September 9, 2015

MEMORANDUM

TO: Robert Strawser, Speaker, Faculty Senate

FROM: Janice Epstein, Co-Chair, Core Curriculum Council
Andrew Klein, Co-Chair, Core Curriculum Council

SUBJECT: Approval actions of the Core Curriculum Council

On September 7, 2015, the following courses were approved for addition to the Texas A&M University Core Curriculum. We recommend that this addition to the Core Curriculum, effective fall 2016, should be considered and approved by the Texas A&M University Faculty Senate.

Life and Physical Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 226</td>
<td>Introduction to Biological Anthropology Laboratory</td>
</tr>
<tr>
<td>ASTR 103</td>
<td>Introduction to Stars &amp; Exoplanets</td>
</tr>
<tr>
<td>ASTR 104</td>
<td>Introduction to Galaxies &amp; Cosmology</td>
</tr>
<tr>
<td>VTPB 212</td>
<td>Genetics in the News</td>
</tr>
</tbody>
</table>

In addition, the following courses were approved for the International and Cultural Diversity graduation requirement. We recommend that this addition to the ICD, effective fall 2016, should be considered and approved by the Texas A&M University Faculty Senate.

International and Cultural Diversity

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>AFST 303</td>
<td>Psychology of Women of Color (cross-listed with PSYC 303 and WGST 303)</td>
</tr>
<tr>
<td>PSYC 303</td>
<td>Psychology of Women of Color (cross-listed with AFST 303 and WGST 303)</td>
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<tr>
<td>WGST 303</td>
<td>Psychology of Women of Color (cross-listed with AFST 303 and PSYC 303)</td>
</tr>
<tr>
<td>ENGR 410</td>
<td>Global Engineering Design</td>
</tr>
<tr>
<td>ENTO 210</td>
<td>Global Public Health Entomology</td>
</tr>
<tr>
<td>LMAS 201</td>
<td>Introduction to Latino/Mexican American Studies</td>
</tr>
</tbody>
</table>
Life and Physical Sciences
Texas A&M University
Core Curriculum Cover Sheet
Initial Request for a course to be considered for the Fall 2015 Core Curriculum

1. This request is submitted by (department name): Department of Anthropology

2. Course prefix and number: ANTH 226 3. Texas Common Course Number:  
   Introduction to Biological Anthropology

4. Complete course title: Laboratory

5. Semester credit hours: 1

6. This request is for consideration in the following Foundational Component Area:
   
   [ ] Communication  [ ] Creative Arts
   [ ] Mathematics  [ ] American History
   [X] Life and Physical Sciences  [ ] Government/Political Science
   [ ] Language, Philosophy and Culture  [ ] Social and Behavioral Sciences

7. This course should also be considered for International and Cultural Diversity (ICD) designation:
   
   [ ] Yes  [X] No

8. How frequently will the class be offered? Every semester

9. Number of class sections per semester: 4-6

10. Number of students per semester: 60-90

11. Historic annual enrollment for the last three years: 141 135 123

   This completed form must be attached to a course syllabus that sufficiently and specifically details the appropriate core objectives through multiple lectures, outside activities, assignments, etc. Representative from department

12. Submitting request should be in attendance when considered by the Core Curriculum Council.

13. Submitted by:
   
   [Signature] 4/14/15  
   Course Instructor:  
   Date

14. Approvals:
   
   [Signature] 4/28/15  
   Department Head:  
   Date

15. College Dean/Designee

   [Signature] 4/15/15  
   Date

For additional information regarding core curriculum, visit the Texas Higher Education Coordinating Board website at www.theCB.state.tx.us/corecurriculum2014

See form instructions for submission/approval process.
Texas A&M University

Core Curriculum

Initial Request for a Course Addition to the Fall 2014 Core Curriculum

Foundational Component Area: Life and Physical Sciences

In the box below, describe how this course meets the Foundational Component Area description for Life and Physical Sciences. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

The proposed course must contain all elements of the Foundational Component Area. How does the proposed course specifically address the Foundational Component Area definition above?

Life and physical sciences focus on describing, explaining, and predicting natural phenomena using the scientific method. Biological Anthropology is among the most scientifically oriented endeavors within the Liberal Arts, focusing on rigorous data collection and hypothesis testing to advance our understanding of one of the core unifying principles of all life sciences: evolution. Biological anthropologists study living primates using well-established wildlife research techniques. They examine, measure, and analyze the skulls, jaws, teeth, and skeletons of both modern humans and primates, as well as the fossil ancestors of these groups. Biological anthropologists investigate the DNA of living and fossil primates, and undertake research into the isotope chemistry underlying the diets of living and fossil primates. And, biological anthropologists are deeply involved in the forensic sciences. All of this research is undertaken with the aim of understanding and explaining the biological diversity of primates worldwide, including humans and our fossil ancestors. The ultimate goal is to better understand the complex interactions between climate/environment/ecology and human and primate populations, and how these external factors have influenced primate and human evolution. If we want to understand what makes us human, we must first recognize our primate heritage, as well as our deeper mammalian heritage. Only then can we grasp how the natural world has shaped our evolutionary history, and resulted in the diverse array of biological adaptations that characterize modern Homo sapiens. Students will receive detailed and integrated hands-on practical experience with conducting biological anthropological research in a weekly laboratory setting.

Core Objectives

Describe how the proposed course develops the required core objectives below by indicating how each learning objective will be addressed, what specific strategies will be used for each objective and how student learning of each objective will be evaluated.

The proposed course is required to contain each element of the Core Objective.

Critical Thinking (to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information):

Evolution is a controversial topic, in particular human evolution. During the lab, students are encouraged to think critically about their preconceived ideas, religious or otherwise, and to reflect on how they know what they think they know. Within paleoanthropology, the study of human evolution, there is often controversy over the exact position of various fossil species in the line leading to humans. As a result, students are also challenged to think critically about the fossil evidence for human evolution presented to them, as well as the various interpretations of that evidence that scientists have made. In the labs, students are provided with various datasets for them to evaluate and analyze, and to use to develop their own understanding of what the various lines of evidence tell us. These include inquiries into the structure of the cell and DNA, genetic inheritance, evolutionary forces, and forensics, as well as measurements of bones, teeth, and fossils. The ultimate goal is to have the students develop a synthesis of human evolutionary history, and how it has been influenced by both extrinsic and intrinsic factors.
Texas A&M University
Core Curriculum

Initial Request for a Course Addition to the Fall 2014 Core Curriculum

Communication (to include effective development, interpretation and expression of ideas through written, oral and visual communication):

A major component of the scientific endeavor is the effective communication of ideas. In the labs, students are encouraged to formulate thoughts into coherent expressions, and to communicate these questions, and their answers, within a larger body of peers. Weekly lab assignments and reports require further development of effective visual and written communication, as students are required to analyze, evaluate and present visual representations of data and write lab reports in a coherent and thoughtful manner that conveys complex ideas in meaningful ways.

Empirical and Quantitative Skills (to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions):

Students perform a weekly series of tasks as outlined in their lab manuals that provide them first-hand access to both numerical data and observable facts. The lab manual that we use includes a substantial number of datasets that students are required to manipulate and analyze. In addition, students create their own datasets from comparative dental, skeletal, and fossil materials available in the labs that they measure on their own. This hands-on approach provides students with direct access to original data that they can then work through on their own, or in groups, depending on the assignment. As a result, students obtain direct exposure to the data that underlies scientific interpretations, thereby gaining first-hand experience in conducting scientific research.

Teamwork (to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal):

Several of the lab assignments require students to work in groups, both to collect and analyze data. These groups then present combined results that require a concerted effort to develop a consensus opinion. As a result, students learn to consider alternate points of view, and critically assess the evidence that underlies these differing perspectives. They work together toward a shared purpose, and even if they disagree with interpretations, they learn to appreciate why other people think the way that they do. Thus we are training students to become responsible colleagues and future effective collaborators or "team players."

Please be aware that instructors should be prepared to submit samples/examples of student work as part of the future course recertification process.
Introduction to Biological Anthropology Laboratory
Anthropology 226
Fall 2015

Anthropology Building Rm 300A

Lab Instructor: Kristin Hoffmeister
Sections: 503 (Friday 9:10-12:00) & 505 (Monday 12:40-3:30)
Office: Room 310D Anthropology Building
Office Hours: Wednesday 2:00-4:00
Email: khoffmei@neo.tamu.edu

Lab Instructor: Kersten Bergstrom
Sections: 504 (Friday 12:40-3:30) & 506 (Wednesday 5:20-8:10)
Office: Room 310F Anthropology Building
Office Hours: Thursday 3:00-5:00
Email: kersten.bergstrom@tamu.edu

Lab Instructor: Katie Bailey
Sections: 501 (Tuesday 9:35-12:25) & 502 (Wednesday 12:40-3:30)
Office: Room 310E Anthropology Building
Office Hours: Monday 10:30-12:30
Email: katie_9808@tamu.edu

Course Description:
Basic evolutionary principles will be explored through population genetics. Lab provides hands-on exposure to the fossils of primate and human evolution along with the opportunity to measure, compare and contrast and observe trends that have occurred throughout the Cenozoic era. Concurrent registration with ANTH 225 is recommended.

This course is an elective with the Life/Physical Science Attribute and open to all students. There are no prerequisites.

Learning Outcomes:
By the end of the course students should be able to:
1. Apply the scientific method to problem solving in non-academic situations
2. Discuss and explain the mechanisms of evolution and the principles of population genetics
3. Measure and demonstrate traits related to major events in human evolution (encephalization, bipedalism, etc.)
4. Identify extant and extinct primate specimens, including human ancestors
5. Demonstrate human variation with examples from the general population
6. Explain and demonstrate examples of bioarchaeological and forensic methods of individual identification (estimate age, sex, and stature)

Required Text:
Always bring your lab manual to lab unless indicated otherwise. We will be doing assignments from the Walker-Pacheco lab manual, so you will need it to follow along during the lecture portion of the lab. The information in the manual will be important when going through the lab stations. Additional supplementary readings and handouts will be passed out for some of the laboratory sessions.

Reading Assignments:
A .pdf of the assigned readings will be posted on the class’s eCampus website (eCampus.tamu.edu). It will be posted in a folder labeled by week that contains the readings/handouts for that week. You must bring a copy of the readings to lab for discussion; these are required just as much as the lab manual.

Evaluation:
Your lab grade will be based on a combination of attendance, quizzes, lab assignments, a midterm practical, and a final lab exam. Participation is an important part of the learning process in the lab and includes: arriving to class on time, being prepared for class, participation in discussions and lab exercises, and adherence to lab rules. Grades will be weighted as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Lab Assignments</td>
<td>25%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
</tbody>
</table>

Participation:
This is an important part of the learning process in the lab and includes: arriving to class on time, being prepared for class, participation in discussions and lab exercises, and adherence to lab rules. Moreover, individuals who contribute while in class and take part in active learning generally find that they do better on tests. There will be 11 in-class lab assignments corresponding to the 11 lab periods, including the midterm practical. The lowest lab grade will be dropped.

Quizzes:
There will be weekly quizzes based on the material presented in lab the previous week, as well as on the current week’s assignments and readings. These quizzes are intended to help you prepare for both your lab practicals and your lecture exams. Your lowest quiz grade will be dropped.

Homework:
There will be 6 homework assignments that will include handouts, lab manual self-tests, and various readings. These are intended to help you study and prepare you for the quizzes and practicals. Homework assignments are due on the dates listed at the end of the syllabus. Late submission of homework will not be accepted and will result in a zero for the assignment.
Practical Exams:
Each exam consists of 20 timed stations at which the questions are based on the osteological and fossil specimens from lab. Each station will have approximately 2-4 questions. There will be two open lab study times before each exam (dates and times to be announced). The prakticals are not cumulative but do build on previous materials.

Grading Scale:
Percentage        Letter Grade
100-90             A
89-80               B
79-70               C
69-60               D
59-0                F

Attendance:
You are expected to attend every lab session and stay for the entire duration. Early departures are not allowed. You will receive a zero for any week you arrive late, leave early, or are absent without an approved excuse. Contact lab instructors as soon as possible if you will be missing or have missed a lab. You may attend a session other than your assigned lab provided that you receive prior approval from both lab instructors. Failure to abide by this rule will result in you being marked absent for that week and receiving a grade of zero (i.e. no make-up quizzes, assignments or late homework).

Make-up Policy:
There is a graded assignment and/or quiz each week, and you will not be allowed to make these up or turn them in late if you do not have a university-approved excused absence.

If an absence is excused, the instructor will provide the student an opportunity to make up any assignment, quiz, or exam by a date agreed upon by the student and instructor. The make-up work must be completed in a timeframe not to exceed 30 calendar days from the last day of the initial absence. The reasons absences are considered excused by the university are listed below. See Student Rule 7 for details (http://studentrules.tamu.edu/rule07). The fact that these are university-excused absences does not relieve the student of responsibility for prior notification and documentation. Failure to notify and/or document properly may result in an unexcused absence. Falsification of documentation is a violation of the Honor Code.

1) Participation in an activity that is required for a class and appears on the university authorized activity list at https://studentactivities.tamu.edu/app/sponsauth/index
2) Death or major illness in a student's immediate family.
3) Illness of a dependent family member.
4) Participation in legal proceedings or administrative procedures that require a student's presence.
5) Religious holy day. NOTE: Prior notification is NOT required.
6) Injury or illness that is too severe or contagious for the student to attend class.
Make-up Policy (Cont.)

a) Injury or illness of three or more class days:
   Student will provide a medical confirmation note from his or her medical provider within one week of the last date of the absence (see Student Rules 7.1.6.1)

b) Injury or illness of less than three class days:
   Student will provide one or both of these (at instructor's discretion), within one week of the last date of the absence:
   (i.) Texas A&M University Explanatory Statement for Absence from Class form available at http://attendance.tamu.edu
   (ii.) Confirmation of visit to a health care professional affirming date and time of visit.

7) Required participation in military duties.
8) Mandatory admission interviews for professional or graduate school that cannot be rescheduled.

In cases where prior notification is not feasible (e.g., accident or emergency) the student must provide notification by the end of the second working day after the absence, including an explanation of why notice could not be sent prior to the class.

Lab Etiquette:
1) No eating or drinking is allowed in the lab.
2) Please clean up your work area before you leave.
3) Absolutely no use of personal electronic devices is permitted. This includes laptops, tablets, and especially cell phones. If you break this rule you will receive a zero for your next quiz grade.

Bone Handling Guidelines (more to be presented in class):
1) Only touch and or hold the bones when you have a specific reason to.
2) When handling bones and casts, always use both hands and hold the specimen over padding.
3) Do not touch or point at the specimens with pens, pencils, or other sharp objects.
4) Do not pick up a skull by putting your fingers in the orbits or through the zygomatic arch.
5) If you want to look at the teeth on a skull that has an articulated mandible, always detach the spring first to prevent the mandible from snapping shut and damaging the teeth.
6) Remember that while casts are expensive to replace, real skeletal material is irreplaceable and is to be treated with the utmost care and respect.

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.
Copyright & Plagiarism
All materials generated for use in this class are copyrighted. These include syllabi, exams, review sheets and other materials. Because these materials are copyrighted you do not have the right to copy them, unless I expressly grant permission. 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 the permission of that person.

Academic Dishonesty
Academic dishonesty is never tolerated at Texas A&M University, and should be actively discouraged by both the instructor and students (http://student-rules.tamu.edu/). Academic dishonesty comprises the unauthorized distribution of information and/or plagiarism. Any student caught cheating on an exam will receive a zero for that exam, and will be reported to the Department Head for further possible disciplinary proceedings at the discretion of the department of Anthropology and the College of Liberal Arts.

Academic Integrity
“An Aggie does not lie, cheat or steal or tolerate those who do.” Honor Council Rules and Procedures will be strictly followed and enforced in this class. If you have any questions about these rules, consult http://aggiehonor.tamu.edu.

Anthropology Diversity Statement
Respect for cultural and human biological diversity are core concepts of Anthropology. In this course, each voice in the classroom has something of value to contribute to class discussion. Please respect the different experiences, beliefs and values expressed by your fellow students and instructor, and refrain from derogatory comments about other individuals, cultures, groups, or viewpoints. The Anthropology Department supports the Texas A&M University commitment to Diversity, and welcomes individuals of all ages, backgrounds, citizenships, disabilities, education, ethnicities, family statuses, genders, gender identities, geographical locations, languages, military experience, political views, races, religions, sexual orientations, socioeconomic statuses, and work experiences (See http://diversity.tamu.edu/).
<table>
<thead>
<tr>
<th>Lab</th>
<th>Week of</th>
<th>Topic</th>
<th>Lab Assignment (done in class)</th>
<th>Homework due</th>
<th>Readings Due*</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/26</td>
<td>9/2</td>
<td>Introduction; Scientific Method; Evolution and Natural Selection</td>
<td>NO LAB</td>
<td>Lab Assignment 1</td>
<td>Walker-Pacheco pp 1-5; 17-24; 35-38; 41-42; 47-52; Reading: Weiner “Evolution in Action”</td>
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<tr>
<td>1</td>
<td>9/9</td>
<td>Mitosis and Meiosis Principles of Inheritance</td>
<td>Quiz 1</td>
<td>Lab Assignment 2</td>
<td>Walker-Pacheco: pp 65-72; 83-88; 93-94; 97-99; Reading: Carroll, “The Origins of Form”</td>
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<tr>
<td>3</td>
<td>9/16</td>
<td>Population Genetics; Hardy-Weinberg Equilibrium</td>
<td>Quiz 2</td>
<td>Lab Assignment 3</td>
<td>Walker-Pacheco pp 113-117; Jurmain textbook pp. 402-408; Reading: Diamond, “Blood, Genes and Malaria”</td>
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<td>4</td>
<td>9/23</td>
<td>Human Osteology</td>
<td>Quiz 3</td>
<td>Lab Assignment 4</td>
<td>Walker-Pacheco pp 135-144, 151-155, 161-164, 169-172</td>
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<td>5</td>
<td>9/30</td>
<td>Primate Taxonomy</td>
<td>Quiz 4</td>
<td>Lab Assignment 5</td>
<td>Walker-Pacheco pp 235-236, 239-241, 245-247; Reading: Gould “What is a Species?”</td>
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<td>6</td>
<td>10/7</td>
<td>Primate Comparative Anatomy and Evolution</td>
<td>Quiz 5</td>
<td>Lab Assignment 6</td>
<td>Walker-Pacheco pp 217-221; 225-226; 279-285; Reading: Krause “Washed up in Madagascar”</td>
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<td>7</td>
<td>10/14</td>
<td>Primate Behavior</td>
<td>Osteology Practical Exam</td>
<td>Lab Assignment 7</td>
<td>Readings: “One Great Ape”, Smuts “What Are Friends For?”</td>
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<td>8</td>
<td>10/21</td>
<td>Early Hominin Evolution and Bipedality</td>
<td>Quiz 6</td>
<td>Lab Assignment 8</td>
<td>Walker-Pacheco pp 303-305, 309-312, 315-316</td>
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<td>9</td>
<td>10/28</td>
<td><em>Homo habilis</em> and <em>Homo erectus</em></td>
<td>Quiz 7</td>
<td>Lab Assignment 9</td>
<td>Walker-Pacheco pp 331-334; Readings: Cartmill “The Third Man”, Shipman “Doubting Dmanisi”</td>
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<td>10</td>
<td>11/4</td>
<td>Middle Pleistocene humans and Neanderthals</td>
<td>Quiz 8</td>
<td>Lab Assignment 10</td>
<td>Walker-Pacheco 339-341; Readings: Wong “Who Were the Neandertals?”; Stix “Traces of a Distant Past”; Tattersall “How We Became Humans”</td>
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<tr>
<td>Week</td>
<td>Date</td>
<td>Activity</td>
<td>Notes</td>
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<tr>
<td>12</td>
<td>11/18</td>
<td><strong>FINAL PRACTICAL</strong></td>
<td>Homework 6: Final Practical Review</td>
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<td>13</td>
<td>11/25</td>
<td>NO LAB—THANKSGIVING</td>
<td></td>
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<tr>
<td>14</td>
<td>12/2</td>
<td>NO LAB—LAST DAY OF CLASS</td>
<td></td>
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</tbody>
</table>
Texas A&M University
Core Curriculum Cover Sheet
Initial Request for a course to be considered for the Fall 2015 Core Curriculum

1. This request is submitted by (department name): Department of Physics & Astronomy

2. Course prefix and number: ASTR 103

3. Texas Common Course Number: 

4. Complete course title: Introduction to Stars & Exoplanets

5. Semester credit hours: 3

6. This request is for consideration in the following Foundational Component Area:
   - [ ] Communication
   - [x] Life and Physical Sciences
   - [ ] Language, Philosophy and Culture
   - [ ] Creative Arts
   - [ ] American History
   - [ ] Government/Political Science
   - [ ] Social and Behavioral Sciences

7. This course should also be considered for International and Cultural Diversity (ICD) designation:
   - [ ] Yes
   - [x] No

8. How frequently will the class be offered? Every Fall and Spring semester starting Fall 2016

9. Number of class sections per semester: 1-2 classes

10. Number of students per semester: 150 to 300 (estimate)

11. Historic annual enrollment for the last three years: New course

This completed form must be attached to a course syllabus that sufficiently and specifically details the appropriate core objectives through multiple lectures, outside activities, assignments, etc. Representative from department submitting request should be in attendance when considered by the Core Curriculum Council.

12. Submitted by:
   
   [Signature]
   Course Instructor

   [Signature]
   George R. Welch
   Approvals:

   26 Aug 2015
   Date

13. Department Head
   
   [Signature]
   [Date]

14. College Dean/Designee
   
   [Signature]
   [Date]

For additional information regarding core curriculum, visit the Texas Higher Education Coordinating Board website at www.thecb.state.tx.us/corecurriculum2014

See form instructions for submission/approval process.
Texas A&M University
Core Curriculum
Initial Request for a Course Addition to the Fall 2016 Core Curriculum

Foundational Component Area: Life and Physical Sciences

In the box below, describe how this course meets the Foundational Component Area description for Life and Physical Sciences. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

The proposed course must contain all elements of the Foundational Component Area. How does the proposed course specifically address the Foundational Component Area definition above?

ASTRONOMY 103 (3 credits): Introduction to Stars & Exoplanets
A qualitative study of stellar birth, stellar structure and evolution, stellar nucleosynthesis, the Hertzsprung-Russell Diagram, white dwarfs, neutron stars, supernovae, black holes, proto-planetary systems, origin of the solar system, and the search for exoplanets; utilizes active learning methods that incorporate observations from the current generation of ground and space-based telescopes. Open to all students.

ASTR 103 enables students to understand, construct, and evaluate relationships in the natural world by understanding the basis for building and testing scientific theory. The course goal is to inculcate the students with an understanding and appreciation of the basic scientific method and principles, thus allowing students an opportunity for a better understanding and appreciation of our physical place in the Universe. The course provides an in-depth study of stars and extrasolar planetary systems, their properties, and how stars and planets; an understanding of our Sun, how it formed, and what it will become; the formation and structure of stars spanning a wide range in masses; the remnants of dead stars including black holes, neutron stars, and white dwarfs; the process of stellar nucleosynthesis that forms heavy elements such as oxygen, nitrogen, and iron; the enrichment of the inter-stellar medium through stellar death; the formation of our own Solar System in the context of planetary formation; and the requirements for life. Through the material covered in ASTR 103, the students are introduced to nearly all fundamental topics of modern stellar astronomy and planetary formation.

Core Objectives

Describe how the proposed course develops the required core objectives below by indicating how each learning objective will be addressed, what specific strategies will be used for each objective and how student learning of each objective will be evaluated.

The proposed course is required to contain each element of the Core Objective.

Critical Thinking (to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information):

Astronomy 103 is structured around general questions about science and its place in our world. We stress the use of the scientific method in answering questions. We give instruction in astronomy specifically, but give an appreciation of the broader context of that knowledge. In particular, we will show that gaining a scientific body of knowledge involves mastery of concepts and specific viewpoints, much more than simply learning a set of facts. We show what types of questions can be posed and how they are answered in a scientific context; this necessarily involves explanation of how scientific theories are developed and tested and the nature of science and limits of empirical knowledge. Astronomy is well tuned to this sort of instruction; both due to its intrinsic interest, but also because the span of time and spatial scales involved are so much greater than human experience.
Texas A&M University
Core Curriculum
Initial Request for a Course Addition to the Fall 2016 Core Curriculum

Astronomy 103 includes instruction in issues that connect astronomical knowledge and associated scientific methodology more generally to concepts that unify the natural sciences and that are related to a broader cultural context. We show the importance of cause and effect reasoning in the scientific world view, demonstrate the characteristic scales and proportions of natural phenomena, explain the ways in which the stars and solar systems form and evolve, reveal the general applicability of natural laws, illustrate the role of mathematics in science, and discuss the historical development of science and impact on culture and general intellectual progress. Individual student progress is assessed regularly throughout the semester using metrics that include homework, in-class participation via polling, and exams.

Communication (to include effective development, interpretation and expression of ideas through written, oral and visual communication):

Communication is key to science and the students develop communication skills on multiple levels including analytic and written skills as part of the assignments as well as verbal skills during lectures, specifically with the lecture tutorials and in-class polling (see the following sections). Astronomy also is particularly attuned to teaching students visual interpretation and understanding, specifically by using figures and images of astronomical objects to infer empirical relations and thus learn universal physical concepts. The course components are designed to teach students how to explain the scientific process, describe basic physical concepts and general characteristics of astronomical objects, apply scientific thinking to the natural world, and formulate a scientific hypothesis. Individual student progress is assessed regularly throughout the semester using metrics that include homework, and exams. In-class tutorials and exams include written, oral, and visual communication. For example, the tutorials require the students to discuss with each other and provide written answers to questions. Several tutorials also require sketching a description of the subject, e.g. relative positions of objects given a gravitational field.

Empirical and Quantitative Skills (to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions):

ASTR 103 teaches students how to identify the differences among competing scientific theories, recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry, apply their analytical skills to understand the physical nature of the universe, and communicate their findings, analyses, and interpretation both orally and in writing. Specifically, there are regular homework sets (12 in total) and exams that are coordinated with the lecture material. The assigned questions include mathematical problems that develop familiarity with data analysis and numerical manipulation as well as short answer, discussion-style problems that utilize higher level cognitive skills.

Teamwork (to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal):

The ASTR 103 lectures incorporate two strategies to promote active learning through teamwork: (1) In-class polling with iClickers (during each lecture) and (2) lecture tutorials for group work (6-8 tutorials per course). With in-class polling, the lecturers are able to determine if students are understanding the new material. If a majority of the class answers a poll question incorrectly, the students are encouraged to discuss with each other using scientific arguments about which answer is most likely to be correct. Once discussion has ended, the poll is taken again. The process is repeated until through evaluation of the different points of view, the majority of the class has selected the correct answer.
Lecture-tutorials are an effective tool for promoting active learning through discussion and collaborative teamwork. During a lecture, the students work in small groups (2-3) on an astronomy tutorial that reinforces the introduction of new concepts by applying these concepts in a series of questions; students typically require 15-20 minutes to complete a tutorial. The tutorials have multiple discussion-style questions that the students evaluate using the
Texas A&M University
Core Curriculum

Initial Request for a Course Addition to the Fall 2016 Core Curriculum

scientific method and answer as a team. The class then reviews the tutorial which often promotes further discussion of the material.

Please be aware that instructors should be prepared to submit samples/examples of student work as part of the future course recertification process.
Astronomy 103 Syllabus – Dr. Kim-Vy Tran (Fall 2015)

Astronomy 103: Introduction to Stars & Exoplanets (Fall 2015)

Course Description: A qualitative study of stellar birth, stellar structure and evolution, stellar nucleosynthesis, the Hertzsprung-Russell Diagram, white dwarfs, neutron stars, supernovae, black holes, proto-planetary systems, origin of the solar system, and the search for exoplanets; utilizes active learning methods that incorporate observations from the current generation of ground and space-based telescopesc. Open to all students.

Prerequisites: None. Course uses basic (high school level) algebra and geometry.

Course Content: 3 Lecture hours each week (3 credit course)

Learning Outcomes: By the conclusion of this course, students should be able to:

- Explain the scientific process and how scientific theories are developed and tested, specifically regarding the formation of stars and planetary systems.
- Recall basic physical concepts such as gravitational and conservation laws and how light and matter interact to study stars and planets.
- Describe the general characteristics of stars and planets, and how stars and planets form and evolve.
- Apply scientific thinking to understand current stellar and planetary formation models.
- Formulate a scientific hypothesis, identify a testable prediction, verify by learning about recent experiments, and assess the results.
- Work effectively in small groups to discuss observational evidence for the current models for stars and planetary systems.

Logistics

Lecturer: Assoc. Prof. Kim-Vy Tran (vy@physics.tamu.edu)
Office Phone Number: 979 458 5853
Equipment: iClicker
(bring to every lecture; register your iClicker in class with roll call)
Lectures (section 501): 12:45 – 14:00 on Tuesdays & Thursdays in MPH 203
Office Day: Tuesdays 09:00 – 16:00 in MIST 324 (except during lecture times). Please email or call me to request an appointment for any other time.
Class Website: http://faculty.physics.tamu.edu/vy/ASTR103-fall15/
ECampus Website: http://ecampus.tamu.edu/
Check here for link to class website and to posted grades.
Attendance: See Texas A&M student rule 7 for missing attendance/make-up policy at http://student-rules.tamu.edu/rule07
Class Requirements

- Homework (10%): 12 assigned, only 10 count towards final grade (late homework receives no credit except for University-excused absences). The 11th and 12th homeworks count as extra credit.
- Class Participation (5%): in-class questions & polling with iClicker; tutorials
- Three Mid-term Exams (60%): fill-in the blank and essay questions. If your Final exam grade is higher than your (single) lowest mid-term grade, the Final exam grade will replace the (single) lowest mid-term grade, i.e. your Final exam grade can be 45% of your total grade.
  *If you receive a "0" for any of the mid-term exams, the "0" will not be replaced.*
- Final Exam (25%): fill-in the blank and essay questions

Grading Scale Guide:
A (≥90%), B (80-89%), C (70-79%), D (60-69%), F (<60%)

Time Investment: For the Lecture component, you are expected to spend approximately 12 hours total per week on the material (3 hours in lecture, 6 hours reading, and 3 hours on homework).

Homework Structure

There will be a total of 12 homeworks assigned during the semester but only 10 will count towards your homework component of 10%. The 11th and 12th homeworks count as extra credit, e.g. if you missed one of the previous 10 homeworks. Each of the 12 homeworks is worth 1% towards your final grade, meaning that there is a potential 2% worth of extra credit if you complete all 12 homeworks.

Each assignment is due by 17:00 on Tuesday.

Mobile phones, Electronic Devices, & Electronic Communication

*There is a strict no laptop/no mobile devices policy for this class; all laptops and mobile devices must remain closed during lecture.*

This is hopefully obvious, but you should turn off your mobile phone prior to the start of class; texting or any other use of a mobile phone during class is not allowed. Texting via your laptop with, e.g. iChat or Skype, is also not allowed. The no electronic communication/distraction policy also applies to iPods, iPhones, Blackberries, and any other such devices. These activities during class are distracting and disrespectful to both your fellow students and me.

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The minimum penalty for such an offense is a failing grade for this course. Aiding and abetting the above behavior is also considered a serious offense resulting in equally severe penalties. The Honor Code sets Texas A&M apart from other universities, and you should be proud of this standard. I expect that you will abide by the Aggie Academic Integrity Statement and Policy:

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Astronomy 103: Class Schedule (Fall 2015)

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Date</th>
<th>Assignment (Read Chapters Before Lecture)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>01 Sept</td>
<td>Ch. 4: Origins of Modern Astronomy</td>
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<tr>
<td></td>
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<td>* HW1 assigned (due 08 Sept)</td>
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<tr>
<td>2</td>
<td>2</td>
<td>03 Sept</td>
<td>Ch. 5: Gravity; Tutorial</td>
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<td>3</td>
<td>08 Sept</td>
<td>Ch. 6: Light &amp; Telescopes; Tutorial</td>
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<td>11 Sept</td>
<td>Ch. 7: Atoms &amp; Spectra</td>
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<td>4</td>
<td>15 Sept</td>
<td>Ch. 8: The Sun</td>
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<td>* HW3 assigned (due 22 Sept)</td>
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<tr>
<td>6</td>
<td>5</td>
<td>17 Sept</td>
<td>Ch. 9: Family of Stars; Tutorial</td>
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<td></td>
<td></td>
<td>22 Sept</td>
<td>Summary &amp; review</td>
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<tr>
<td></td>
<td>8</td>
<td>24 Sept</td>
<td>Mid-term #1</td>
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<tr>
<td></td>
<td>9</td>
<td>29 Sept</td>
<td>Ch. 10: Interstellar Medium</td>
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<td></td>
<td>10</td>
<td>01 Oct</td>
<td>Ch. 11: Formation &amp; Structure of Stars</td>
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<td>06 Oct</td>
<td>Ch. 12: Stellar Evolution; Tutorial</td>
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<td>13 Oct</td>
<td>Ch. 13: Deaths of Stars</td>
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<td>15 Oct</td>
<td>Ch. 14: Neutron Stars &amp; Black Holes; Tutorial</td>
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<td>14</td>
<td>20 Oct</td>
<td>Summary &amp; review</td>
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<td>15</td>
<td>20 Oct</td>
<td>Mid-term #2</td>
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<td>22 Oct</td>
<td>Ch. 19: Solar System</td>
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<td>27 Oct</td>
<td>Ch. 19: Extrasolar Planets; Tutorial</td>
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<td>17</td>
<td>29 Oct</td>
<td>Ch. 20: Earth</td>
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<td>18</td>
<td>03 Nov</td>
<td>Ch. 21: Rocky Planets; Tutorial</td>
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<td>19</td>
<td>05 Nov</td>
<td>Ch. 21: Venus &amp; Mars</td>
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<td>20</td>
<td>10 Nov</td>
<td>Summary &amp; review</td>
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<td>12 Nov</td>
<td>Mid-term #3</td>
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<td>22</td>
<td>17 Nov</td>
<td>Ch. 22: Jupiter &amp; Saturn</td>
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<td>12</td>
<td>19 Nov</td>
<td>Ch. 23: Icy Planets; Tutorial</td>
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<td>23</td>
<td>24 Nov</td>
<td>Ch. 24: Kuiper Belt Objects</td>
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<td>24</td>
<td>26-27 Nov</td>
<td>THANKSGIVING HOLIDAY (no classes)</td>
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<td>01 Dec</td>
<td>Ch. 25: Meteorites, Comets, Asteroids; Tutorial</td>
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<td>25</td>
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<td>* HW11 assigned (due 01 Dec)</td>
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<td></td>
<td>26</td>
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<td>* HW12 assigned (due 08 Dec)</td>
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<tr>
<td>14</td>
<td>27</td>
<td>03 Dec</td>
<td>Ch. 26: Astrobiology</td>
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<td>28</td>
<td>08 Dec</td>
<td>Summary &amp; review</td>
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<tr>
<td></td>
<td>11 Dec</td>
<td>Final Exam: 12:30-14:30 (for lecture TR@12:45)</td>
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</tbody>
</table>
Texas A&M University
Core Curriculum Cover Sheet
Initial Request for a course to be considered for the Fall 2015 Core Curriculum

1. This request is submitted by [department name]: Department of Physics & Astronomy
2. Course prefix and number: ASTR 104  3. Texas Common Course Number: 
6  
4. Complete course title: Introduction to Galaxies & Cosmology  5. Semester credit hours: 3
6. This request is for consideration in the following Foundational Component Area:
   □ Communication  □ Creative Arts
   □ Mathematics  □ American History
   □ Life and Physical Sciences  □ Government/Political Science
   □ Language, Philosophy and Culture  □ Social and Behavioral Sciences
7. This course should also be considered for International and Cultural Diversity (ICD) designation:
   □ Yes  □ No
8. How frequently will the class be offered? Every Fall and Spring semester starting Fall 2016
9. Number of class sections per semester: 1-2 classes
10. Number of students per semester: 150-300 (estimate)
11. Historic annual enrollment for the last three years: New course

This completed form must be attached to a course syllabus that sufficiently and specifically details the appropriate core objectives through multiple lectures, outside activities, assignments, etc. Representative from department
submitting request should be in attendance when considered by the Core Curriculum Council.

13. Submitted by: [Signature]  26 August 2015
    Course Instructor: [Signature]  26 Aug 2015
    Approvals: [Signature]
14. Department Head: [Signature]  8/27/15
15. College Dean/Designee: [Signature]

For additional information regarding core curriculum, visit the Texas Higher Education Coordinating Board website at
www.thecb.state.tx.us/corecurriculum2014

See form instructions for submission/approval process.
Texas A&M University
Core Curriculum
Initial Request for a Course Addition to the Fall 2016 Core Curriculum

Foundational Component Area: Life and Physical Sciences

In the box below, describe how this course meets the Foundational Component Area description for Life and Physical Sciences. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

The proposed course must contain all elements of the Foundational Component Area. How does the proposed course specifically address the Foundational Component Area definition above?

ASTRONOMY 104 (3 credits): Introduction to Galaxies & Cosmology
A qualitative study of properties of galaxies, galaxy evolution through cosmic time, galactic archeology, active galactic nuclei, super-massive black holes, large-scale structure, the expansion history of the universe, cosmological parameters, and Big Bang nucleosynthesis; utilizes active learning methods that incorporate observations from the current generation of ground and space-based telescopes. Open to all students.

ASTR 104 enables students to understand, construct, and evaluate relationships in the natural world by understanding the basis for building and testing scientific theory. The course goal is to inculcate the students with an understanding and appreciation of the basic scientific method and principles, thus allowing students an opportunity for a better understanding and appreciation of our physical place in the Universe. The course provides an in-depth study of galaxies, their properties, and how galaxies evolve through cosmic time; the formation of our own Milky Way in the context of galaxy evolution; the formation of super massive black holes and how they power Active Galactic Nuclei; the relationship of galaxy evolution to the dynamics, kinematics, formation, and development of large scale structure of the Universe; observational evidence for Big Bang cosmology; modern measurements of cosmological parameters including the age of the Universe and its expansion history; the discovery of Dark Energy; and current theories on the nature of Dark Matter. Through the material covered in ASTR 104, the students are introduced to nearly all fundamental topics of modern extragalactic astronomy and cosmology.

For more information, please contact the Undergraduate Astronomy Coordinator Dr. Kim-Vy Tran (vy@physics.tamu.edu) and visit the website astronomy.tamu.edu

Core Objectives

Describe how the proposed course develops the required core objectives below by indicating how each learning objective will be addressed, what specific strategies will be used for each objective and how student learning of each objective will be evaluated.

The proposed course is required to contain each element of the Core Objective.

Critical Thinking (to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information):

Astronomy 104 is structured around general questions about science and its place in our world. We stress the use of the scientific method in answering questions. We give instruction in astronomy specifically, but give an appreciation of the broader context of that knowledge. In particular, we will show that gaining a scientific body of knowledge involves mastery of concepts and specific viewpoints, much more than simply learning a set of facts. We show what types of questions can be posed and how they are answered in a scientific context; this necessarily involves explanation of how scientific theories are developed and tested and the nature of science and limits of empirical knowledge. Astronomy is well tuned to this sort of instruction; both due to its intrinsic interest, but also because the span of time and spatial
Texas A&M University

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Initial Request for a Course Addition to the Fall 2016 Core Curriculum

Astronomy 104 includes instruction in issues that connect astronomical knowledge and associated scientific methodology more generally to concepts that unify the natural sciences and that are related to a broader cultural context. We show the importance of cause and effect reasoning in the scientific world view, demonstrate the characteristic scales and proportions of natural phenomena, explain the ways in which the Universe and local environment change and evolve, reveal the general applicability of natural laws, illustrate the role of mathematics in science, and discuss the historical development of science and impact on culture and general intellectual progress. Individual student progress is assessed regularly throughout the semester using metrics that include homework, in-class participation via polling, and exams.

Communication (to include effective development, interpretation and expression of ideas through written, oral and visual communication):

Communication is key to science and the students develop communication skills on multiple levels including analytic and written skills as part of the assignments as well as verbal skills during lectures, specifically with the lecture tutorials and in-class polling (see the following sections). Astronomy also is particularly attuned to teaching students visual interpretation and understanding, specifically by using figures and images of astronomical objects to infer empirical relations and thus learn universal physical concepts. The course components are designed to teach students how to explain the scientific process, describe basic physical concepts and general characteristics of astronomical objects, apply scientific thinking to the natural world, and formulate a scientific hypothesis. Individual student progress is assessed regularly throughout the semester using metrics that include homework, and exams. In-class tutorials and exams include written, oral, and visual communication. For example, the tutorials require the students to discuss with each other and provide written answers to questions. Several tutorials also require sketching a description of the subject, e.g. relative positions of objects given a gravitational field.

Empirical and Quantitative Skills (to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions):

ASTR 104 teaches students how to identify the differences among competing scientific theories, recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry, apply their analytical skills to understand the physical nature of the universe, and communicate their findings, analyses, and interpretation both orally and in writing. Specifically, there are regular homework sets (12 in total) and exams that are coordinated with the lecture material. The assigned questions include mathematical problems that develop familiarity with data analysis and numerical manipulation as well as short answer, discussion-style problems that utilize higher level cognitive skills.

Teamwork (to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal):

The ASTR 104 lectures incorporate two strategies to promote active learning through teamwork: (1) In-class polling with iClickers (during each lecture) and (2) lecture tutorials for group work (6-8 tutorials per course). With in-class polling, the lecturers are able to determine if students are understanding the new material. If a majority of the class answers a poll question incorrectly, the students are encouraged to discuss with each other using scientific arguments about which answer is most likely to be correct. Once discussion has ended, the poll is taken again. The process is repeated until through evaluation of the different points of view, the majority of the class has selected the correct answer.

Lecture-tutorials are an effective tool for promoting active learning through discussion and collaborative teamwork. During a lecture, the students work in small groups (2-3) on an astronomy tutorial that reinforces the introduction of new concepts by applying these concepts in a series of questions; students typically require 15-20 minutes to
Texas A&M University

Core Curriculum

Initial Request for a Course Addition to the Fall 2016 Core Curriculum

complete a tutorial. The tutorials have multiple discussion-style questions that the students evaluate using the scientific method and answer as a team. The class then reviews the tutorial which often promotes further discussion of the material.

Please be aware that instructors should be prepared to submit samples/examples of student work as part of the future course recertification process.
ASTRONOMY 104: INTRODUCTION TO GALAXIES & COSMOLOGY (FALL 2015)

COURSE DESCRIPTION: A qualitative study of properties of galaxies, galaxy evolution through cosmic time, galactic archeology, active galactic nuclei, super-massive black holes, large-scale structure, the expansion history of the universe, cosmological parameters, and Big Bang nucleosynthesis; utilizes active learning methods that incorporate observations from the current generation of ground and space-based telescopes. Open to all students.

PREREQUISITES: None. Course uses basic (high school level) algebra and geometry.

COURSE CONTENT: 3 Lecture hours each week (3 credit course)

LEARNING OUTCOMES: By the conclusion of this course, students should be able to:

- Explain the scientific process and how scientific theories are developed and tested, specifically regarding the formation of galaxies and current cosmological models.
- Recall basic physical concepts such as gravitational and conservation laws and how light and matter interact to study galaxies and the universe.
- Describe the general characteristics of galaxies and the universe, and how galaxies and the universe evolve through cosmic time.
- Apply scientific thinking to understand current cosmological models of the Universe.
- Formulate a scientific hypothesis, identify a testable prediction, verify by learning about recent experiments, and assess the results.
- Work effectively in small groups to discuss observational evidence for the current cosmological model of the Universe.

Logistics

LECTURER: Assoc. Prof. Kim-Vy Tran (vy@physics.tamu.edu)
OFFICE PHONE NUMBER: 979 458 5853
EQUIPMENT: iClicker
  (bring to every lecture; register your iClicker in class with roll call)
LECTURES (SECTION 501): 12:45 – 14:00 on Tuesdays & Thursdays in MPHY 203
OFFICE DAY: Tuesdays 09:00 – 16:00 in MIST 324 (except during lecture times). Please email or call me to request an appointment for any other time.
CLASS WEBSITE: http://faculty.physics.tamu.edu/vy/ASTR104-fall15/
ECAMPUS WEBSITE: http://ecampus.tamu.edu/
Check here for link to class website and to posted grades.
ATTENDANCE: See Texas A&M student rule 7 for missing attendance/make-up policy at http://student-rules.tamu.edu/rule07
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- Homework (10%): 12 assigned, only 10 count towards final grade (late homework receives no credit except for University-excused absences). The 11th and 12th homeworks count as extra credit.

- Class Participation (5%): in-class questions & polling with iClicker; tutorials

- Three Mid-term Exams (60%): fill-in the blank and essay questions. If your Final exam grade is higher than your (single) lowest mid-term grade, the Final exam grade will replace the (single) lowest mid-term grade, i.e. your Final exam grade can be 45% of your total grade.

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- Final Exam (25%): fill-in the blank and essay questions

Grading Scale Guide:
A (≥90%), B (80–89%), C (70–79%), D (60–69%), F (<60%)

Time Investment: For the Lecture component, you are expected to spend approximately 12 hours total per week on the material (3 hours in lecture, 6 hours reading, and 3 hours on homework).

Homework Structure

There will be a total of 12 homeworks assigned during the semester but only 10 will count towards your homework component of 10%. The 11th and 12th homeworks count as extra credit, e.g. if you missed one of the previous 10 homeworks. Each of the 12 homeworks is worth 1% towards your final grade, meaning that there is a potential 2% worth of extra credit if you complete all 12 homeworks.

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### Astronomy 104: Class Schedule (Fall 2015)

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LECTURE</th>
<th>DATE</th>
<th>ASSIGNMENT: (READ CHAPTERS BEFORE LECTURE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>01 Sept</td>
<td>Ch. 1.1–1.2: Our Milky Way Galaxy</td>
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<tr>
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<td>* HW1 assigned (due 08 Sept)</td>
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<tr>
<td>2</td>
<td>3</td>
<td>08 Sept</td>
<td>Ch. 2.1–2.2: Galactic Coordinates, Determining Distances</td>
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<td>* HW2 assigned (due 15 Sept)</td>
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<td>15 Sept</td>
<td>Ch. 2.3: Structure of the Milky Way; Tutorial</td>
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<td>6</td>
<td>7</td>
<td>17 Sept</td>
<td>Ch. 3.1–3.3: Galaxy classes; Tutorial</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>22 Sept</td>
<td>Summary &amp; review</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>24 Sept</td>
<td>Mid-term #1</td>
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<td>10</td>
<td>11</td>
<td>01 Oct</td>
<td>Ch. 3.4: Galaxy Scaling Relations</td>
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<td>* HW4 assigned (due 06 Oct)</td>
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<tr>
<td>6</td>
<td>12</td>
<td>06 Oct</td>
<td>Ch. 3.7–3.8: Super-Massive Black Holes</td>
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<td>* HW5 assigned (due 13 Oct)</td>
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<td>7</td>
<td>13</td>
<td>10 Oct</td>
<td>Ch. 3.9–3.10: Galaxy Luminosity Functions</td>
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<td>Ch. 3.11: Gravitational Lensing and Dark Matter; Tutorial</td>
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<td>* HW6 assigned (due 20 Oct)</td>
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<td>8</td>
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<td>15 Oct</td>
<td>Summary &amp; review</td>
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<td>9</td>
<td>16</td>
<td>20 Oct</td>
<td>Mid-term #2</td>
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<td>* HW7 assigned (due 27 Oct)</td>
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<tr>
<td>10</td>
<td>17</td>
<td>22 Oct</td>
<td>Ch. 4.1–4.2: Fundamentals of Cosmology; Tutorial</td>
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<td>Ch. 4.3: Friedmann Expansion and Cosmological Distances</td>
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<td>* HW8 assigned (due 03 Nov)</td>
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<td>10</td>
<td>18</td>
<td>27 Oct</td>
<td>Ch. 4.4: Standard Model</td>
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<td>19</td>
<td>19</td>
<td>03 Nov</td>
<td>Ch. 4.5: Evidence for the Standard Model; Tutorial</td>
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<td>* HW9 assigned (due 10 Nov)</td>
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<td>11</td>
<td>20</td>
<td>05 Nov</td>
<td>Ch. 5.1–5.2: Active Galactic Nuclei</td>
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<td>21</td>
<td>22</td>
<td>10 Nov</td>
<td>Summary &amp; review</td>
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<td>12</td>
<td>23</td>
<td>12 Nov</td>
<td>Mid-term #3</td>
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<tr>
<td>24</td>
<td>24</td>
<td>17 Nov</td>
<td>Ch. 5.3–5.5: Components of an AGN</td>
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<td>* HW10 assigned (due 24 Nov)</td>
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<tr>
<td>13</td>
<td>25</td>
<td>19 Nov</td>
<td>Ch. 8.1–8.2: Cosmological Parameters</td>
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<tr>
<td>26</td>
<td>26</td>
<td>24 Nov</td>
<td>Ch. 8.3: Supernovae and Cosmology; Tutorial</td>
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<td>* HW11 assigned (due 01 Dec)</td>
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<tr>
<td>26</td>
<td>27</td>
<td>27 Nov</td>
<td>THANKSGIVING HOLIDAY (no classes)</td>
</tr>
<tr>
<td>28</td>
<td>28</td>
<td>01 Dec</td>
<td>Ch. 8.6: Cosmic Microwave Background; Tutorial</td>
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<td></td>
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<td>* HW12 assigned (due 08 Dec)</td>
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<tr>
<td>14</td>
<td>29</td>
<td>03 Dec</td>
<td>Ch. 8.7 Dark Energy &amp; Inflation</td>
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<tr>
<td>11</td>
<td>30</td>
<td>08 Dec</td>
<td>Summary &amp; review</td>
</tr>
<tr>
<td>31</td>
<td>31</td>
<td>09 Dec</td>
<td>Final Exam: 12:30-14:30 (for lecture TR@12:45)</td>
</tr>
</tbody>
</table>
Texas A&M University

Core Curriculum Cover Sheet
Initial Request for a course to be considered for the Fall 2015 Core Curriculum

1. This request is submitted by (department name): Veterinary Pathobiology

2. Course prefix and number: VTPB 212

3. Texas Common Course Number:

4. Complete course title: Genetics in the News

5. Semester credit hours: 3

6. This request is for consideration in the following Foundational Component Area:
   - [ ] Communication
   - [ ] Mathematics
   - [x] Life and Physical Sciences
   - [ ] Language, Philosophy and Culture
   - [ ] Creative Arts
   - [ ] American History
   - [ ] Government/Political Science
   - [ ] Social and Behavioral Sciences

7. This course should also be considered for International and Cultural Diversity (ICD) designation:
   - [ ] Yes
   - [x] No

8. How frequently will the class be offered? Fall and spring

9. Number of class sections per semester: 1

10. Number of students per semester: 30

11. Historic annual enrollment for the last three years:
    - Click here to enter text.
    - Click here to enter text.
    - Click here to enter text.

This completed form must be attached to a course syllabus that sufficiently and specifically details the appropriate core objectives through multiple lectures, outside activities, assignments, etc. Representative from department submitting request should be in attendance when considered by the Core Curriculum Council.

13. Submitted by:

   [Signature]

   [Date] 10/30/14

14. Department Head

   [Signature]

   [Date] 11-11-14

15. College Dean/Designee

   [Signature]

   [Date] 11-26-14

For additional information regarding core curriculum, visit the Texas Higher Education Coordinating Board website at www.thecb.state.tx.us/corecurriculum2014

See form instructions for submission/approval process.
Texas A&M University
Core Curriculum

Initial Request for a Course Addition to the Fall 2015 Core Curriculum

Foundational Component Area: Life and Physical Sciences

In the box below, describe how this course meets the Foundational Component Area description for Life and Physical Sciences. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

The proposed course must contain all elements of the Foundational Component Area. How does the proposed course specifically address the Foundational Component Area definition above?

The course will use recent genetic news articles as a starting point to investigate the underlying science, to learn about the methodology associated with the discovery and to understand how genetics impacts life systems. This life and physical science course will use genetics topics from contemporary press articles. The original science paper that lead to the press release will be critiqued using the scientific method. This will include learning how data is rigorously collected, quantitatively analyzed and conclusions reached using the scientific method. Genetics provides is a unique field with growing impact on modern society. Geneticists have tools and methodologies that are radically changing the world. These include genetic engineering using DNA to alter organisms, quantitative analysis of the link between DNA polymorphisms and disease susceptibility, and the modification of species to adapt to changing environments. Students will receive detailed lectures on the genetic phenomena underlying the press release before the delving into the science. They will learn to perform similar analyses to gain experience in the scientific methods, quantitative analyses of genetic data, and design and interpretation of molecular genetic experiments. This course will focus on the science, not the translation. The news articles will only be used as the starting point to get into the science since they usually provide interesting findings that capture students interest.

Core Objectives

Describe how the proposed course develops the required core objectives below by indicating how each learning objective will be addressed, what specific strategies will be used for each objective and how student learning of each objective will be evaluated.

The proposed course is required to contain each element of the Core Objective.

Critical Thinking (to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information):

Modern genetics requires critical thinking to analyze data using quantitative approaches. Students will be required to evaluate the science and data behind recent genetic news articles and to determine whether the news articles have accurately presented the discovery. This will require students to understand the raw data, how it was collected and to think creatively about alternative ways it could be analyzed. Students will provide similar datasets and will be expected to creatively design an analysis, and develop innovative approaches that experiments would have been performed differently. This will require evaluation of potential outcomes and synthesis of new information that may lead to different interpretations of the data. Students will be evaluated on their understanding of the genetic science through exams. Each topic area will focus on one recent new report and one underlying primary paper that will be used to teach specific genetic concepts that will include both qualitative and quantitative analysis. The concepts will be the focus of the exams.

Communication (to include effective development, interpretation and expression of ideas through written, oral and visual communication):

Texas A&M University

Core Curriculum

Initial Request for a Course Addition to the Fall 2015 Core Curriculum

Since a major component of scientific endeavors is accurately and succinctly communicating new ideas and results, students will be required to write a news article based on assigned recent genetic discoveries or based on research of a TAMU faculty member in the genetic sciences that the student interviews. This will require the students to understand the underlying genetic study, interpret the data conclusions were based upon, and express the new findings (ideas). The students will develop a news article that presents the research at a level that can be understood by a lay audience but also demonstrates that the students understands the science supporting the discovery and can accurately interpret the conclusions. Students will also be assigned into teams to develop a short presentation with visuals such as powerpoint that describes a historical genetic discovery that has a current impact on modern society. The topics will be drawn from those that have presented with controversial results and will be required to present the contrasting views (see below). These will be presented to the entire class. Student news articles will be evaluated on their writing clarity using a pre-assigned grading matrix and the accuracy of the description of the research discovery. Peer evaluation of the news reports will also be used. The oral presentations will be evaluated on the quality of the presentation and visual materials, the clarity of the description of the science, accurately interpretation of the data, and the response to class questions. Peer evaluation will also be used.

Empirical and Quantitative Skills (to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions):

Students will delve into the primary research paper behind recent genetic discoveries reported in the news. This will include analyzing the data for appropriate news prepresentation. Students will also be expected to quantitatively analyze inheritance data and demonstrate an introductory level understanding of quantitative genetic data. This will include taking provided genetic data, quantitatively analyzing the data for type type of inheritance and performing correlation analyses to link DNA polymorphisms with phenotypic measures. The analyses will require using numerical datasets to elucidate the mode of inheritance. Students will be evaluated through exams that contain quantitative problems similar to those studied in class that originated from the news articles.

Teamwork (to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal):

Students will be assigned teams (mentioned above) to research and develop a short presentation on a historical discovery that has an impact on modern society. This topics will be chosen by the instructor to focus on those with controversial conclusions and students will be required to present both interpretations and to arrive at their own conclusions while considering the alternative conclusions. Society impacts will also be presented from perspectives of the positive and negative impacts on society. News articles will be selected that have some controversy on either the interpretation or the impact on society. Students will be expected to present both sides and to engage in discussion with others in the class after their presentations. Students will be evaluated on their individual contribution to the group project through a confidential peer-evaluation.

Please be aware that instructors should be prepared to submit samples/examples of student work as part of the future course recertification process.
Course title and number: Genetics in the News, VTPB 212
Term: Fall 2015
Meeting times and location: 9:35-10:50 TR, location TBA

Course Focus

The science of genetics and the broader field of genomics is becoming central to understanding and adapting advances in the life sciences with direct impact on many issues facing society from medical and veterinary advances to food production, biological impact of climate change, ecological conservation and synthetic life forms. As a consequence, discoveries and technological advances in genetics are often in the news.

Course Description and Prerequisites

VTPB 212 (3 Credit hours) Examination of contemporary news articles from the popular press for class discussion of the underlying genetics and genomics, and their methodologies to gain a deeper understanding of the science behind news headlines in this increasingly important field.
Prerequisites: Freshman/Sophomore classification or approval of instructor; high school or college biology course recommended.

Learning Outcomes

At the end of the course, students will be able to:
1. Differentiate and describe the fundamental principles of genetics including gene function and inheritance;
2. Apply these principles to analyze the accuracy and interpret current news reports describing advances in genetics and genomics.

Instructor Information

Name: David Threadgill
Telephone number: 979-862-2569
Email address: dwt@tamu.edu
Office hours: Thursday 11:00 am-12:00 pm
Office location: REYN 428

Textbook and/or Resource Material

Publisher: Pearson / Benjamin Cummings, ISBN-13: 978-0-321-72412-0. This text is an excellent reference, but is not required for your success in the course as any modern genetic text will suffice.
News articles will be assigned weekly.

Grading Policies

Your grade is based on the number of points you accumulate during the semester. It is unlikely that there will be a curve in this class so it is to your advantage to accumulate points at every opportunity during the semester. All written assignments must be submitted prior to 5:00 pm on the due date. No late work will be accepted EXCEPT in the case of a University-approved excuse.
Assignment | Due Date | Point Value
--- | --- | ---
Class Participation | Clicker participation during class | 50
Exam #1 | Tuesday, date xxx | 100
News Article | Tuesday, date xxx prior to 5:00 pm | 50
Exam #2 | Tuesday, date xxx | 100
Oral presentation | Tuesday/Thursday, date xxx | 50
Final Exam | Date/time | 150

Note: Final Exam is Cumulative

Total | | 500

Total Points | Grade
--- | ---
450 - 500 | A
400 - 449 | B
350 - 399 | C
300 - 349 | D
Below 300 | F

Note: A grade of "Incomplete" will only be used as delineated in Student Rule 10.5.

Attendance and Make-up Policies

Attendance is required and will be determined by clicker response during lecture. Attendance at examinations is mandatory unless there is a genuine emergency as described in Student Rule 7 (http://student-rules.tamu.edu/rule07). Missing an examination without a documented emergency will result in a zero score for the examination in question. Attendance and make-up policy will follow Student Rule 7.

Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required Reading</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Course introduction</td>
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<td></td>
<td>From Galen to Mendel, Watson, and Crick: foundation of genetics</td>
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<td>2</td>
<td>My parents and me: pedigrees and probabilities</td>
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<td>3</td>
<td>Is there a biological reason for sex?: linkage and recombination</td>
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<td>4</td>
<td>Where are my genes?: chromosomes, extra-nuclear inheritance</td>
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<td>Exam 1</td>
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<td>5</td>
<td>To tan or not to tan?: mutations, repair and cancer</td>
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<td>6</td>
<td>Why should I care about my grandmother’s diet?: epigenetics and transgenerational inheritance</td>
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<td>7</td>
<td>Neanderthals, lactose intolerance and farming: population and evolutionary genetics</td>
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<td>News article due</td>
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<td>8</td>
<td>How does Farmer Brown produce more corn than me?: quantitative genetics</td>
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<td>9</td>
<td>Why won’t Spot play catch?: behavioral genetics</td>
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<td>10</td>
<td>Plague, HIV and disease: immunogenetics and infections</td>
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<td>Exam 2</td>
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<td>11</td>
<td>The newt who lost its tail: stem cells</td>
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<td>12</td>
<td>I'm my own ecosystem?: microbiome, genomics and synthetic life forms</td>
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<td>13</td>
<td>Student presentations</td>
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<td>14</td>
<td>Student presentations</td>
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<tr>
<td>Final</td>
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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://aggiehonor.tamu.edu*

"An Aggie does not lie, cheat, or steal, or tolerate those who do."
International and Cultural Diversity (ICD)
Texas A&M University
International and Cultural Diversity Cover Sheet
Request for a course to be included in the University Graduation Requirement for International and Cultural Diversity

1. This request is submitted by (department name): Africana Studies Program

2. Course prefix and number: AFST 303 / PSYC 303
3. Texas Common Course Number: 2319

4. Complete course title: Psychology of Women of Color
5. Semester credit hours: 3

6. Frequency the class will be offered: Approximately every 2nd or 3rd semester

7. Number of sections per semester: 1

8. Number of students per semester: 20

9. Historic annual enrollment for the last three years:
   2012-2013: n/a
   2011-2012: n/a
   2010-2011: n/a

10. Statement on how this course meets the criteria for International and Cultural Diversity.
    The course, Psychology of Women of Color: A Multi-Cultural Focus and an Interdisciplinary Perspective, fulfills the international and Cultural Diversity (ICD only) designation criteria in the following ways. First, 100% of the course content interconnects individual and national group identities in order for TAMU students to better understand the complexities of women's diverse experiences in day-to-day living. Second, the class assignments are designed to foster student participation, plus give students practice preparing clear, accurate, and engaging presentations on popular topics of race/ethnicity, feminism backlash, and social cognitions. Third, the intellectual framework covered in the required course readings highlights the growing influence of a more pluralistic, globally-aware populace, and the diverse diaspora that TAMU students may encounter both professionally and personally.

   This course is intended to serve as a cross-listed, elective option for undergraduate students seeking a BA, BS, or Minor degree in the Psychology Department, a BA or Minor degree in the Women's and Gender Studies Program and/or a Minor degree in the Africana Studies Program. The course content largely focuses on contemporary issues for women of color. Specifically, 93% of the required course readings (13 out of 24 chapters) cover topics that have developed in a global context during the past 50 years. The academic scope of this class includes interdisciplinary theories that mainly address concerns about inequality/disparities, gender role conflicts, and psychological well-being for women of color. Additionally, students are introduced to scientific research methods that study the unique yet intersectional experiences of women from different races/ethnicities, nationalities, and cultural backgrounds.

   Odineresse R. Carter-Bowell August 8, 2014

11. Course Instructor

12. Department Head 8/13/14

13. College Dean/Designee 9/3/15

Submit this form and current course syllabus to fso-ccc@tamu.edu or Kristin Harper, TAMU 1125
Fall 2015
PSYC 303 / AFST 303 / WGST 303
Psychology of Women of Color: A Multi-Cultural Focus and an Interdisciplinary Perspective

CLASS MEETING INFORMATION:
Class Dates: August 31 – December 9, 2015
Class Time: Mondays, Wednesdays, and Fridays, 12:40pm - 1:30pm
Class Location: PSYC Bldg., Rm. 337

CLASS INSTRUCTOR INFORMATION:
Instructor’s Name: Adrienne R. Carter-Sowell, Ph.D.
Instructor’s Title: Assistant Professor
Instructor’s Office: Room 270 in the Department of Psychology
Instructor’s Phone: 979-845-0378
Instructor’s E-mail: acsowell@tamu.edu
Instructor’s Office Hours: Wednesdays, 11:30am -12:30pm or by appointment

Required Texts: Authors: Janet Shibley Hyde, University of Wisconsin - Madison
and Nicole Else-Quest, University of Maryland, Baltimore County
Title: Half the Human Experience, Eighth Edition
Copyright: 2013
Publishing Company: Cengage Publishing
Student Companion Site: http://www.cengagebrain.com

Author: Vivian M. May, Syracuse University
Title: Pursuing Intersectionality, Unsettling Dominant Imaginaries
Copyright: 2015
Publishing Company: Taylor & Francis Publishing

Course Prerequisite: Satisfactory completion of courses PSYC 107, AFST 201, and/or WGST 200 or with the approval of the instructor.

Learning Outcomes:
Students who are successful in this course will:
• gain a broad understanding of the influences of gender, race, and ethnicity on psychology and society.
• critically think about pop culture versus academic feminism as it relates to psychology.
• be able to discuss theories and analyze research on the science of women’s diverse experiences across the lifespan.

Course Goals: The primary goal of this course is to examine the complexities of women’s diverse experiences with regard to race, sexuality, class, nationality, ability, and work/labor in a global context. Course goals include:
• to better understand the intersections of identities and various forms of oppression.
• to discover how race really is a women’s issue.
• to learn how to apply course content to your everyday life, including possible action to create positive change.
• to identify quantitative and qualitative researchers along with peer-reviewed research relevant to the psychology of women/gender with a multi-cultural focus.
• to learn about media portrayals of women and the impact of those explicit images on how we all think about girls and women.

Please note that the content of this syllabus is subject to change and that all course announcements, updates, and notes will be available on the course website.
<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture Topic</th>
<th>Readings and Videos</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 31, 2015</td>
<td>Introduction to Class, Syllabus, and Website</td>
<td>Chapter 1 in Hyde textbook</td>
</tr>
<tr>
<td>September 2, 2015</td>
<td>Guest Lecture from April-Autumn Jenkins, TAMU Offices of the Dean of Student Life</td>
<td>Chapter 14 in Hyde textbook</td>
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<td>September 4, 2015</td>
<td>The Victimization of Women</td>
<td>Chapter 14 in Hyde textbook</td>
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<td>September 7, 2015</td>
<td>Introduction and Introduction: The Case for Intersectionality and the Question of Intersectionality Backlash</td>
<td>Chapter 1 in Hyde textbook and Introduction in May reader</td>
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<td>September 9, 2015</td>
<td>Theoretical Perspective</td>
<td>Chapter 2 in Hyde textbook</td>
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<td>September 11, 2015</td>
<td>Theoretical Perspectives and Group Presentation 1</td>
<td>Chapter 2 in Hyde textbook and Chapter 1 in May reader</td>
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<td>September 14, 2015</td>
<td>Women of Color</td>
<td>Chapter 4 in Hyde</td>
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<tr>
<td>September 16, 2015</td>
<td>Women of Color</td>
<td>Chapter 4 in Hyde</td>
</tr>
<tr>
<td>September 18, 2015</td>
<td>Test #1</td>
<td>Chapters 1, 2, 4, &amp; 14 in Hyde textbook + May Readings</td>
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<tr>
<td>September 21, 2015</td>
<td>Gender Stereotypes and Gender Differences</td>
<td>Chapter 3 in Hyde textbook</td>
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<tr>
<td>September 23, 2015</td>
<td>Gender Stereotypes and Gender Differences</td>
<td>Chapter 3 in Hyde textbook</td>
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<tr>
<td>September 25, 2015</td>
<td>Guest Lecture from Heather Wheeler, TAMU Women's Resource Center</td>
<td>Chapter 7 in Hyde textbook</td>
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<tr>
<td>September 28, 2015</td>
<td>From Infancy to Old Age: Development across the Lifespan and Group Presentation 2</td>
<td>Chapter 7 in Hyde textbook and Chapter 2 in May reader</td>
</tr>
<tr>
<td>September 30, 2015</td>
<td>Language</td>
<td>Chapter 5 in Hyde textook</td>
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<tr>
<td>October 2, 2015</td>
<td>Language and Group Presentation 3</td>
<td>Chapter 5 in Hyde textook and Chapter 3 in May reader</td>
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<td>October 5, 2015</td>
<td>Emotion</td>
<td>Chapter 6 in Hyde</td>
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<td>October 7, 2015</td>
<td>Emotion</td>
<td>Chapter 6 in Hyde</td>
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<tr>
<td>October 9, 2015</td>
<td>Test #2</td>
<td>Chapters 3, 5, 6, &amp; 7 in Hyde textbook + May Readings</td>
</tr>
<tr>
<td>October 12, 2015</td>
<td>Biological Influences on Women's Behavior</td>
<td>Chapter 10 in Hyde textbook</td>
</tr>
<tr>
<td>October 14, 2015</td>
<td>Biological Influences on Women's Behavior</td>
<td>Chapter 10 in Hyde textbook</td>
</tr>
<tr>
<td>October 16, 2015</td>
<td>Abilities, Achievement, and Motivation</td>
<td>Chapter 8 in Hyde textbook</td>
</tr>
<tr>
<td>October 19, 2015</td>
<td>Abilities, Achievement, and Motivation</td>
<td>Chapter 8 in Hyde textbook</td>
</tr>
<tr>
<td>October 21, 2015</td>
<td>Women and Work</td>
<td>Chapter 9 in Hyde textbook</td>
</tr>
<tr>
<td>October 23, 2015</td>
<td>Women and Work and Group Presentation 4</td>
<td>Chapter 9 in Hyde textbook and Chapter 4 in May reader</td>
</tr>
<tr>
<td>October 26, 2015</td>
<td>Psychology of Men</td>
<td>Chapter 16 in Hyde textbook</td>
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<tr>
<td>October 28, 2015</td>
<td>Psychology of Men and Group Presentation 5</td>
<td>Chapter 16 in Hyde textbook and Chapter 5 in May reader</td>
</tr>
<tr>
<td>October 30, 2015</td>
<td>Test #3</td>
<td>Chapters 8, 9, 10, &amp; 16 in Hyde textbook + May Readings</td>
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<td>November 2, 2015</td>
<td>Psychology and Women's Health Issues</td>
<td>Chapter 11 in Hyde textbook</td>
</tr>
<tr>
<td>November 4, 2015</td>
<td>Psychology and Women's Health Issues</td>
<td>Chapter 11 in Hyde textbook</td>
</tr>
<tr>
<td>November 6, 2015</td>
<td>Women and Mental Health Issues</td>
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<td>Women of Color Mental &amp; Physical Health Issues</td>
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<td>Photovoice Presentations</td>
<td>List of Presenters: TBD</td>
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<td>List of Presenters: TBD</td>
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<td>November 20, 2015</td>
<td>Test #4</td>
<td>Chapters 11 &amp; 15 in Hyde textbook + Readings + Presentations</td>
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<tr>
<td>November 23, 2015</td>
<td>Group Presentation 6 and Selection of Spotlight Person Due</td>
<td>Chapter 6 in May reader</td>
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<td>December 2, 2015</td>
<td>Female Sexuality</td>
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<td>December 4, 2015</td>
<td>Lesbian and Bisexual Women</td>
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<td>December 7, 2015</td>
<td>Retrospect and Prospect</td>
<td>Chapter 17 in Hyde textbook</td>
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<td>December 9, 2015</td>
<td>Course Wrap-up and Extra Credit Spotlight Presentations</td>
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<td>December 14, 2015</td>
<td>Test #5</td>
<td>Chapters 12, 13, &amp; 17 in Hyde textbook + May Readings</td>
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Course Overview:

*Psychology of Women of Color: A Multi-Cultural Focus and an Interdisciplinary Perspective* is a 3.0 credit course. We will cover the unique yet intersectional experiences of women from different racial groups, ethnicities, nationalities and cultural backgrounds, using:

Feminist Framework:
Academic feminism seeks to accomplish the following goals:
- to make visible the invisible social forces that perpetuate oppression;
- to challenge sexist, racist, heterosexist, and classist stereotypes and representations;
- to render unthinkable and ineffective those ideological systems that hold these oppressions in place; and
- to transform oppressive institutions from tools of discriminatory practices into peaceful, compassionate, and educational practices.

Critical Race Theory:
Critical race theory, originating in critical law studies, later gave rise to critical white studies as an examination of whiteness and white privilege. Critical race theory:
- conceptualizes racism as an ingrained feature of the American landscape that appears natural to those within the society.
- uses non-traditional academic tools such as story-telling and narratives to analyze racial myths, racial assumptions, and the social construction of reality. Critical race theory aims to construct a different reality through recognition of the experiential knowledge of people of color.
- calls for a critical analysis of racism within liberalism and for contextual and historical analysis of law and society.

Intersectional Theory:
Perspectives of intersectionality provide a new platform for:
- making connections across/within forms of oppression and privilege
- identifying the complexity of social identity & the consequences of social location in the matrix of oppression
- examining the systems of power that support and perpetuate oppression based on race, class, gender, sexuality, and more.

Course Climate:
The material presented in this course is firmly rooted in scientific research and theory. Some of the topics we talk about will be both provocative and sensitive. We will all get the most out of this class if you come prepared and willing to share your own ideas and discuss the subject matter as assigned. It is natural for people to disagree at times, but even if you hear something you disagree with you should consider that position and respond to it in a respectful and thoughtful manner. As such, I expect you to be respectful of both me and your fellow classmates. While I cannot guarantee that you will be comfortable, it is mandatory that everyone be respected. Therefore, I reserve the right to remove anyone from class who acts in a rude or disruptive manner.

Teaching Philosophy:
I intend to treat students fairly, respectfully, and provide as much information as I can regarding grading criteria and expectations. My goal is to use the course to facilitate your development as responsible and intelligent adults. I have high expectations of my students, only because experience has taught me that students can do outstanding, thoughtful, difficult work if given the opportunity. I am happy to meet with you anytime if you have problems understanding the material or have questions about the assignments. However, it is difficult for me to be sympathetic to your unique situation if I am uninformed and/or you display little effort.
Contacting Me:
The most effective way to contact me is by email. My policy is to reply to email messages within 24 hours. If you have not heard from me within 24 hours, please feel free to send the message again. When communicating via email, please include your class title somewhere in the message (i.e., Psychology of Women of Color, or PSYC 303, either in the subject line or in the text). When requesting information about the class, please look to make sure the information you are requesting is not already explained in the syllabus. I am happy to answer questions that help clarify information that is ambiguous or confusing. You do not need to contact me if you are going to miss class, however, if there is a major event in your life that is causing you to miss multiple classes, I would like to be aware of it. Thanks!

How to succeed in this course:
1. Attend class → arrive on time → sign the Attendance Sheet → stay for the entire class period → while in class, pay attention to the lecture and discussion
2. Come to class prepared (having read the material for the day ahead of time) so you can intelligently discuss the material presented and ask relevant questions.
3. Participate in class discussion; you will remember the information better if you are engaged in the topic
4. Take note of what is said by your instructor, peers, guest speakers, and in the media clips shown.
5. Take all FIVE exams and complete the TWO student assignments.
6. Meet with the instructor to discuss problems and unresolved concerns.

Grading:
Attendance and Participation:
- In order to receive credit for attendance, students must sign the dated Attendance Sheet or take the Pop Quiz. The Attendance Sheet or Pop Quiz is circulated once per class, within approximately 15 minutes of the start of class. Afterward, no attendance credit will be afforded to a student for attending class on that day.
- Participation will include a student's appropriate interaction with the instructor and fellow students by asking questions, offering comments, and contributing to class discussions. You also will have the opportunity to participate in course related research projects.
- Disruptions due to late arrivals, early departures, and personal conversations are inappropriate interactions with the instructor and fellow students. Also, during class, please do not text, use your electronic devices to interact with social media, read the newspaper, study for another class, surf the internet, check email, or sleep. Finally, please silence your cell phones and alarms before class begins.
- The total contribution of attendance and participation to your final grade is 20 points.

Extra Credit: Students may complete an additional, optional assignment contributes up to 10 points total to your final grade.

Exams:
There will a total of FIVE examinations each worth 100 points. Each exam will cover reading or lecture material as indicated on the class schedule as such the exams are non-cumulative in nature. The exams will consist of multiple choice questions. The total contribution of examinations to your final grade is 500 points.
Student Group Presentation: The purpose of the group presentation assignment is to provide an opportunity for you to relate theory and findings from the selected readings in the Pursuing Intersectionality. Unsettling Dominant Imaginaries, by Vivian M. May to a critical evaluation of course topics. Each 6 person student group will prepare a presentation that should meet a time limit of no less than 8 minutes but no more than 10 minutes. There will be a Q & A session after each student group presentation. The presentation should include 8 to 10 PowerPoint slides and verbally express your thoughts and ideas, satisfy the information needs of the audience, as well as provide clear, concise, and entertaining coverage of a selected course related topic. In order for the group assignment to be eligible for full credit, all group members need to show up on their presentation day and each person in the group needs to cover some portion of the collective presentation. Lastly, one student from the group needs to provide ONLY the instructor, via email, with six multiple choice test questions from your final presentation along with four multiple choice answers per question, and the correct answer indicated for each question. I prefer these types of questions to favor the students who were present and listening to you. Please read the assignment description provided on the course website for a complete explanation of this assignment. The presentation contributes up to 30 points total to your final grade.

Photovoice Assignment:
Photovoice has been used for several decades by social scientists, educators, and counselors to work with people and provide a space for individualized expression. When used as a methodological approach to working with marginalized communities, it can be a powerful way to gather perspective from people that are traditionally silenced. For example, a psychology professor once gave cameras to women immigrants from Taiwan living in a domestic violence shelter. She asked them to take pictures that represented who they were and their experiences as immigrant women.

Your charge will be to take pictures over the next few weeks that capture your voice with regard to some aspect of intersectionality. Although all photovoice assignments must include intersectionality as a central focus, there are several ways you can approach this assignment.
Examples:
• Photos that represent the intersections of your own various identities, including those that are associated with privilege and disadvantaged populations.
• Photos that attempt to illustrate intersectionality as a concept. You might take pictures of items, locations, and abstract images that would help others understand intersectional theory and interdisciplinary perspective.
• Photos that focus on one particular aspect of intersectionality or one particular social location. For example, a student might use the photovoice assignment to address experiences of disabled veteran women or perhaps lesbian and bisexual women of color.

Each student will display and explain the photos taken as part of an in-class presentation. PowerPoint is the recommended format. Your presentation must be fully visible to all students in the class at once as you explain.

Your grade will be based on how well you make connections between intersectional theory, the readings from the course, and your explanations of the photos you present to the class. Please read the assignment description provided on the course website for a complete explanation of this assignment. This assignment is worth 50 points.

Extra Credit Spotlight Woman of Color Student Presentation: For extra credit students may select a woman related to one of the course topics and prepare a presentation that serves as a lesson on the importance and contributions of the chosen woman. You should integrate theories and findings from the course to educate the audience on challenges and/or barriers that your chosen Spotlight Woman of Color may have faced. The presentation should meet a time limit of about 3-5 minutes. There will be a Q & A session after each student’s presentation. The presentation should include 4 to 5 PowerPoint slides and verbally express your thoughts and ideas, satisfy the information needs of the audience, as well as provide clear, concise, and entertaining coverage of the selected Spotlight Woman of Color.
The purpose of the spotlight presentation assignment is to provide students an opportunity to identify a woman who is alive, contributes positively to public interests, and is prominent in her area of service, activism, career, volunteering/philanthropy. Although mothers along with other female friends and family are important, this assignment is not intended to include inspirational figures known on such a personal level. You are expected to pick a topic and featured woman that is meaningful to you and that you feel comfortable discussing with others.

Please read the assignment description provided on the course website for a complete explanation of this assignment. The person you choose for this assignment is due on Monday, November 23, 2015 and the student presentations occur the last week of classes - December 2015. This assignment is worth up to 10 extra credit points toward your final grade. No late presentations will be accepted for full credit grading consideration.

Grade Calculation:
Grading will be in accord with the University Rules and Regulations (see http://student-rules.tamu.edu/rule7.htm. Below are the requirements for each letter grade based on the following total amount of points:

A = at least 90% of 600 or 540 points and above
B = at least 80% of 600 or 539 - 480 points
C = at least 70% of 600 or 479 - 420 points
D = at least 60% of 600 or 419 - 360 points
F = at least 59% of 600 or 359 points and below

Exams (500) +Group Presentation (30) + Photovoice Assignment (50) + Attendance/ Participation (20) = 600 Pts.

Make up Policy:
In rare circumstances (as specified by University regulations at http://student-rules.tamu.edu/) and with appropriate documentation, within one week of the last date of the student’s absence, a student may be permitted to take a make-up any quiz, exam or other work that contributes to the final grade or provide a satisfactory alternative by a date agreed upon by the student and instructor. The make-up work must be completed in a timeframe not to exceed 30 calendar days from the last day of the initial absence.

In accordance with Texas House Bill 256 and TAMU Student Rule 7: Attendance, students shall be excused from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. For more information about excused absences due to religious holy days, please visit the Dean of Faculties website at http://dof.tamu.edu/content/religious-observance.

If an absence is excused, the instructor will either provide the student an opportunity to make up any quiz, exam or other work that contributes to the final grade or provide a satisfactory alternative by a date agreed upon by the student and instructor. If the instructor has a regularly scheduled make up exam, students are expected to attend unless they have a university approved excuse. The make-up work must be completed in a timeframe not to exceed 30 calendar days from the last day of the initial absence.

The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for the absence. Among the reasons absences are considered excused by the university are the following (see Student Rule 7 for details http://student-rules.tamu.edu/rule07. The fact that these are university-excused absences does not relieve the student of responsibility for prior notification and documentation. Failure to notify and/or document properly may result in an unexcused absence. Falsification of documentation is a violation of the Honor Code.
IMPORTANT UNIVERSITY INFORMATION

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 Statements
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.

As commonly defined, plagiarism consists of passing off as one’s own ideas, words, writings etc., which belong to another. In accordance with the definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of the person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust without which research cannot be safely communicated. If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section “Scholastic Dishonesty”.

For additional information please visit: http://aggiehonor.tamu.edu/.
Texas A&M University  
**International and Cultural Diversity Cover Sheet**  
*Request for a course to be included in the University Graduation Requirement for International and Cultural Diversity*

1. This request is submitted by (department name):  
   Engineering Student and Academic Affairs

2. Course prefix and number: **ENGR410**  
   3. Texas Common Course Number:  

4. Complete course title: **Global Engineering Design**  
   5. Semester credit hours: **3 credits**

6. Frequency the class will be offered: **Every fall**

7. Number of sections per semester: **1**

8. Number of students per semester: **10-20**

9. Historic annual enrollment for the last three years:  
   - **2014-2015:** 12  
   - **2013-2014:** 8  
   - **2012-2013:** not offered

10. Statement on how this course meets the criteria for International and Cultural Diversity:  
    This course exposes students to intercultural models and their applications to engineering design in diverse, multinational and multidisciplinary settings. Students carry out an engineering design project working in international teams of students, faculty and industry experts. In addition to applying engineering skills in the project, class topics also include the study and application of intercultural models, global enterprise fundamentals, and remote collaboration technologies.

    Student in this class learn to identify cultural differences and understand those cultural differences in ways that enables them to interact effectively with others from different racial, ethnic, or social identity groups. This concept supports the viewpoint of providing the tools for students for lifelong learning.

    Students interact with students from another country in a virtual engineering context. By presenting the intercultural concepts to the students in the engineering setting will allow them to grasp the importance of the concept and how it applies in the real world and to engineering.

11. Course Instructor:  
   **[Signature]**

12. Department Head:  
   **[Signature]**

13. College Dean/Designee:  
   **[Signature]**

---

Submit this form and current course syllabus to fso-ccc@tamu.edu or Kristin Harper, TAMU 1125.

*See form instructions for submission/approval process.*
ENGR 410 - Global Engineering Design (Proposed)

Instructors:
- Dr. Jorge Leon, ETID & ISEN, Texas A&M University; +1 (979) 845-4993, jleon@tamu.edu.
- Dr. Marcelo Savi, Professor, Mechanical Engineering, Federal University of Rio de Janeiro (UFRJ), Brazil, savi@mecanica.ufrj.br.
- Alan Labes, Innovation Manager, South America Technology Center, FMC Technologies, Brazil.

Course Description: A study of intercultural models and their application to engineering design in diverse, multinational and multidisciplinary settings. Students carry out an engineering design project working in international teams of students, faculty and industry experts. In addition to applying engineering skills in the project, topics also include the study and application of intercultural models, global enterprise fundamentals, and remote collaboration technologies.

Learning Outcomes: To learn to work effectively (professional, productive, culturally sensitive) as an engineer in multicultural and multidisciplinary work environments. The student will learn to:
- Integrate and apply skills required to solve an engineering design problem (Design and cognitive competence).
- Be aware of intercultural differences and similarities, and their relevance to effectiveness in the workplace (Cognitive competence).
- Apply intercultural knowledge for self-improvement (Intrapersonal competence).
- Apply intercultural knowledge for effective teamwork (Interpersonal competence).
- Apply synchronous and asynchronous technologies for remote and web-based collaboration (communication competence).

Course Activities:
- A challenging design project serves as the common application context for the class.
- Students will organize in international teams.
- Topics relevant to work in intercultural/international settings will be covered in parallel and integrated with the project.
- The course content will be delivered combining traditional face-to-face, video-conference, and web-based lectures and readings.
- Routine structured and unstructured meetings will provide opportunities for routine interactions between the international participants; students will be required to document these interactions in weekly journals.
- Invited guest speakers.

Grading:

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<th>Weight</th>
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<td>Attendance and Participation</td>
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<td>Less than 59.99</td>
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Attendance is as per university regulations: [http://student-rules.tamu.edu/rule07](http://student-rules.tamu.edu/rule07); absences from any graded activity require a medical confirmation note containing the date and time of the illness and medical professional’s confirmation of needed absence. Your participation in remote collaboration activities, online lectures, online discussions, and related tasks will count as part of your attendance and participation grade.

Course Website:
The course will use eCampus, [http://eCampus.tamu.edu](http://eCampus.tamu.edu) as the course website. Within eCampus, students will be able to locate reference materials, communicate with the instructors, and submit electronic assignments. To access eCampus go to, [http://eCampus.tamu.edu](http://eCampus.tamu.edu), click the login button the left side of the screen and then enter your TAMU credentials. If you have problems login in or using eCampus, please contact support at [itshelp@tamu.edu](mailto:itshelp@tamu.edu) or 979-458-3417.

Reference Materials:
The following is a list of reference materials for the course. These materials and additional links will be provided within eCampus.

A. Project related references:
1. Technical references to be provided by the instructor.
   a. [http://www.youtube.com/watch?v=JkH1OxyafGpE](http://www.youtube.com/watch?v=JkH1OxyafGpE)
   b. [http://www.youtube.com/watch?v=pVZ8pmkg1do](http://www.youtube.com/watch?v=pVZ8pmkg1do)
   c. [http://www.youtube.com/watch?v=nvugvCQTuw](http://www.youtube.com/watch?v=nvugvCQTuw)
4. Video: Creativity by Catherine Courage: [http://www.youtube.com/watch?v=01Y7qIPFpqw](http://www.youtube.com/watch?v=01Y7qIPFpqw)

B. Global engineering & culture:
6. M. Bennett
   b. Video: Bennett’s Developmental Model of Intercultural Sensitivity (DMIS): [https://www.youtube.com/watch?v=6vKRFH2Wm6Y](https://www.youtube.com/watch?v=6vKRFH2Wm6Y)
7. Geert Hofstede
   b. Video: culture model: [https://www.youtube.com/watch?v=wdh40kgyYOY](https://www.youtube.com/watch?v=wdh40kgyYOY)
   c. Video: World map with dimensions: [https://www.youtube.com/watch?v=U-XdlbgFzXO](https://www.youtube.com/watch?v=U-XdlbgFzXO)
   e. Sample applications: [http://geert-hofstede.com/applications.html](http://geert-hofstede.com/applications.html)
8. Deborah Swallow
   a. Video – Intercultural Communication Adventure with Little Pilot: [https://www.youtube.com/watch?v=Ps1_OP3dQck&list=UU5FhjSTTvGw2fGqG13rLo5Q](https://www.youtube.com/watch?v=Ps1_OP3dQck&list=UU5FhjSTTvGw2fGqG13rLo5Q)
   b. Video – what is cross cultural communication?: [https://www.youtube.com/watch?v=nT3Ajd3rGM&list=UU5FhjSTTvGw2fGqG13rLo5Q](https://www.youtube.com/watch?v=nT3Ajd3rGM&list=UU5FhjSTTvGw2fGqG13rLo5Q)

C. Remote collaboration and virtual meetings:
Within ENGR 410, instructors and students will use a variety of technologies to interact with each other. These technologies include:

1. Bb Collaborate
   a. Collaborate will be used as the official communication between instructors and students within the course. Collaborate can be accessed within the eCampus website, under the Bb Collaborate link located within the menu on the left. Before the first collaborate session, you will need to visit [http://blackboard.force.com/publickbarticleview?id=kA770000000ChlW](http://blackboard.force.com/publickbarticleview?id=kA770000000ChlW) to check your system requirements.
   b. Here are some tips for using collaborate for these virtual meetings:
      i. Join Early – get in habit of joining your session at least 10 minutes early, which gives you a chance to make sure that your computer configured correctly
         1. Run the Audio Wizard as soon as you join the session to ensure that your audio is working correctly.
      ii. Ensure that there are not other programs running in the background while using Collaborate. This not only helps you focus at the task at hand, but using websites with large bandwidth like YouTube, Facebook, and other websites can interfere with the Collaborate session.
      iii. Ask questions within the chat box or virtually raise your hand if you have any questions during the virtual session. There will be times when the instructors will call on participants during these sessions.

2. Google Drive & Hangouts:
   a. If you have not already authorized your Google Apps for Education account, please go to [http://google.tamu.edu/](http://google.tamu.edu/).
   b. Groups will have a Google Drive folder created for them by the instructors (using your @tamu.edu email address), which will allow groups to interactively work together on assignments and projects. Groups can create any type of drive document (i.e. document, presentation, spreadsheet, etc.) as well as use this as common document storage for all team assignments and projects. If you do not see the folder within your Google drive folder, click on “Shared with me” in the left hand menu. Here are some tips for using Google drive:
      i. File Sharing – any document that is uploaded or created into the group folder will be shared with the group. Make sure that you are uploading content to the correct drive folders.
      ii. Be considerate of others work – determine how the team would like to handle corrections and revisions to Google files. Google tracks the history of the document, but some may not be done with their thoughts when exiting the document. Determine what works best for everyone in the group.
      iii. Multiple users – when multiple users are in the same Google files, you will see different colored cursors indicating the area in which that user is editing. When using Google Spreadsheets, the cell will be grayed out when another person is editing a cell.
c. Google Hangouts can be used to communicate with group members, this will not be used to formally communicate with instructors within the course. Additional information about Google Hangouts can be found at https://www.google.com/+/learnmore/. Feel free to use other technologies to communicate with your groups and share your experiences with your classmates and instructors.

3. Managing a remote workforce:
   http://thefutureofwork.net/assets/Managing_a_Remote_Workforce_Proven_Practices_from_Successful_Leaders.pdf

Important Policies:

Academic Integrity Statement & Policy:
"An Aggie does not lie, cheat or steal, or tolerate those who do." For more information on the TAMU academic integrity policies, please visit http://aggiehonor.tamu.edu.

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### COURSE CONTENT – Please check eCampus for updates and assignment details.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Readings, meetings &amp; assignments</th>
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</table>
| **L1. Course introduction**  
  - Description  
  - Procedures |  
  - Check remote collaboration technology (web based audio- and video-conferencing) |
| **L2. Intercultural maturity**  
  - Bennett’s intercultural sensitivity developmental model  
    - Ethnocentric developmental phase  
    - Ethnorelative developmental phase |  
  - Read articles on remote collaboration, “Five Tips for Better Virtual Meetings”  
  - Complete practice assignments  
  - View video on Bennett’s model.  
  - Complete written assignment |
| **L3. Culture**  
  - Hofstede cultural dimensions |  
  - Read Hofstede’s handouts  
  - Watch Hofstede’s videos  
  - Complete written assignment |
| **L4. Selected topics in global engineering**  
  - Global engineering framework  
  - Global supply chains  
  - International trade and agreements  
  - The effect of foreign exchange  
  - Global human resources  
  - Property and IP rights |  
  - Read Global Engineering Model chapter (Acosta et al., 2010)  
  - Experts talk about similarities and differences in cultures (Brazil & USA)  
  - Student SCHEDULED self-study by watching short videos and readings on each topic  
  - Scheduled online discussions  
  - Complete written assignment |
Course content (continued)

<table>
<thead>
<tr>
<th>P1. Project description</th>
<th>Read reference articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Problem description</td>
<td></td>
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<tr>
<td>- Expected deliverables</td>
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<table>
<thead>
<tr>
<th>P2. Individual research</th>
<th>Assignment:</th>
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<tbody>
<tr>
<td></td>
<td>- Research topic of interest related to project (Individually)</td>
</tr>
<tr>
<td></td>
<td>- Write 1-2 page summary; sketch ideas</td>
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<tr>
<td></td>
<td>Presentations of main topics learned by individual students</td>
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</table>

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<thead>
<tr>
<th>Design Process</th>
<th>P3. The voice of the customer</th>
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<tr>
<td></td>
<td>View Deep Dive videos</td>
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<td>Form International Market research GROUPS</td>
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<td>Groups get the “voice of the customer”</td>
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<td>- Write 1-2 page summary; sketch ideas</td>
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<td>Groups report what users/customers say (all)</td>
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<td>- Write 1-2 page summary; sketch ideas</td>
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<td>- Large meeting prioritize customer/user needs</td>
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<td>Complete written assignment</td>
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<tr>
<th>P4. Idea generation</th>
<th>Virtual brainstorming meetings (2x, or as needed) (All)</th>
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<tbody>
<tr>
<td></td>
<td>Team ranks top ideas</td>
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<td>Complete written assignment</td>
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<tr>
<th>P5. Synthesis of best ideas: design solution</th>
<th>Virtual Team meets as necessary</th>
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<td>- Discuss merit of top ideas</td>
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<td>- Integrate into solution</td>
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<td>Complete written assignment</td>
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<tr>
<th>P6. Prototyping: students organize in teams to build prototype, additional research/engineering, and documentation – prototype must be built in 4 weeks</th>
<th>Virtual team meetings as necessary:</th>
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<tbody>
<tr>
<td></td>
<td>- Organize in teams</td>
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<td>- Working meetings as necessary</td>
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<td>Complete written assignment</td>
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<tr>
<th>P7. Final Report and presentations (industry, faculty, users)</th>
<th>Prepare presentations and reports to stake holders</th>
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<td>- Working meetings as necessary</td>
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<td>Give presentations and gather feedback</td>
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# ENGR 410 - Schedule of topics

**Fall 2014 (updated 9/11/14)**

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<tr>
<th>WEEK</th>
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<td>L1. Introduction; Remote Collaboration</td>
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<td>L2. The multicultural workplace</td>
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<td>IM: Intrapersonal</td>
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<td>Multicultural workplace: Hofstede’s</td>
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<td>L3. Selected Topics in global engineering</td>
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**WEEK**

| Project | 1 | 9/5 | 2 | 9/12 | 3 | 9/19 | 4 | 9/26 | 5 | 10/3 | 6 | 10/10 | 7 | 10/17 | 8 | 10/24 | 9 | 10/31 | 10 | 11/7 | 11 | 11/14 | 12 | 11/21 | 13 | 11/28 | 14 | 12/5 |
|---------|---|-----|---|------|---|------|---|------|---|------|---|------|---|------|---|------|---|------|---|------|---|------|---|------|---|------|---|
| P1. Problem description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P2. Individual research | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P3. The voice of the customer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P4. Idea generation and ranking | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P5. Design solution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P6. Prototype | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P7. Final report and presentations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Texas A&M University
International and Cultural Diversity Cover Sheet
Request for a course to be included in the University Graduation Requirement for International and Cultural Diversity

1. This request is submitted by (department name): Michel Slotman

2. Course prefix and number: ENTO210

3. Texas Common Course Number: N/A

4. Complete course title: Global Public Health Entomology

5. Semester credit hours: 3

6. Frequency the class will be offered: Spring + Fall

7. Number of sections per semester: 1

8. Number of students per semester: Fall 150 max, Spring 270 max

9. Historic annual enrollment for the last three years:
   - 2014-2015: 276
   - 2013-2014: 235
   - 2012-2013: 125

10. Statement on how this course meets the criteria for International and Cultural Diversity:
    The course covers the variety of ways in which arthropods and the diseases they transmit affect primarily human health in the US and across the globe. It provides a historical perspective on the impact of these diseases on human societies, and has a strong focus on the roles of poverty, globalization, migration, culture in disease transmission. Students walk away from this course with a new appreciation of the problems that people around the world face when dealing with some of most devastating infectious diseases. As just an example, students watch a hard-hitting PBS video that documents the numerous difficulties a woman in rural Kenya faces in getting treatment for her young son, who suffers from cerebral malaria. I also have a professional connection with a malaria program on Bioko Island, Equatorial Guinea and I often cite my experience with the project to provide examples of the political and cultural challenges that we face in combating vector borne diseases in developing countries. The course is serving many students with an interest in medicine and public health and ICD designation will improve the appeal of the course to these students providing them with a much-needed global perspective in health related issues.

11. Course Instructor
    Date: 8/25/2015

12. Department Head
    Date: 8/25/2015

13. College Dean/Designee
    Date: 8/25/2015

Submit this form and current course syllabus to fso-ccc@tamu.edu or Kristin Harper, TAMU 1125.

See form instructions for submission/approval process.
ENTO 210 Global Public Health Entomology (3 Credit Hours)

Spring 2015

Texas A&M University

Instructor: Dr. Michel A Slotman,
Associate Professor
Department of Entomology
Office: Room 510 Heep Center
Phone (979) 845 7556/ Email: maslotman@tamu.edu
Lecture: TR 2:20-3:35, Room 115 KLCT
Office Hours: Wednesday 2:00 pm - 3:00 pm
(or by appointment at another time)

Teaching Assistant: Luciano Cosme
Email: cosme.simple@gmail.com

We will make all announcements regarding the course email via howdy or Ecampus. Please make sure the email address you have on file in these systems is current.
Course Description: Arthropods affect the health and well-being of humans and other animals in a wide variety of ways. Most importantly, they transmit several of the most devastating infectious diseases affecting humans worldwide. This course provides an overview of the ways in which arthropods impact global public health and well-being, either directly or through the diseases they transmit. The course aims to provide a broad perspective, covering pertinent public health issues from a local to global scale. A historical perspective will be integrated throughout the course, and the impact of globalization, poverty and human actions on disease transmission by arthropods will be discussed. Attention will be given to the role of vector-borne diseases in the development of state-level, national and international public health infrastructure.

Course Learning Objectives:

After this course, students will be able to:

- Describe the life histories of arthropods of medical importance.
- Identify vector-host-pathogen relationships in arthropod-borne diseases
- Identify tactics and design strategies for vector control
- Evaluate impacts of vector-borne disease on socio-economic development in different world communities.
- Describe the role of vector-borne disease on human history and the development of public health infrastructure.
- Assess how human actions can impact vector-borne disease transmission

Prerequisites: None

Grading:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Description</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Midterm I</td>
<td>Materials pertaining to lectures 1 - 9</td>
<td>33.3 %</td>
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<tr>
<td>Midterm II</td>
<td>Materials pertaining to lectures 10 - 17</td>
<td>33.3 %</td>
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<tr>
<td>Final Exam</td>
<td>All material covered during course</td>
<td>33.4 %</td>
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<tr>
<td>Weekly Quiz</td>
<td>Materials covered since previous quiz</td>
<td>3 bonus points</td>
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</table>

A = 90-100, B = 80-89, C= 70-79, D= 60-69, F< 60
Weekly Quizzes

Each Thursday a 6 question multiple-choice quiz will be given at the end of class (starting the second week). The quiz covers the material presented since the previous quiz (usually the preceding Thursday and Tuesday lectures). The result of these quizzes can earn you up to 3 bonus points. These points are allocated proportionally to the number of questions you have answered correctly.

There are no make-up quizzes, but excused absences will be taken into account in calculating your average score.

Grading Policy: In order to assure fairness for all students in the course, my grading policy is to apply the same rules and criteria to each student in the course. This means that I cannot grant any requests for additional work for credit based on exceptional personal circumstances.

Attendance Policy: Attending classes will be the student's responsibility, and although attendance is recommended, it is not required. However, please note that the vast majority of the materials covered on the exams will only be covered in class.

Exam Make-up policy: Make-up exams (not quizzes) are available to students who have a valid reason for an excused absence: http://studentrules.tamu.edu/rule7.htm, and who provide satisfactory evidence to the instructor to substantiate the reason for absence. Students must make the request for a make-up exam in writing to the instructor prior to the date of absence, if at all possible. Make-up exams are not available to students who do not have an excused absence.

Americans with Disabilities Act (ADA) Policy Statement: The ADA is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation required 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, located in Cain Hall or call 845-1637.

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

This code of conduct pertains to such acts as cheating, fabrication, falsification, plagiarism, and complicity in academic dishonesty and the consequences of such acts. The Honor Council Rules and Procedures can be found on the web at http://www.tamu.edu/aggiehonor.
Lecture Schedule (Subject to change):

Lecture 1  Introduction to “Ento 210: Global Public Health Entomology”,
           Introduction to Arthropods Part I
Lecture 2  Introduction to Arthropods Part II
Lecture 3  Allergens and Poisons
Lecture 4  The Dynamics and Evolution of Vector-Borne Disease
Lecture 5  The Biology of Blood Feeding
Lecture 6  Mosquito Biology
Lecture 7  Mosquitoes and the Diseases They Transmit: Malaria I
Lecture 8  Mosquitoes and the Diseases They Transmit: Malaria II
Lecture 9  Mosquitoes and the Diseases They Transmit: Dengue Fever
Midterm 1 Thursday February 19th 2015
Lecture 10 Mosquitoes and the Diseases They Transmit: Yellow Fever
Lecture 11 Mosquitoes and the Diseases They Transmit: West Nile and Other Encephalitic Viruses
Lecture 12 Mosquitoes and the Diseases They Transmit: Filariasis
Lecture 13 Blackflies and River Blindness
Lecture 14 TseTse Flies and Sleeping Sickness
Lecture 15 “The Kiss of Death” - Kissing Bugs and Chagas Disease
Lecture 16 Sandflies and Leishmaniasis
Midterm 2 Tuesday March 31st 2015
Lecture 17 The Tick-Borne Diseases
Lecture 18 Lice and Typhus
Lecture 19 “A Rat-a-Day Keeps the Plague Away”- Fleas and the Plague
Lecture 20 Minor Nuisances –Other Blood Feeding Insects
Lecture 21 Flesh, Food, Filth and Flies
Lecture 22 Vector Control
Lecture 23  Poverty and Vector-Borne Disease
Lecture 24  Globalization and Climate Change /
A History of Vector-Borne Disease in the United States

Cumulative Final Exam: May 12th 1-3 pm

List of Required Readings

Currently, no textbook is exists that adequately treats the material covered in this course. Therefore, the required readings for this course consist of articles selected from the primary and secondary literature. These readings are selected to provide background information and/or to highlight the broader themes of the course. All readings are made available on eCampus. Readings are assigned for the lecture that covers the corresponding topic.

Lecture 1
Lecture 2  Introduction to Insects, pages 1-19
Lecture 3


Lecture 15  **Chagas Disease: An impediment in achieving millennium development goals in Latin America (2007)** Paredes et al BMC International Health and Human Rights 7:7 Pages 1-6


**Trachoma and Fly Control (1999)** P.M. Emerson, R.L. Bailey, Community Eye Health 12:32, page 57

Lecture 22  **Integrated Vector Management for Malaria Control (2008)** J.C. Beier et al. Malaria Journal 7:S4 Pages 1-10


Lecture 24  **Chikungunya: No longer a third world disease (2007)** M. Enserink Science pages 1860-1861

Suggested background reading for students desiring more specific information on the biology of the vectors and parasites discussed in this course.

**THESE BOOKS ARE NOT REQUIRED FOR THE COURSE**

For those interested in obtaining more information (beyond what is required for class) on the biology of disease vectors can be found in:

**Medical Entomology for Students, 4th edition,**

Mike Service

Cambridge University Press 2008


List price: $60.00

More detailed information can be found in:

**Medical and Veterinary Entomology, 2nd edition**

Gary Mullen and Lance Durden

Academic Press 2009


List Price $99.95  (Amazon.com $70.35)
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
* Submit original form and attach a course syllabus.*

Form Instructions
1. Course request type: □ Undergraduate ☑ Graduate ☐ First Professional (D.D.E., M.D., P.h.D., D.V.M.)
2. Request submitted by (Department or Program Name): Department of Sociology
3. Course prefix, number and complete title of course: LMAS 201 • Introduction to Latino/Mexican American Studies
4. Catalog course description (not to exceed 50 words):

Introductory survey of the historical presence of U.S. Latinos and Mexican Americans from an interdisciplinary perspective that incorporates the group's global origins; application of critical thinking skills to the study of Latinos and Mexican Americans.

5. Prerequisite(s): None

Cross-listed with: Stacked with:

6. Is this a variable credit course? □ Yes ☑ No If yes, from ______ to ______
7. 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

8. Will this course be submitted to the Core Curriculum Council? ✔ Yes (CD only)
9. How will this course be graded: ☑ Grade □ S/U □ P/F (CLAS)
10. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)

      Minor in Latino/Mexican American Studies (LMAS)

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

      General Undergraduate Academics

11. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.
12. ✔ I certify that I have reviewed the FAQ for Export Control Basics for Distance Education (http://cpr.tamu.edu/resources/export-control/controls/export-controls-basics-for-distance-education)

13. Prefix Course Title (excluding punctuation):

   LMAS 201 Introduction to Latino/Mexican American Studies
   LMA 201

   Lect. Enh. Other: SCH CIP and HU Code Admin Unit Academic Year HU Code Approval recommended by:
   3 0 3 05.0203.0001 2500 16 - 17 0 0 3 6 3 2
   Level 2

   Department Head or Program Chair (Type Name & Sign) Date
   4/21/2015

   Chair, College Review Committee Date
   4/25/2015

   Department Head or Program Chair (Type Name & Sign) Date
   (if cross-listed course)
   Dean of College
   4/25/2015

   Submitted to Coordinating Board by:
   Chair, GC or UCC

   Date

   Associate Director, Curricular Services

   Date

   Effective Date

RECEIVED 04/25/2015
CURRICULAR SERVICES

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Curricular Services – 07/14
LMAS 201: Introduction to Latino/Mexican American Studies
Request for International and Cultural Diversity Designation

This course is an overview of issues and themes related to the academic study of Latino/a and
Mexican American populations. The course includes historical as well as current information
from the last twenty years. The course examines topics such as race and ethnic relations, racism,
discrimination, systems of oppression, political activism and identity from multiple perspectives.
These include dominant culture portrayals of Latino/as and Mexican Americans as well the
perspectives of Latino/a immigrants, native-born Latino/as, and their compatriots in immigrant
sending societies.
Introduction to Latino/Mexican American Studies (LMAS) 201  
M-W-F, 11:30-12:20 PM, GLAS 008

Course Description
Introductory survey of the historical presence of U.S. Latinos and Mexican Americans from an interdisciplinary perspective that incorporates the group’s global origins; application of critical thinking skills to the study of Latinos and Mexican Americans.

Prerequisites
None.

Core Objectives
1) Critical Thinking (to include creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information); 2) Communication (to include effective development, interpretation and expression of ideas through written, oral, and visual communication); 3) Social Responsibility (to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities); 4) Personal Responsibility (to include the ability to connect choices, actions, and consequences to ethical decision-making).

Student Learning Outcomes
Students will:
- differentiate the diversity and complexity of the cultures, traditions, and artistic expressions found throughout Latin America, Caribbean, and/or the US Latino/a population;
- analyze the developmental history, culture, experiences of inequality, and current opportunities for improvement of life for Latinos/as in the US;
- analyze minority group interactions in the United States focusing on immigration and migration patterns, assimilation processes, and adjustments to American life;
- explain historical, political, and socioeconomic issues that define Latin America and its people and/or US Latinos/as; and,
- assess relevant primary source materials as understood by the discipline and interpret the material in writing assignments.

Required Readings

Grading Assessment
1) Participation, 10%; 2) Exam 1, 20%; 3) Exam 2, 20%; 4) Exam 3, 20%; 5) Paper, 30%.

Grading Scale Percentage
A, 90-100; B, 80-89; C, 70-79; D, 60-69; F, 0-59.

Assignments
There are five grades in the class. The first is participation, which counts 10% of the final average. Then three non-comprehensive exams are weighted at 20% apiece of the final class average. They are derived from content accessible in the assigned readings and lectures. Each exam consists of three in-class essay options of which the student will answer two, each in three to five blue book pages. These exam essays are graded on content and interpretive ability. The final 30% of the course is a three to five page analytical book review of Valenzuela’s *Leaving Children Behind* due at 11:30 AM at the professor’s office (the scheduled final exam period) on December 17th. Writing Guidelines and in-class instruction on this assignment will be given the last two weeks of class. It will be graded on interpretive ability and writing proficiency. Makeups for missed exams or the paper will be done in accordance with Student Rule 7, http://student-rules.tamu.edu/rule07. Please visit Student Rule 7 for the current policy on university excused absences. Graded papers, tests, and quizzes are not posted publicly, nor will grades be released electronically in accordance with university rules.

Attendance
Attendance derives from a seating chart generated in the first week of class. After the creation of the seating chart it is the student’s responsibility to ensure proper seating and, in the case of any irregularities, to follow up with the instructor or teaching assistant. Please visit Student Rule 7 http://student-rules.tamu.edu/rule07 for the current policy on university excused absences.

Course Schedule

Week of September 1

*Unit I: Latino/Mexican American Ethnogenesis*

*Monday:* Class introduction.

*Wednesday:* Lecture, “First Contacts Between the Old and New Worlds.” Topics include: the Spanish and Native American Background, the Conquistadors and their World, the Columbian Exchange: Disease, the Emergence of Extractive Industry, Cultural Construction and the Process of Mestizaje.

*Friday:* Wednesday’s lecture continued.

Week of September 8

*Monday:* Discussion, all of Reséndez’s *A Land So Strange*.

*Wednesday:* Monday’s discussion continued.

*Friday:* Wednesday’s discussion continued.
Week of September 15

**Monday:** Lecture, "Spanish Colonialism." Topics include: the Church, Race in the Spanish World, African Slavery, the Spanish Frontier, Native American Relations, Later Exploration in New Mexico, Texas, and California, the Bourbon Reforms.

**Wednesday:** Monday's lecture continued.

**Friday:** Lecture, "Independence in Latin America: Mexico." Topics include: Spanish Liberalism and Enlightenment Ideas, *the Demise of Spain's New World Empire*, Hidalgo and Origins of Mexican Independence, Elites and Peasants, the Creation of the Mexican Republic, Mexican Politics.

Week of September 22

**Monday:** Friday's lecture continued.

**Wednesday:** Lecture, "Secession and the Borderlands: Texas." Topics include: the Transcontinental Treaty, the Arrival of Anglos, the Arrival of African Slaves and the Plantation Economy, the Stateless Borderlands, Santa Ana and the Betrayal of the Federalists, Mexican Civil War to Texas Revolution.

**Friday:** Wednesday's lecture continued.

Week of September 29

**Monday:** Exam 1.

**Unit II: The Arrival of the U.S.**

**Wednesday:** Lecture, "The U.S.-Mexican War." Topics include: Manifest Destiny, Annexation of Texas, the Treaty of Guadalupe Hidalgo, *the California Gold Rush*, Unintended Consequences: The U.S. Civil War and the French Occupation of Mexico.

**Friday:** Wednesday's lecture continued.

Week of October 6

**Monday:** Lecture, "The Loss of Land and Status in the Long 19th Century." Topics include: Land Loss in the Southwest, Capitalism and Economic Incorporation, Political Decline, Civic Ambivalence, Violence, *Social Banditry*.

**Wednesday:** Monday's lecture continued.

**Friday:** Discussion, *all of* Carrigan's *Forgotten Dead*.

Week of October 13-17

**Monday:** Friday's discussion continued.

**Wednesday:** Wednesday's discussion continued.
Friday: Lecture, “Migration Within Mexico and Immigration to the U.S.” Topics include: the Porfirato in Mexico, the Mexican Revolution, Large-Scale Agriculture in Mexico and the U.S., the Mexican Diaspora, Class and Labor, the Mexicanist Identity.

Week of October 20

Monday: Friday’s lecture continued.

Wednesday: Discussion, all of Hernández’s Working Women Into the Borderlands.

Friday: Wednesday’s discussion continued.

Week of October 27

Monday: Exam 2.

Unit III: Struggles for Justice


Friday: Wednesday’s lecture continued.

Week of November 3


Wednesday: Monday’s lecture continued.

Friday: Lecture, “The Chicano Movement.” Topics include: PASSO Precursor, Student Activism and Culture, Aztlán and the Explosion of the Chicano Imaginary: Art and Literature, the Barrio, La Raza Unida Party and Chicano Politics, Non-Chicano Civil Rights Organizations and Movements, the Birth of Chicano Studies, Divisions: Cultural Nationalism and Sexism, the Chicano Identity.

Week of November 10

Monday: Friday’s Lecture Continued.

Wednesday: Discussion, all of Blackwell’s ¡Chicana Power!.

Friday: Wednesday’s discussion continued.

Week of November 17

Monday: Friday’s discussion continued.
Wednesday: Lecture, “Hispanic or Latino?” Topics include: Terms of Identity and their Meaning, the New Latina/o Migration, the Puerto Rican and Cuban Experience, the New Chicana/o and Latina/o Studies, Economic Advancement and Stagnation (Continued), Physical and Civic Segregation (Continued), Ideas of Assimilation (Continued), the future of Latino/Mexican American Studies.

Friday: Wednesday’s lecture continued.

Week of November 24

Monday: Exam 3.

Wednesday: Writing Workshop 1, “Paper Guidelines and Brainstorming.”

Friday: Thanksgiving Holiday—No Class Meeting

Week of December 1


Friday: Writing Workshop 4, “Style.”

Final Exam: December 12, 15-17

Wednesday, December 17: Paper Due, 11:30AM, GLAS 008, in professor’s office.

ADA: 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 845-1637. For additional information visit http://disability.tamu.edu.

Academic Integrity