numerical methods for space/time reactor kinetics without feedback (i.e., the time evolution of neutrons in a nuclear systems, without accounting for feedback due changes in temperatures and geometries). This was a very narrow topic and when I taught the course for the first time in 2004, I started to remodel it to include a more complete and up-to-date picture by adding at the core of the course multiphysics simulation techniques.

Multiphysic simulations are a challenging and interdisciplinary field, with numerous examples found in nuclear science and engineering: coupled neutronics with thermal-hydraulic feedback (an important theme for the high-fidelity simulation of nuclear reactor transients and accidents), radiative transfer (in industrial ovens and stellar atmospheres), nuclear fuel deformation and swelling, conjugate heat transfer between the reactor coolant and the nuclear fuel rods, ...

In order to reflect these changes in the contents of NUEN 618, I kindly request that the title and the catalog course description be modified, as described in the attached forms.
Texas A&M University

Departmental Request for a Change in Course
Undergraduate • Graduate • Professional

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

2. Course prefix, number and complete title of course: NUEN 630 Monte Carlo Methods for Particle Transport

3. Change requested
   a. Prerequisite(s): From: None To: Approval of Instructor, MCNP/MCNPX code single user license from RSICC, ORNL, USA
   b. Withdrawal (reason): not applicable
   c. Cross-list with: not applicable

4. For informational purposes only, please indicate course number if this course will be stacked: not applicable

5. Complete current course title and current catalog course description:

   Computational Methods for Particle Transport Problems. (4-0). Credit 4. Key properties of linear Boltzmann equation, including analytic solution of model problems, discretization methods; analysis of how well discretization methods reproduce important characteristics of exact solution; assessment of which properties are most important in various application

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

   Monte Carlo Methods for Particle Transport. (2-2). Credit 3. Principles of Monte Carlo method; random number generation; random variable sampling; particle tracking; statistical error estimation; ACE format cross-sections; introduction to MCNP code; MCNP applied to radiation shielding, criticality safety, reactor physics and detector modeling; MCNP output analysis, statistical tests, and tallying procedures; variance reduction techniques; Monte Carlo algorithm development.

7. a. As currently in course inventory:

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   Approval recommended by:

   Raymond J. Juzelius
   Department Head or Program Chair (Type Name & Sign) Date

   Department Head or Program Chair (Type Name & Sign) Date (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.
Course title and Number: "Monte Carlo Methods for Particle Transport" NUEN 630

Term (e.g., Fall 200X): Fall 2011
Meeting times and location: Mon, Wed 1:50pm to 2:40pm, Computer Lab to be determined
Fri 1:50pm to 3:50pm, Computer lab, Computer Lab to be determined

Course Description and Prerequisites

Credits: NUEN 630 (2 hrs. lecture - 2 hrs. lab) "Monte Carlo Methods for Particle Transport"
Credit 3.

Description: Principles of Monte Carlo method; Statistical methods in Monte Carlo; Random number
generation; Sampling methods for physical processes represented by Boltzmann transport equation;
Particle tracking in combinatorial geometry; ACE format cross-sections; Introduction to MCNP code;
MCNP applied to radiation shielding, criticality safety, reactor physics and detector modeling problems;
MCNP output analysis; MCNP statistical tests; MCNP tallying procedures; Variance reduction techniques;
Introduction to develop Monte Carlo algorithms.

Prerequisites: Approval of instructor, MCNP/MCNPX code single user license from RSICC, ORNL,
USA.

Learning Outcomes or Course Objectives

NUEN 630 is a graduate level course, also open to NUEN undergraduate seniors. Particle
(neutron/photon/electron...) transport simulations based on Monte Carlo principles should be an
inevitable part of graduate curriculum, both for nuclear engineering and radiological health
engineering degrees because they are widely used now in research and industry. Monte Carlo
transport code helps to develop realistic models for analyzing problems in reactor physics,
radiation shielding, medical physics, etc. There are state-of-art computer codes available vis-a-
vis MCNP/MCNPX, KENO, EGS and GEANT to meet these challenges. These codes are now
made more attractive to students with the provision of graphical interfaces, but are vulnerable to
abuse, when used as black boxes.

The objective of this course is to educate on the underlying principles of Monte Carlo method, its
statistical behavior, random number generation, variance reduction schemes, sampling methods
to simulate physical process of the linear Boltzmann transport equation, combinatorial geometry
modeling, forward/adjoint capabilities, interaction cross section formats, etc. Hands-on computer
lab training will be provided on the use of MCNP code through model development and analyses
of international benchmark exercises. In addition, a flavor to code Monte Carlo algorithms will
be taught, so as to appreciate the basic ideas of MCNP code.

Successful completion of the course would provide the students in depth knowledge on the
theory and principles of Monte Carlo transport simulations. This should facilitate them to
independently handle transport simulations and analyses envisaged in reactor core physics,
criticality safety, radiation shielding, radiation detector modeling, medical physics, etc., which
are amenable by Monte Carlo methods. Also, students would have acquired insight to develop
Monte Carlo algorithms and coding.
Instructor Information

Name: Dr. Sunil S. Chirayath
Telephone Number: (979) 862-2616
Email address: sunil@ne.tamu.edu
Office Hours: M-F 8am to 5pm (appointment to meet)
Office Location: Room No. 325C, Teague Research Center
Texas A&M University, College Station
TX-77843-3473, USA

Textbook and/or Resource Materials

1. Notes: Lecture notes on "Principles of Monte Carlo particle transport with specific reference to MCNP code"

2. Textbooks: L.L. Carter and E.D. Cashwell, Particle transport simulation with the Monte Carlo method, ERDA critical review series, TID-26607, 1975

   X-5 Monte Carlo Team, LANL Criticality calculations with MCNP5: A primer, Second edition, LANL report LA-UR-04-0294

   http://mcnp-green.lanl.gov/index.html

Grading Policies

1. **Professional Behavior:** An important attribute of your professional development is that you act and speak in a manner that will not offend others giving particular care to diversity issues.

2. **Home Assignments:** Each assignment work will be prepared with an assignment number, student name, date of submission, course number on a cover sheet along with assignment description and your workout in the subsequent pages. Your assignment work should look neat and legible with a logical presentation. Handwritten or typed pages are acceptable. Group efforts are encourages in submitting the assignments with the listing of participating course-mates on the cover sheet. However, individual
contributions should be made visible in the final submitted assignments. No score will be assigned, if instructor observes copying of other's assignment workouts.

All assignments are due at the start of the class on the due date. No late assignments are accepted without creditable excuse/explanation for the delay. No assignments will be accepted after the last day of classes (See course schedule provided in this syllabus).

**Late Submission (1 week to explain and ask for a new due date):**

The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. (see university approved list of excused absences).

If a student cannot submit the assignment workout by the due date, he/she has 1 week after the due date to explain the reasons for non-submission and ask for a new due date. At the discretion of the instructor and based on the reasons explained for the delay, a new date may be assigned without grade penalty or denied. If denied, late assignment submissions will not be accepted. If the student fails to contact the instructor within 1 week after the due date, the delayed work will not be accepted. No exceptions. Re-submission of assignments with corrections indicated by the instructor can fetch you at the most 70% of the maximum score assigned to each of the assignments. And, only one re-submission is permitted.

3. Structure of final course score:

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<td>Home assignments</td>
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<td>Weekly summarizing</td>
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<tr>
<td>60% to &lt; 70%</td>
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Course Topics, Calendar of Activities, Major Assignment Dates

(Dates and topics are subject to change, but will be informed in advance)

<table>
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<tr>
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<th>Date</th>
<th>Topic</th>
<th>Lecture - Date</th>
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<td>3. Particle tracking in 3D combinatorial geometry</td>
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<td>- Macro bodies (RPP, RCC, ARB,)</td>
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<td>- Geometry cell (INTERSECTION, UNION and NOT operation)</td>
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<td>4. Monte Carlo Algorithms Coding</td>
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<td>• Volume source: spherical, cylindrical, cartesian, etc.,</td>
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<td>• Criticality source (KCODE)</td>
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<td>• Source distributions through source information (SI) and Source Probability (SP) cards</td>
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<td>18/40 – 10/08'10 (F)</td>
<td>Mid-term written exam review</td>
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**Mid-term written examination October 11, 2010 (Monday)**

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<td><strong>MCNP Tallies (F cards)</strong></td>
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<td>• Point Flux (deterministic tally), F5</td>
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<td>• Pulse height tallies, F8</td>
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<td>• Special tallies, F6 &amp; F7</td>
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<td>• Foll reaction rates, Dose rates, etc., Tally special treatments</td>
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<td>20/40 – 10/15'10 (F)</td>
<td>Computer Lab</td>
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<td>9.</td>
<td><strong>MCNP Statistical Tests on Tallies</strong></td>
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<td><strong>MCNP Statistical Tests on Tallies</strong></td>
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<td><strong>Variance Reduction Methods</strong></td>
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<td>• Particle attributes: position coordinates (x, y, z), direction cosines (u, v, w), energy (E) and Monte Carlo specialty, weight (w)</td>
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<td>• Importance sampling</td>
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<td>Benchmark Models using MCNP</td>
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<td>Criticality safety benchmarks</td>
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<td>Detector response model: HPGe, NaI gamma spectrometry with Gaussian broadening feature</td>
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<td>Neutron coincidence counting using MCNPX</td>
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Other Pertinent Course Information

Desirable Background Knowledge:

- Basics of nuclear physics
- Basics of coordinate geometry
- Knowledge in any scientific computer programming

Course Structure:

The academic elements of the course along with their purpose and content are listed below:

1. Lecture and lecture notes:
   Lectures and stand alone lecture notes provided will suffice to cover the theoretical portion of the course.

2. Computer lab:
   Hands on training on the use of MCNP code through simulations of the benchmark exercises is vital and will provide a better understanding of Monte Carlo principles and applications.

3. Home assignments:
   Out of class assignments will be given and graded weekly. Note the Course Policy, Assignment Submission Guidelines and Grading Policy defined later in this syllabus.

4. Weekly Summary:
   Each week one/two of the students will summarize (open book) what was taught and everyone will do it at least once in the semester.

5. One to one performance assessment:
   Instructor will individually meet with each student to assess their performance in meeting the course requirements. In these meetings students will get an opportunity to discuss their progress with instructor, share concerns and suggestions about the course. A detailed performance report and instructor feedbacks will be made available to each student. It is mandatory to attend the performance assessment meeting.

6. Midterm examinations:
   In the midst of the semester, students will undergo one written and one 30 minutes oral examination, both of them mandatory. Both the examinations will be closed book, closed notes and with no calculators. The examinations will be conducted based on the course material, homework assignments and lab exercises completed till the end of first term of the semester. Oral examination will be conducted by a committee with more than one professor from the department with instructor chairing the committee. See the midterm examination schedule embedded in course timetable.

7. Final written examination:
   The mandatory final written examination (closed book, closed notes and no calculators) will be based on the entire course materials, homework assignments and lab exercises.

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 the handouts, unless the author expressly grants permission.

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.”
Special Consideration Items
Texas A&M University
New Certificate, Bachelors, Masters, or Doctoral Program
* Proposal Checklist *

Requested by the Department or Unit of: The Africana Studies Program

Program Type, Level, Designation, Title, Description, Hours
Program Type Certificate Program ☒ Degree Program ☐
Program Level Undergrad Certificate ☐ Grad Certificate ☒ Bachelor ☐ Master ☐ Doctoral ☐
Degree Designation (i.e., BS, BA, MA, MS, MAg, Med, PhD, EdD, etc.)
Title of proposed program: Graduate Certificate in Africana Studies
Proposed CIP Code (if known): 05.0101

Brief program description (provide a catalog description for undergraduate and graduate certificates):
The Graduate Certificate in Africana Studies offers interested master or doctoral students an opportunity to develop an interdisciplinary graduate concentration in Africana Studies while earning a degree in a disciplinary major field. In addition to gaining knowledge of Africa and its Diaspora, students pursuing the certificate will also benefit from the interdisciplinary training that is the hallmark of Africana Studies. Students will be exposed to the scholarship, methodology, and theories of multiple disciplines that contribute to the critical analysis and understanding of the Africana world.

Minimum program semester credit hours (SCH) Certificates - 12 hours* Bachelors - 120 hours Masters - 30 hours
Proposed program hours: 12

*12 hours minimum to appear on transcript

Off-Campus or Distance Delivery
% of Program a student can take off-campus or through Distance Education
☐ 25% Program Start Date SACS Approval** When Provost needs to inform SACS
☐ 50% Notification Only 6 months before first day of program
☐ 70% Approval Required 6 months before first day of program
☐ 100% Approval Required 6 months before first day of program

**Notification letter arranged through the Assistant Provost and sent by TAMU President.

Program Delivery Mode
☒ On-campus Location Texas A & M University -- College Station
☐ Broadcast / TTVN
☐ Specific off-campus location***
☐ Distance Education / Internet In-State ☐ Out-of-State ☐ Start Date
☐ Out-of-Country Will this program be offered with another institution? Yes ☐ No ☐
If yes, contact Assistant Provost for additional reporting requirements.

***Is this an approved SACS location? Yes ☒ No ☐ If no, a program prospectus must be sent to SACS.
Approved locations as of September 2009: TAMU-Galveston, TAMU-Qatar, University Center-The Woodlands, Dubai (EMBA)

Program Funding
Has program funding been finalized at the department or college level? Yes ☒ No ☐
If no, explain or attach budget: 

Will new costs for the first five years of the program be under $2 million? Yes ☒ No ☐
If new costs exceed $2 million, coordinating board approval is required.
**Submitted by (Contact Person):**
Kimberly Nicole Brown, Ph.D.

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<tr>
<th>Name</th>
<th><a href="mailto:knbrown@tamu.edu">knbrown@tamu.edu</a></th>
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<tbody>
<tr>
<td>Director of The Africana Studies Program</td>
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<td>Title</td>
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**Certification Statement**
By signing below, the Dean of the College certifies the proposed program complies with coordinating board standards. If the program is delivered through Distance Education, the Dean of the College certifies that they are following the *Principles of Good Practice for Academic Degree and Certificate Programs and Credit Courses Offered Electronically*.

<table>
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<tr>
<th>Signature, Department Head or Interdisciplinary</th>
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<td>Program Chair</td>
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<tr>
<td>Kimberly Nicole Brown, Ph.D.</td>
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<td>Chair, College Review Committee</td>
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<tr>
<td>Patricia A. Shanky</td>
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<td>Dean of College</td>
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<tr>
<td>Patricia A. Shanky</td>
<td>12-10-10</td>
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<th>Chair, University Curriculum Committee or Graduate Council</th>
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Additional Approvals Required: Faculty Senate and President.
New Program Request Form for Certificate Programs, Bachelor’s and Master’s Degrees

Directions: An institution shall use this form to propose a new bachelor’s or master’s degree program. In completing the form, the institution should refer to the document Standards for Bachelor’s and Master’s Programs, which prescribes specific requirements for new degree programs. Note: This form requires signatures of (1) the Chief Executive Officer, certifying adequacy of funding for the new program; (2) a member of the Board of Regents (or designee), certifying Board approval; and (3) if applicable, a member of the Board of Regents or (designee), certifying that criteria have been met for staff-level approval. NOTE: Preliminary authority is required for all engineering programs. An institution that does not have preliminary authority for a proposed engineering program shall submit a separate request for preliminary authority prior to submitting the degree program request form. That request shall address criteria set in Coordinating Board rules Section 5.24 (a).

Administrative Information

1. Institution: Texas A & M University

2. Program Name — Show how the program would appear on the Coordinating Board’s program inventory (e.g., Bachelor of Business Administration degree with a major in Accounting):
   Graduate Certificate in Africana Studies

3. Proposed CIP Code: 05.0101

4. Brief Program Description — Describe the program and the educational objectives:

   The Graduate Certificate in Africana Studies offers interested master or doctoral students an opportunity to develop an interdisciplinary graduate concentration in Africana Studies while earning a degree in a disciplinary major field. In addition to gaining knowledge of Africa and its Diaspora, students pursuing the certificate will also benefit from the interdisciplinary training that is the hallmark of Africana Studies. Students will be exposed to the scholarship, methodology, and theories of multiple disciplines that contribute to the critical analysis and understanding of the Africana world.

   Number of Semester Credit Hours Required: 12

5. Administrative Unit — Identify where the program would fit within the organizational structure of the university (e.g., The Department of Electrical Engineering within the College of Engineering):

   The Africana Studies Program within the College of Liberal Arts

6. Proposed Implementation Date — Report the first semester and year that students would enter the program:

   Fall 2011

7. Contact Person — Provide contact information for the person who can answer specific questions about the program:

Updated 06.07.2010
Program Information

I. Need

Note: Complete I.A and I.B only if preliminary authority for the program was granted more than four years ago. This includes programs for which the institution was granted broad preliminary authority for the discipline.

A. Job Market Need – Provide short- and long-term evidence of the need for graduates in the job market.

In an increasingly pluralistic society and global economy, students cannot afford to enter into the workforce without a fundamental respect and understanding of people from different racial, ethnic, and religious backgrounds. Africana Studies equips students to be competitive in a diverse global marketplace.

B. Student Demand – Provide short- and long-term evidence of demand for the program.

Diversity is a key component in the Vision 2020 plan. In light of the aims of 2020, many departments have revamped their curricular offerings to attract a more diverse graduate student population. This certificate would enable departments to attract minority and other students who are interested in diversity, and race and ethnicity issues. Ensuring that the certificate is reflected on student transcripts enables students to substantiate their proficiency in Africana Studies when they are applying for jobs that place a particular emphasis on diversity and cross-cultural competency.

C. Enrollment Projections – Use this table to show the estimated cumulative headcount and full-time student equivalent (FTSE) enrollment for the first five years of the program. (Include majors only and consider attrition and graduation.)

Enrollment Projections are unavailable at this time.

II. Quality
A. Certificate and Degree Requirements – Use this table to show the certificate and degree requirements of the program. (Modify the table as needed; if necessary, replicate the table for more than one option.)

<table>
<thead>
<tr>
<th>Category</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Core Curriculum (bachelor’s degree only)</td>
<td>N/A</td>
</tr>
<tr>
<td>Required Courses</td>
<td>3</td>
</tr>
<tr>
<td>Prescribed Electives</td>
<td>6</td>
</tr>
<tr>
<td>Free Electives</td>
<td>3</td>
</tr>
<tr>
<td>Other (Specify, e.g., internships, clinical work) (if not included above)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>12</td>
</tr>
</tbody>
</table>

B. Curriculum – Use these tables to identify the required courses and prescribed electives of the program, and curriculum as it will appear in the undergraduate and graduate catalog. Note with an asterisk (*) courses that would be added if the program is approved. (Add and delete rows as needed. If applicable, replicate the tables for different tracks/options as shown in the undergraduate catalog.)

<table>
<thead>
<tr>
<th>Prefix and Number</th>
<th>Required Courses</th>
<th>SCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>*AFST 601</td>
<td>Methods of Inquiry into Africana Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Prescribed Courses

Note: The following is a sampling of courses that count towards the fulfillment of the certificate requirements. Students are allowed to select 3 hours of humanities credits and 3 hours of social science credits from the list below. New courses will be added to the list annually. Students will be asked to consult with the Africana Studies director for the most current list of courses, or to inquire about the possibility of including an Africana-content course that is not listed below.

Note: While senior-level undergraduate courses (400-level) are included on the list, only 3 credit hours of coursework may be taken at that level to count toward the Graduate Certificate in Africana Studies; the remainder of the credit hours must be at the graduate level. Also note that

Updated 06.07.2010
with prior approval, up to 3 of the 12 required credit hours may be taken through an Independent Study or a Readings Course in a Africana-content course in the student’s major department. If the student’s thesis or dissertation involves a substantial Africana Studies focus, up to 3 hours of the thesis or dissertation research hours may be counted toward the certificate provided that the research is shared through a public forum on the A & M campus (e.g., brown bag, Glasscock lecture, RESI lecture, etc.). It is understood that courses counted toward the certificate may also count toward the major degree requirements.

Partial Graduate Course List

ENGL 668. Topics in African American and Africana Literature and Culture
HIST 636. History of the American South
PERF 605. Topics in Globalization and Performance Studies. (Dependent on chosen topic. Chosen topic must be 50% AFST content)
POLS 625. Seminar in Comparative Race and Ethnic Politics.
POLS 644. Seminar in Politics of Race, Ethnicity and Public Policy.
POLS 674. Seminar in Race, Ethnicity and American Politics.
POLS 660. Gateway Seminar: Politics of Race and Ethnicity
SOCI 617. Comparative Ethnic Relations.
SOCI 660. Theories of Race and Ethnic Group Relations.
SOCI 662. Racism and Anti-Racism.
SOCI 663. Black and Latino Americans.
SOCI 667. Seminar in Race and Ethnic Relations.

400 Level Courses

AFST 481. Senior Seminar in Africana Studies
AFST 485. Directed Studies in Africana Studies
AFST 489. Special Topics in Africana Studies
AFST 491. Research in Africana Studies
ANTH 445. Anthropology of the African Diaspora (In development)
ANTH 440. Anthropology of Globalization (In development)
COMM 425. Rhetoric of the Civil Rights Movement.
FILM 401. National Cinema History. (When the subject is AFST related)
HIST 401. Slavery in World History.
HIST 449. History of Brazil, 1822 to the Present.

Potential Courses Outside of the College of Liberal Arts

EDCI 642. Multicultural Education: Theory, Research and Practice.
EDCI 643. Teaching in Urban Environments.
HLTH 635. Race, Ethnicity and Health.
PLAN 623. Development Planning in Third World Countries.
SPSY 629. Psychosocial Variables in the Education of Minority Children.
SPED 611. Multicultural Special Education.
SPMT 613. Diversity in Sport Organizations.

400 Level Courses

Updated 06.07.2010
ALED 422. Cultural Pluralism in Agriculture.
ARCH 458. Cultural and Ethical Considerations for Global Practice.
EHRD 408. Diversity Issues and Practices in HRD.
URSC 461. Urban Issues.

C. Faculty – Use these tables to provide information about Core and Support faculty. Add an asterisk (*) before the name of the individual who will have direct administrative responsibilities for the program. *(Add and delete rows as needed.)*

<table>
<thead>
<tr>
<th>Name of Core Faculty and Faculty Rank</th>
<th>Highest Degree and Awarding Institution</th>
<th>Courses Assigned in Program</th>
<th>% Time Assigned To Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g.: Robertson, David Asst. Professor</td>
<td>PhD. in Molecular Genetics Univ. of Texas at Dallas</td>
<td>MG200, MG285 MG824 (Lab Only)</td>
<td>50%</td>
</tr>
<tr>
<td>*Kimberly N. Brown Associate Professor</td>
<td>Ph.D. in English University of Maryland</td>
<td>ENGL 668</td>
<td>95% <em>(The majority of my courses are cross-listed with AFST)</em></td>
</tr>
<tr>
<td>Sara Busdiecker Assistant Professor</td>
<td>Ph.D. in Anthropology University of Notre Dame</td>
<td>AFST 601 ANTH 440 ANTH 445</td>
<td>50%</td>
</tr>
<tr>
<td>Adrienne Carter-Sowell</td>
<td>Ph.D. in Psychology Purdue University</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td>Nicole Castor Assistant Professor</td>
<td>Ph.D. in Anthropology University of Chicago</td>
<td>AFST 601 ANTH 440 ANTH 445</td>
<td>50%</td>
</tr>
<tr>
<td>David Donkor Assistant Professor</td>
<td>Ph.D. in Performance Studies Northwestern University</td>
<td>AFST 601 PERF 605</td>
<td>50%</td>
</tr>
<tr>
<td>Aisha Durham Assistant Professor</td>
<td>Ph.D. in Communication University of Illinois at Urbana-Champaign</td>
<td>AFST 601 AFST 489</td>
<td>50%</td>
</tr>
<tr>
<td>Alain Lawo-Sukam Assistant Professor</td>
<td>Ph.D. in Spanish University of Illinois at Urbana-Champaign</td>
<td>AFST 481 AFST 489</td>
<td>50%</td>
</tr>
<tr>
<td>Phia Salter Assistant Professor</td>
<td>Ph.D. in Psychology University of Kansas</td>
<td>AFST 601</td>
<td>50%</td>
</tr>
<tr>
<td>Mikko Tuhkanen Associate Professor</td>
<td>Ph.D. in English (University of Tampere – Finland) Ph.D. in Comparative Literature – State University of New York -- Buffalo</td>
<td>ENGL 668</td>
<td>50%</td>
</tr>
</tbody>
</table>

Updated 06.07.2010
<table>
<thead>
<tr>
<th>Name of Support Faculty and Faculty Rank</th>
<th>Highest Degree and Awarding Institution</th>
<th>Courses Assigned in Program</th>
<th>% Time Assigned To Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nandini Bhattacharya Professor</td>
<td>Ph.D. in English University of Rochester</td>
<td>ENGL 673.</td>
<td>10%</td>
</tr>
<tr>
<td>Fred Bonner</td>
<td>Ed.D. in Higher Education Administration and College Teaching The University of Arkansas -- Fayetteville</td>
<td>(We intend to cross-list with the College of ED shortly – he’s listed in anticipation of this expansion)</td>
<td>Not specified</td>
</tr>
<tr>
<td>Albert Broussard Professor</td>
<td>Ph.D. in History Duke University</td>
<td>AFST 489</td>
<td>10%</td>
</tr>
<tr>
<td>Glenn Chambers Assistant Professor</td>
<td>Ph.D. in History Howard University</td>
<td>AFST 489</td>
<td>10%</td>
</tr>
<tr>
<td>Michael Collins Associate Professor</td>
<td>Ph.D. in English Columbia University</td>
<td>ENGL 668</td>
<td>25%</td>
</tr>
<tr>
<td>Tommy Curry Assistant Professor</td>
<td>Ph.D. in Philosophy Southern Illinois University-Carbondale</td>
<td>AFST 601</td>
<td>50%</td>
</tr>
<tr>
<td>Leroy Dorsey Associate Professor</td>
<td>Ph.D. in Speech Communication Indiana University</td>
<td>COMM 407 COMM 425</td>
<td>10%</td>
</tr>
<tr>
<td>Amy Earhart Assistant Professor</td>
<td>Ph.D. in English Texas A &amp; M University</td>
<td>AFST 489.</td>
<td>10%</td>
</tr>
<tr>
<td>Joseph Feagin Professor</td>
<td>Ph.D. in Sociology Harvard University</td>
<td>SOCI 617. SOCI 660. SOCI 662. SOCI 667</td>
<td>10%</td>
</tr>
<tr>
<td>Sarah Gatson</td>
<td>Ph.D. in Sociology Northwestern University</td>
<td>SOCI 617. SOCI 660. SOCI 662. SOCI 667</td>
<td>10%</td>
</tr>
<tr>
<td>Shona Jackson</td>
<td>Ph.D. in Program in Modern Thought and Literature Stanford University</td>
<td>ENGL 668 ENGL 673</td>
<td>25%</td>
</tr>
<tr>
<td>Joseph Jewell</td>
<td>Ph.D. in Sociology University of Los Angeles</td>
<td>SOCI 617. SOCI 660. SOCI 662. SOCI 667</td>
<td>25%</td>
</tr>
<tr>
<td>Reuben May</td>
<td>Ph.D. in Sociology University of Chicago</td>
<td>SOCI 617. SOCI 660. SOCI 662. SOCI 667</td>
<td>25%</td>
</tr>
<tr>
<td>Jennifer Meese</td>
<td>Ph.D. in Communication</td>
<td>AFST 489</td>
<td>10%</td>
</tr>
</tbody>
</table>

*Updated 06.07.2010*
### Studies

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree 1</th>
<th>University 1</th>
<th>Degree 2</th>
<th>University 2</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wendy Leo Moore</td>
<td>Ph.D. in Sociology</td>
<td>SOCI 617.</td>
<td>SOCI 660.</td>
<td>SOCI 662.</td>
<td>10%</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>University of Minnesota</td>
<td>SOCI 667</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larry Oliver</td>
<td>Ph.D. in English</td>
<td>ENGL 668</td>
<td></td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Pennsylvania State</td>
<td>University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ernest Starks</td>
<td>Ph.D. in History</td>
<td>AFST 489</td>
<td></td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>University of Houston</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larry Yarak</td>
<td>Ph.D. in History</td>
<td>AFST 489</td>
<td></td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Northwestern University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### D. Students
- Describe general recruitment efforts and admission requirements. In accordance with the institution’s Uniform Recruitment and Retention Strategy, describe plans to recruit, retain, and graduate students from underrepresented groups for the program.

The certificate will be actively promoted via all academic promotional catalogs and brochures within the College of Liberal Arts, and on the CLLA and AFST websites.

Any Texas A & M University graduate student enrolled in a masters or doctoral program may apply for a Graduate Certificate in Africana Studies.

To be eligible to pursue the certificate, a student must meet the following additional conditions:

- The student must be in good academic standing.
- The student must submit all the application materials listed under “How to Apply.”
- The student must have her or his pursuit of the certificate approved by the Director of Africana Studies after review of all the application materials.

### E. Library
- Provide the library director’s assessment of library resources necessary for the program. Describe plans to build the library holdings to support the program.

N/A

### F. Facilities and Equipment
- Describe the availability and adequacy of facilities and equipment to support the program. Describe plans for facility and equipment improvements/additions.

N/A

### G. Accreditation
- If the discipline has a national accrediting body, describe plans to obtain accreditation or provide a rationale for not pursuing accreditation.

Updated 06.07.2010
N/A

H. **Evaluation** – Describe the evaluation process that will be used to assess the quality and effectiveness of the new degree program.

The PICA Evaluation System will be used.

III. **Costs and Funding**

**Five-Year Costs and Funding Sources** - Use this table to show five-year costs and sources of funding for the program.

All courses are already reflected in the graduate catalog; resources are in place and no additional budget is required.

<table>
<thead>
<tr>
<th>Five-Year Costs</th>
<th>Five-Year Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel$^1$</td>
<td>$0</td>
</tr>
<tr>
<td>Facilities and Equipment</td>
<td>$0</td>
</tr>
<tr>
<td>Library, Supplies, and Materials</td>
<td>$0</td>
</tr>
<tr>
<td>Other$^2$</td>
<td>$0</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$0</td>
</tr>
</tbody>
</table>

1. Report costs for new faculty hires, graduate assistants, and technical support personnel. For new faculty, prorate individual salaries as a percentage of the time assigned to the program. If existing faculty will contribute to program, include costs necessary to maintain existing programs (e.g., cost of adjunct to cover courses previously taught by faculty who would teach in new program).
2. Specify other costs here (e.g., administrative costs, travel).
3. Indicate formula funding for students new to the institution because of the program; formula funding should be included only for years three through five of the program and should reflect enrollment projections for years three through five.
4. Report other sources of funding here. In-hand grants, “likely” future grants, and designated tuition and fees can be included.

*Updated 06.07.2010*
Signature Page

1. **Adequacy of Funding** – The chief executive officer shall sign the following statement:

   *I certify that the institution has adequate funds to cover the costs of the new program. Furthermore, the new program will not reduce the effectiveness or quality of existing programs at the institution.*

   ________________________________  ________________________________
   Chief Executive Officer               Date

2. **Board of Regents or Designee Approval** – A member of the Board of Regents or designee shall sign the following statement:

   *On behalf of the Board of Regents, I approve the program.*

   ________________________________  ________________________________
   Board of Regents (Designee)                Date of Approval

3. **Board of Regents Certification of Criteria for Commissioner of Assistant Approval** – For a program to be approved by the Commissioner or the Assistant Commissioner for Academic Affairs and Research, the Board of Regents or designee must certify that the new program meets the eight criteria under TAC Section 5.50 (b): The criteria stipulate that the program shall:

   (1) be within the institution’s current Table of Programs;
   (2) have a curriculum, faculty, resources, support services, and other components of a degree program that are comparable to those of high quality programs in the same or similar disciplines at other institutions;
   (3) have sufficient clinical or in-service sites, if applicable, to support the program;
   (4) be consistent with the standards of the Commission of Colleges of the Southern Association of Colleges and Schools and, if applicable, with the standards or discipline-specific accrediting agencies and licensing agencies;
   (5) attract students on a long-term basis and produce graduates who would have opportunities for employment; or the program is appropriate for the development of a well-rounded array of basic baccalaureate degree programs at the institution;
   (6) not unnecessarily duplicate existing programs at other institutions;
   (7) not be dependent on future Special Item funding
   (8) have new five-year costs that would not exceed $2 million.

   *On behalf of the Board of Regents, I certify that the new program meets the criteria specified under TAC Section 5.50 (b).*

   ________________________________  ________________________________
   Board of Regents (Designee)                Date
August 17, 2009

MEMORANDUM

TO: Kimberly Brown, Director
    Interdisciplinary Program in Africana Studies

FROM: M. Jimmie Killingsworth
      Professor and Head

SUBJECT: Graduate Certificate in Africana Studies

I am writing to give my unqualified endorsement for the proposal to create a graduate certificate in Africana Studies. Many of our students are already doing research on related topics—such as African American literature and rhetoric, critical race studies, comparative border studies, and global literatures in English—and would enthusiastically welcome the chance at certification. The program also works well with a key research initiative in our department at the moment: English without Borders. Finally, we have a number of associated faculty in English and Africana Studies who would benefit from greater participation of graduate students that could result from having the certificate.

Let me know what else I can do to advance the proposal. For now, please accept my strong encouragement and complete endorsement.

cc: Pamela Matthews, Associate Dean of Liberal Arts

227 John R. Blocker Building
4227 TAMU
College Station, TX 77843-4227
Tel. 979.845.3451 Fax. 979.862.2292
www-english.tamu.edu
August 26, 2009

MEMORANDUM

TO: Kimberly Brown
    Director of Africana Studies

FROM: Walter L. Buenger
       Professor & Head of Department

SUBJECT: Graduate Certificate in Africana Studies

You have my unqualified endorsement for your proposal to create a graduate certificate in Africana Studies. Some of our graduate students are conducting research on related topics in African American history and the history of the African diaspora, and this should encourage others to follow the same path. It also fits nicely with our emphasis on Comparative Borders on the graduate level. We have several faculty associated with your program, and this will encourage even further collaboration. Again you have the complete endorsement of the Department of History. Let me know if you need further assistance.

xc: Pamela Matthews
MEMORANDUM

Date: 26 August 2009

To: Dr. Kimberly Brown, Director
Africana Studies Program

From: Daniel Conway, Professor and Head
Department of Philosophy

Re: Graduate Certificate in Africana Studies

I wish to register my enthusiastic support for the proposed graduate certificate in Africana Studies. The approval of this proposal would not only provide the Africana Studies Program with the enhanced visibility it deserves, but also complement graduate degree programs throughout the College of Liberal Arts. MA and PhD students in Philosophy stand to benefit enormously from the approval of this proposal. Our Department has embarked recently on an ambitious plan to incorporate the study of African-American Philosophy and Critical Race Studies into our degree program curricula. The opportunity to pursue a graduate certificate in Africana Studies would enable our graduate students to receive the kind of education in African-American Philosophy and Critical Race Theory that is available only at a handful of universities in North America. Needless to say, the approval of this proposal would also provide our faculty with the opportunity to develop new courses and cultivate important new areas of research specialization.

The Department of Philosophy remains firmly committed to the continued growth and expansion of the Africana Studies Program. The approval of the proposed graduate certificate would be an unqualified boon to our faculty members and students. Please let me know if there is anything more that I might do to support this proposal or the Africana Studies Program in general.

cc: Pamela Matthews, Associate Dean
College of Liberal Arts
MEMORANDUM
Date: October 2, 2009
To: Kimberly Brown, Director, Interdisciplinary Program in Africana Studies
From: Mark Fosset, Head, Sociology
Regarding: Support for Graduate Certificate in Africana Studies

I am writing to state my enthusiastic support for the proposal to create a graduate certificate in Africana Studies. The area of racial and ethnic relations is a crucial concentration area in the sociology graduate program. It has the largest number of doctoral students of any of our concentration areas and it also is the area with largest number of faculty conducting research and contributing graduate seminars. I am certain that many of our students in this area will take advantage of the opportunity to receive certification for take supporting graduate coursework in Africana Studies. They will benefit from the valuable content of the courses. In addition the certificate documenting that our students have taken a structured program of study in the area will enhance their marketability when they graduate from our program. I am pleased to endorse the proposed certificate program. Let me know if there is anything else I can do to support the proposal.
-----Original Message-----
From: James R. Rogers [mailto:ROGERS@politics.tamu.edu]
Sent: Thursday, December 02, 2010 10:08 AM
To: Brown, Kimberly
Subject: RE: AFST Grad. Certificate

Hi Kimberly,

I have heard back from a number of faculty members - and POLS supports the certificate proposal enthusiastically.

One suggestion that I did receive from several faculty members is that POLS 660 should be included as an additional POLS course that counts toward the certificate. This is the Department's Gateway Seminar in Race and Politics.

Let me know if you need anything else.

Best,

-- Jim

James R. Rogers, Ph.D., J.D.
Associate Professor & Department Head
Editor, Journal of Theoretical Politics
Department of Political Science
Texas A&M University
4348 TAMU
College Station, TX 77843-4348
979 845 8833
Fax 979 847 8924