New Course Proposal

Date Submitted: 04/17/18 9:58 am

Viewing: ACCT 622 : Accounting for Income Taxes

Last edit: 04/17/18 9:58 am
Changes proposed by: tblasor

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tara Blasor</td>
<td><a href="mailto:tblasor@tamu.edu">tblasor@tamu.edu</a></td>
<td>979-845-4289</td>
</tr>
</tbody>
</table>

Course prefix       ACCT  
Course number       622  
Department          Accounting  
College/School      Mays Business School  
Academic Level      Graduate  
Effective term      2019-2020  

Complete Course Title
Accounting for Income Taxes  
Abbreviated Course Title
ACCT FOR INCOME TAXES

Catalog course description
Study of accounting concepts and principles related to reporting of income taxes; including book-tax differences, deferred tax assets and liabilities, valuation allowances, uncertain tax positions, various advanced topics.

Prerequisites and Restrictions
ACCT 328 and ACCT 405, or equivalent; graduate classification.

Should catalog prerequisites / concurrent enrollment be enforced? Yes

Enforced Prerequisites / Concurrent Enrollment

<table>
<thead>
<tr>
<th>And/Or</th>
<th>Course Prefix/Number</th>
<th>Min Grade/Score</th>
<th>Academic Level</th>
<th>)</th>
<th>Concurrency?</th>
</tr>
</thead>
</table>

In Workflow
1. ACCT Department Head
2. Curricular Services Review
3. BA Committee Preparer GR
4. BA Committee Chair GR
5. BA College Dean GR
6. GC Preparer
7. GC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services
13. Banner

Approval Path
1. 04/17/18 10:02 am
   James Benjamin (j-benjamin): Approved for ACCT Department Head
2. 04/17/18 1:24 pm
   Sandra Williams (sandra-williams): Approved for Curricular Services Review
3. 04/17/18 1:38 pm
   Angela Catlin (acatlin): Approved for BA Committee Preparer GR
4. 04/17/18 4:15 pm
   Michael Shaub (mshaub): Approved for BA Committee Chair GR
5. 04/17/18 4:49 pm
   Michael Kinney (kinneym): Approved for BA College Dean GR
6. 04/24/18 8:58 am
   LaRhesa Johnson (lrjohnson): Approved for GC Preparer
7. 05/03/18 4:35 pm
   LaRhesa Johnson (lrjohnson): Approved for GC Chair
### Course Syllabus

**Academic Course Information**

**ACCT 405**
- Credit: C
- Level: UG

**ACCT 328**
- Credit: C
- Level: UG

<table>
<thead>
<tr>
<th>Crosslistings</th>
<th>No</th>
<th>Crosslisted With</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Stacked</td>
<td>No</td>
<td>Stacked with</td>
<td>No</td>
</tr>
</tbody>
</table>

#### Semester:
- Credit: 3
- Contact Hour(s) (per week):
  - Lecture: 3
  - Lab: 0
  - Other: 0
  - Total: 3

**Repeatable for credit?** No

**CIP/Fund Code** 5216010016

**Default Grade Mode** Letter Grade (G)

**Method of instruction** Lecture

**Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education)** No

**Will this course be taught as a distance education course?** No

**Is 100% of this course going to be taught in Texas?** Yes

**Will classroom space be needed for this course?** Yes

This will be a required course or an elective course for the following programs:

**Required (select program)**

**Elective (select program)**

<table>
<thead>
<tr>
<th>Program(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(MS-ACCT) Master of Science in Accounting</td>
</tr>
<tr>
<td>(MFM-FINM) Master of Financial Management in Financial Management</td>
</tr>
</tbody>
</table>

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**Syllabus:**

Upload syllabus

- F18 Syllabus ACCT 622 v2.pdf

**Letters of support or other documentation:**

No

**Additional information**

**Reviewer Comments**

Tara Blasor (tblasor) (04/11/18 5:27 pm): Subsequent to submitting this request, I realized I would also like to add that students in the MFM program may take this course as an elective. Could it be added below? Thanks!

Sandra Williams (sandra-williams) (04/12/18 8:28 am): Minor edits made to catalog course prerequisites to match enforced prerequisite table and to comply with style guide. Included MFM in electives field.

Sandra Williams (sandra-williams) (04/12/18 8:32 am): Rollback: Syllabus is missing grading scale (A= , B= ,
etc.); and missing link to student rule 7 regarding absences and make-up work.

Sandra Williams (sandra-williams) (04/17/18 1:24 pm): Update received.
ACCT 622
ACCOUNTING FOR INCOME TAXES

MW 8:00 – 9:15, 9:35-10:50 in WCBA 155

INSTRUCTOR INFO

Instructor: Dr. Connie D. Weaver
Office: 449P Wehner Building
Phone: (979) 845-7934
Office Hours: MW 11 - 12:30 pm, anytime via discussion board, and by appointment
Email: cweaver@mays.tamu.edu
Course Website: eCampus.tamu.edu

COURSE OVERVIEW

Taxes represent a significant expense for businesses. Nearly every economic decision involves tax considerations. The study of taxation is particularly important for students interested in careers in accounting. Although most accounting students will, at some point, study taxation, few will gain a significant understanding of how businesses account for income taxes in their financial statements. This course is designed to fill that void and provides a comprehensive study of the financial accounting for income taxes.

The core content of the course focuses on Accounting Standards Codification (ASC) 740 and the preparation and review of a corporation tax provision. One of the unique features of this topic is that it requires a solid understanding of both tax reporting and financial reporting. Therefore, the course initially focuses on the fundamentals of Federal corporate tax reporting before progressing to how corporations will report these income taxes in the financial statements. Students in both audit and taxation will find this course important and valuable to their careers.

To be successful in this course, you will need to familiarize yourself with the fundamental tax concepts and calculations you learned in your introductory income tax course (e.g., ACCT 405). In addition to these fundamental tax concepts, you will need to recall the basic premise of accounting for income taxes learned in ACCT 328.

SYLLABUS CONTENTS

Course Overview; Course Objectives
Prerequisites; Required Materials; Course Website; Mays Food and Beverage
Students with Disabilities; Method of Assessment
Policy on Academic Integrity; Classroom Civility; Tips for Success
Tentative Schedule

COURSE OBJECTIVES

At the completion of the course, successful students should be able to:

1. Apply rules and regulations of the Internal Revenue Code to calculate taxable income for a corporation.
3. Utilize the U.S. and international guidance for proper accounting and reporting for income taxes in a realistic and complex setting.
4. Organize and prepare tax provision schedules and the related income tax footnote for the financial statements.
Analyze financial statement disclosures of income taxes to assess underlying corporate tax practices and strategies and communicate this information to interested parties.

Analyze the risks and objectives of an audit of the income tax provision and tax footnote disclosure.

PREREQUISITES
Graduate classification and successful completion of ACCT 405 (or equivalent) and ACCT 328 (or equivalent).

REQUIRED MATERIALS
To assist students in meeting the course objectives, the following course materials are required:

- Accounting for Income Taxes course packet (includes Chapters 9, 16 and 17 from Taxation of Individuals and Business Entities, 2019 edition by Spilker, Ayers, arrick, Outslay, Robinson, Weaver, and Worsham). 1
- Firm guidance on Accounting for Income Taxes revised 2015 by PwC available on eCampus.
- Access to the FASB Codification (http://aaahq.org/ascLogin.cfm).
- You will need a calculator and access to a laptop computer and the course website.
- Other materials (e.g., class notes, templates, articles, assignments) will be posted to the course website.

You may find it useful to download the free Blackboard Mobile Learn app to your phone. This app will allow you to see when updates have been made to the website. The tentative class schedule (p 6) shows the material to be covered each day in class. The tentative schedule will likely require adjustment as the course progresses. The instructor reserves the right to make changes at any time during the semester with notice to the class.

COURSE WEBSITE & EMAIL
You will find electronic materials for this class at the eCampus website (eCampus.tamu.edu/). Electronic materials include the course syllabus, course announcements, assignments, problem templates, articles, handouts, discussion boards, grades, etc….

The discussion board is an online discussion group where you can post questions (and answers) related to the class. It is designed as a format to enable you to get help with concepts and assignments and to encourage discussion among students without needing to meet in groups outside of class. I strongly encourage your participation in this forum. I will jump in to help if questions posted remain unanswered or if posted answers are more confusing than helpful.

My preferred method of communication is email and I will respond to messages quickly unless I am out of town with limited email access. I do not check my email after 9 pm but I will respond to night emails the next morning. I regularly send email containing announcements and upcoming events. Be sure to check your email and the website often. The email address I will use is your official university address.

MAYS FOOD & BEVERAGE POLICY
We have beautiful and state-of-the-art classrooms in the Wehner Building and Cox Hall. To maintain the high quality of these classrooms for the students in future years, the college requests that you adhere to the established policy of no beverages, food, tobacco products, or animals (unless approved) within the Wehner Building classrooms.

1If you used the 2018 edition of the textbook in your introductory tax class (e.g., ACCT 405), you can continue using that text for this course. Also, note that Weaver contributes all royalties from ACCT 622 students to a Texas A&M accounting scholarship fund.
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, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information visit http://disability.tamu.edu.

METHOD OF ASSESSMENT

The course will follow the organization in the attached tentative schedule. Required readings and assignments are listed in the schedule. Additional readings and homework problems may be assigned as time and interest allows. Your grade will be determined as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-term 1 (Sept. 24 evening)</td>
<td>100</td>
</tr>
<tr>
<td>Mid-term 2 (Oct. 24)</td>
<td>60</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
</tr>
<tr>
<td>Class participation</td>
<td>40</td>
</tr>
<tr>
<td>Assignments/Projects (2)</td>
<td>100</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>400</td>
</tr>
</tbody>
</table>

There will be no extra credit assigned during the semester. Final course grades will be assigned as follows, based on the number of points earned as a percentage of total points possible:

- **A** 90% or above
- **B** 80% - 89%
- **C** 70% - 79%
- **D** 60% - 69%
- **F** less than 60%

Mid-term Exams (40%)

You will take two mid-term exams during the semester. The mid-term exams are scheduled in the evening on the date listed in the attached tentative schedule and are designed to reward comprehension and analysis.

The exams will be primarily problem and analysis oriented and will be "closed book/notes." However for midterm 1 only, you may bring one handwritten 8-1/2” x 11” single-sided note sheet to the exam. Be sure to write your name on the note sheet in the upper right hand corner when held portrait-wise. The note sheet must be turned in with your exam.

In general I do not give makeup exams. One exception is if you must miss a midterm exam for cause. Students will be deemed absent for cause only under circumstances consistent with Student Rule 7 (e.g., medical and family emergencies; religious holidays, or other university authorized activity). University-excused absences do not relieve you of responsibility to provide prior notification. Recruiting events are not considered extenuating circumstances. If you miss any exam without cause, you will receive a zero for the exam.

Grade Appeals: If you feel I have made an error grading your exam, you must submit an exam appeal to me in writing within one week after your exam is returned. Your appeal should 1) identify which problems are of concern, 2) include a description of the grading error, and 3) describe the suggested corrective action. Please note that once you submit a request for re-grade, your entire exam will be re-graded to ensure no further grading errors, so your overall grade could change up or down.

Final Exam (25%)

The final exam is a cumulative exam. The exam will be given during the university assigned final exam period. For this exam, you may bring one handwritten 8-1/2” x 11” single-sided note sheet to the exam. Be sure to write your name on the note sheet in the upper right hand corner when
held portrait-wise. The note sheet must be turned in with your exam.

Class Participation (10%)

My objective is to conduct class in a manner that encourages discussions about the application of the material. While my responsibility is to “teach” the class, I strongly believe that learning is the responsibility of everyone in the class. My responsibility is to point out the most important issues and to facilitate your understanding of them. Research indicates that adults learn most effectively in a participative setting, thus a portion of our class time will consist of discussions reinforced by your solving related problems and working on cases in teams.

To motivate discussion and preparation, a portion of your grade is based upon class participation. The class participation portion of your grade will be based on the quality of your contributions to class discussions and your professionalism. Attending class and being on time are two factors in determining both your professionalism and your class participation; however, simply attending class will not earn participation points. You must contribute to class discussions in a meaningful way in order to earn participation points. See the Tips For Success section for more information about participation.

Assignments (25%)

You will complete two assignments during the semester as part of your course grade. The assignments may include problems and/or analysis of relevant issues we’ve discussed in class. Assignments are due at the beginning of class on the stated dates. I do not accept late assignments. Assignments e-mailed, placed in the instructor’s mailbox or left in the instructor’s office are not considered timely unless I instruct you to turn in the assignment in such a manner. If you cannot make it to class the day the assignment is due, please make arrangements with me to turn the assignment in early.

Attendance Policy

Attendance in class is an important part of the learning process and your participation grade. Each student is allowed one class absence without penalty. For each additional class absence, your class participation grade will be reduced by an amount equal to the proportion of class absences to the total number of class days in the semester. For example, if a student misses half of the class sessions, his/her participation grade would be a maximum of 50 percent (20 points).

In the event an excused absence coincides with a quiz, exam, or other graded assignment, students will have an opportunity to make up the assignment or to provide a satisfactory alternative by a date agreed upon by the student and the instructor.

Absences are considered excused by the university under Student Rule 7 (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.

Academic Integrity

Aggie Honor Code

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

Upon accepting admission to Texas A&M University, you immediately assumed a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or processes of the Honor System. For more information please visit: http://aggiehonor.tamu.edu.

On course work, assignments, and examinations at Texas A&M University, you will be asked to sign the following Honor Pledge:

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

Under no circumstances should you use any materials (course packets, notes, essays, etc.) obtained from students who have already
completed this course. Such usage will constitute scholastic dishonesty for both borrower and lender.

### CLASSROOM CIVILITY

I expect all students to facilitate a classroom environment that is conducive to learning. To assure that all students have an opportunity to benefit from time spent in class, I ask that all students behave in a respectful manner. Inappropriate behavior in the classroom may result in a request to leave class.

### TIPS FOR SUCCESS

1. **Preparation** – Before each class, you should complete the required reading and review your class notes from the previous lecture. This review will serve as an important step in determining your level of understanding of course material. If you are having problems with materials previously covered in class, please do not wait until an exam before getting answers to your questions. It is imperative that we resolve any questions that you have as soon as possible so these issues do not compound throughout the semester.

2. **Rework examples/problems discussed in class.** Class discussions are highly representative of the material that I expect you to glean from this course. It is important that you not only understand the problems discussed in class, but also understand the issues well enough to analyze and solve related problems as well as problems that integrate multiple ideas presented in this course.

3. **Attend class regularly and be on time.** I note when you are late or absent from class as part of your participation grade. You may not attend a section other than the section in which you are enrolled without advance permission from me. In the event you fail to obtain permission from me, you are welcome to attend another section; however, your attendance will not be considered in determining your participation grade (i.e., you will be marked absent for that day). In addition, all changes to the assignments in the syllabus and the Tentative Schedule are made at the beginning of class. If you miss class, it is your responsibility to find out from your classmates or the website what was covered in class and if any changes to the assignments have been made.

4. **Class participation is an integral part of this course.** If asked, most students will express some discomfort with this component of the course requirements. However, the cases and material we will discuss in class can only be successful with open discussions of the issues. *In my opinion, a student that enhances the learning environment in a substantial manner is deemed to have participated in class.* Your contribution may take many forms, such as:
   - asking relevant questions during class (I do not “count” the questions asked, rather I evaluate the questions based on their quality and contribution to the discussion),
   - volunteering thoughtful answers to questions or problems posed in class or on the class discussion board,
   - expressing pertinent and thoughtful opinions in class discussions,
   - clarifying a complex issue during class discussions,
   - helping members of your team solve problems.

The topic of this class is both challenging and interesting. Because it combines material from several of your prior courses, it can be very frustrating at times. Feeling confused is not a unique experience when learning the material for this course. When/if you have questions, I encourage you to seek help and to ask questions in class. I am available during posted office hours and by appointment and I welcome you to come by for any assistance you might need.
<table>
<thead>
<tr>
<th>SESSION</th>
<th>WEEKDAY</th>
<th>MONTH</th>
<th>DATE</th>
<th>TOPIC</th>
<th>READINGS and REFERENCES</th>
<th>NOTES AND ASSIGNMENTS</th>
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<tbody>
<tr>
<td>1</td>
<td>Monday</td>
<td>August 27</td>
<td>27</td>
<td>Introduction / Course Overview</td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>Wednesday</td>
<td>August 29</td>
<td>29</td>
<td>Fundamentals of ASC 740 – 4 Key Examples</td>
<td>Syllabus</td>
<td>Information Sheet due in class</td>
</tr>
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<td>3</td>
<td>Monday</td>
<td>September 3</td>
<td>3</td>
<td>Fundamentals of ASC 740 – Terminology, Research</td>
<td>Ch 17 pp</td>
<td>Labor Day – but we still have class! 😊</td>
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<tr>
<td>4</td>
<td>Wednesday</td>
<td>September 5</td>
<td>5</td>
<td>Corporate Income Tax – Basics</td>
<td>Ch 16: 1-24</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Monday</td>
<td>September 10</td>
<td>10</td>
<td>Corporate Income Tax – BTDs, Corp specific</td>
<td></td>
<td>Assignment #1 – due 9/18 in class</td>
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<tr>
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<td>Wednesday</td>
<td>September 12</td>
<td>12</td>
<td>Income and Expense Recognition</td>
<td>Ch 9: 15-30</td>
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<td>Monday</td>
<td>September 17</td>
<td>17</td>
<td>Income and Expense Recognition</td>
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<tr>
<td>8</td>
<td>Wednesday</td>
<td>September 19</td>
<td>19</td>
<td>Income and Expense Recognition</td>
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<td>9</td>
<td>Monday</td>
<td>September 24</td>
<td>24</td>
<td>The tax provision process – in class</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>MIDTERM 1 – 7:15 – 9:15 pm in W111</td>
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<tr>
<td>10</td>
<td>Wednesday</td>
<td>September 26</td>
<td>26</td>
<td>The tax provision process</td>
<td>PwC: Ch 1 &amp; 2</td>
<td>Tax rates, states</td>
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<tr>
<td>11</td>
<td>Monday</td>
<td>October 1</td>
<td>1</td>
<td>The tax provision process</td>
<td>PwC: Ch 3 &amp; 4</td>
<td>JNB 2012</td>
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<tr>
<td>12</td>
<td>Wednesday</td>
<td>October 3</td>
<td>3</td>
<td>The tax provision process</td>
<td></td>
<td>JNB 2012 and 2013</td>
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<td>13</td>
<td>Monday</td>
<td>October 8</td>
<td>8</td>
<td>The tax provision process</td>
<td></td>
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<td>14</td>
<td>Wednesday</td>
<td>October 10</td>
<td>10</td>
<td>State taxes and Misc</td>
<td>Pwc: Ch 7</td>
<td></td>
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<td>15</td>
<td>Monday</td>
<td>October 15</td>
<td>15</td>
<td>State taxes and Misc</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>Wednesday</td>
<td>October 17</td>
<td>17</td>
<td>State taxes and Misc</td>
<td></td>
<td>JNB 2014; Midterm 2 prep assigned</td>
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<tr>
<td>17</td>
<td>Monday</td>
<td>October 22</td>
<td>22</td>
<td>Financial statement disclosure</td>
<td>PwC FSP: Ch 16</td>
<td></td>
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<tr>
<td>18</td>
<td>Wednesday</td>
<td>October 24</td>
<td>24</td>
<td>Financial statement disclosure</td>
<td></td>
<td>MIDTERM 2 – in class</td>
</tr>
<tr>
<td>19</td>
<td>Monday</td>
<td>October 29</td>
<td>29</td>
<td>Financial statement disclosure</td>
<td></td>
<td>JNB 2015</td>
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<tr>
<td>20</td>
<td>Wednesday</td>
<td>October 31</td>
<td>31</td>
<td>Uncertain tax positions</td>
<td>PwC: Ch 16</td>
<td></td>
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<td>21</td>
<td>Monday</td>
<td>November 5</td>
<td>5</td>
<td>Uncertain tax positions</td>
<td></td>
<td>Assignment #2 (due 11/20 in class)</td>
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<td>22</td>
<td>Wednesday</td>
<td>November 7</td>
<td>7</td>
<td>Uncertain tax positions</td>
<td></td>
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<tr>
<td>23</td>
<td>Monday</td>
<td>November 12</td>
<td>12</td>
<td>Valuation allowances</td>
<td>PwC: Ch 5 &amp; 6</td>
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<td>24</td>
<td>Wednesday</td>
<td>November 14</td>
<td>14</td>
<td>Valuation allowances</td>
<td></td>
<td>JNB 2016</td>
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<tr>
<td>25</td>
<td>Monday</td>
<td>November 19</td>
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<td>Valuation allowances</td>
<td></td>
<td>David Dyer - EY</td>
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<tr>
<td>26</td>
<td>Wednesday</td>
<td>November 21</td>
<td>21</td>
<td>Reading day – No class</td>
<td></td>
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<tr>
<td>27</td>
<td>Monday</td>
<td>November 26</td>
<td>26</td>
<td>International Issues</td>
<td>PwC: Ch 11</td>
<td>JNB 2017</td>
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<tr>
<td>28</td>
<td>Wednesday</td>
<td>November 28</td>
<td>28</td>
<td>International Issues</td>
<td></td>
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<tr>
<td>29</td>
<td>Wednesday</td>
<td>December 5</td>
<td>5</td>
<td>Auditing the provision</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>December 7-23</td>
<td>Final Exam Schedule</td>
<td>8:00 am – Fri, Dec 7, 10-noon; 9:35 am – Mon, Dec 10, 8-10 am</td>
</tr>
</tbody>
</table>
New Course Proposal

Date Submitted: 04/11/18 5:15 pm

Viewing: **ACCT 624 : Tax technology and Analytics**

Last edit: 04/12/18 8:33 am

Changes proposed by: tblasor

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
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</thead>
<tbody>
<tr>
<td>Tara Blasor</td>
<td><a href="mailto:tblasor@tamu.edu">tblasor@tamu.edu</a></td>
<td>979-845-4289</td>
</tr>
</tbody>
</table>

Course prefix: ACCT
Course number: 624

Department: Accounting
College/School: Mays Business School
Academic Level: Graduate
Academic Level (alternate): Undergraduate
Effective term: 2019-2020

Complete Course Title: Tax technology and Analytics

Abbreviated Course Title: TAX TECHNOLOGY & ANALYTICS

Catalog course description:
Streamlining the data collection and management process of the tax function needed to work with people, processes and technologies; includes transformation, direct tax, indirect tax, emerging technologies, global mobility and asset management.

Prerequisites and Restrictions:
ACCT 427 and ACCT 405, or equivalent.

Concurrent Enrollment: No

Should catalog prerequisites / concurrent enrollment be enforced? Yes

Enforced Prerequisites / Concurrent Enrollment

| And/Or | Course Prefix/Number | Min Grade/Score | Academic Level | | Concurrency? |
|--------|----------------------|-----------------|----------------||-------------|

In Workflow
1. ACCT Department Head
2. Curricular Services Review
3. BA Committee Preparer GR
4. BA Committee Chair GR
5. BA College Dean GR
6. GC Preparer
7. GC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services
13. Banner

Approval Path
1. 04/11/18 6:15 pm James Benjamin (j-benjamin): Approved for ACCT Department Head
2. 04/12/18 8:36 am Sandra Williams (sandra-williams): Approved for Curricular Services Review
3. 04/12/18 9:46 am Angela Catlin (acatlin): Approved for BA Committee Preparer GR
4. 04/12/18 3:04 pm Michael Shaub (mshaub): Approved for BA Committee Chair GR
5. 04/12/18 3:32 pm Michael Kinney (kinneym): Approved for BA College Dean GR
6. 04/24/18 8:58 am LaRhesa Johnson (lrjohnson): Approved for GC Preparer
7. 05/03/18 4:35 pm LaRhesa Johnson (lrjohnson): Approved for GC Chair
Learning Outcomes

Describe how learning outcomes are met or provide justification why they are not met.

This course meets for the required number of credit hours in a Friday-only format. This meeting pattern enables valuable professional guest speaker and facilitator interaction for longer length of time with students. We feel that if the course met during a traditional meeting pattern for 15 weeks, they would interact with fewer guest speakers and for shorter periods of time. Interaction with professionals is significant in a course focused on technology which is constantly changing.

Will this course be taught as a distance education course?

Yes

Is 100% of this course going to be taught in Texas?

Yes

Will classroom space be needed for this course?

Yes

This will be a required course or an elective course for the following programs:

Required (select program)

Elective (select program)
### Course Syllabus

<table>
<thead>
<tr>
<th>Syllabus:</th>
<th>Upload syllabus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><a href="ACCT%20624%20Syllabus%20-%20Tax%20Technology.pdf">ACCT 624 Syllabus - Tax Technology.pdf</a></td>
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</table>

<table>
<thead>
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<th>Letters of support or other documentation</th>
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<table>
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<th>Additional information</th>
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<thead>
<tr>
<th>Reviewer Comments</th>
<th>Sandra Williams (sandra-williams) (04/12/18 8:33 am): Minor edits made to form.</th>
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</table>

<table>
<thead>
<tr>
<th>Reported to state?</th>
<th>Add</th>
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</table>

Key: 18555
ACCT 644 – TAX TECHNOLOGY AND ANALYTICS
Section 602 – Fall 2018
11-2 p.m. Fridays
Wehner 442

Instructor: Joan E. Sanders, C.P.A
Office: 485L Wehner
Phone: 979-845-8587
E-Mail: j-sanders@tamu.edu
Office Hours: By Appointment

COURSE OVERVIEW

This special topics course in Tax Technology and Analytics focuses on streamlining the data collection and management process enabling the tax function to shift its focus from gathering data to analyzing data to participate more strategically within the organization. It is aimed at enhancing the ability of accounting professionals to perform both the tax and technical functions needed to work with the people, processes and technologies in that area. It covers topics such as transformation, direct tax, indirect tax, emerging technologies, global mobility and asset management.

COURSE LEARNING OUTCOMES

At the completion of the course, successful students should be able to:

- Discuss the technological transformations that are occurring in the tax industry
- Give examples of technology applications being used in direct tax, indirect tax and asset management
- Identify the key strategies to consider when implementing tax technology in those areas
- Investigate the emerging technologies and the opportunities within global mobility

CATALOG DESCRIPTION

Focuses on streamlining the data collection and management process of the tax function needed to work with people, processes and technologies; includes transformation, direct tax, indirect tax, emerging technologies, global mobility and asset management.

COURSE PREREQUISITES

ACCT 427 – Accounting Information Systems or instructor approval
ACCT 405 – Personal Income Tax or instructor approval

COURSE MATERIALS

All materials will be provided.
GRADING AND COURSE REQUIREMENTS

The course requirements and evaluation of each student’s work in the course are based upon performance in several areas. Grade contributions and letter grade determination are shown below.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 - 100</td>
<td>A</td>
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<td>70 - 79</td>
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<tr>
<td>60 - 69</td>
<td>D</td>
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<tr>
<td>0 - 59</td>
<td>F</td>
</tr>
</tbody>
</table>

Exam 1  10%
Exam 2  10%
Exam 3  10%
Exam 4  10%
Exam 5  10%
Final Exam 20%
Class Participation 30%
Total 100%

CLASS PARTICIPATION:

Students must attend all class meetings (unless they have an excused absence). An unexcused absence will count off 10% of the total grade for each missed class period.

Students must write individual hand-written thank you notes to at least 4 of the 5 sets of speakers. If there are multiple speakers for that week students must write to EACH speaker to receive credit. A missing thank you note will count off 10% of the total grade. Thank you notes should be professional, hand-written and delivered to my office UNSEALED by 2pm on Monday of the week following the firm’s last presentation (see calendar for exact dates). Be sure to drop them off in my office rather than handing them to me in front of the speaker. Notes should be 3-4 sentences and include at least one specific meaningful comment from the presentation. The goal is to show the speakers you appreciate them giving up a week of their time to be here and that you were listening to what they had to say.

In addition to class attendance and thank you notes students are expected to actively participate by asking and answering questions as well as providing meaningful contributions to the class. Public accounting requires active communication in all phases of an engagement and with all key individuals. Effective communication with other staff, with seniors, with partners, and with the client is an essential skill for professional development. As a graduate student, you should not have to be poked, prodded, or threaten to participate in class. As a graduate student, you should know that communication skills are developed and practiced when you regularly participate in class discussions. Therefore, it is important during this class to engage in constructive discourse with your fellow students and firm representatives by sharing insights and debating different points of view. If you do not ask/answer questions, or if no
Students with unexcused absences will receive no credit for missed deliverables.

**ATTENDANCE POLICY**

The university views class attendance as an individual student responsibility. Students are expected to attend class and to complete all assignments. Under Student Rule 7, an excused absence is defined as follows:

The reasons absences are considered excused by the university are listed below. 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.

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.
   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 or
      (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.
9) Mandatory participation as a student-athlete in NCAA-sanctioned competition.
10) In accordance with Title IX of the Educational Amendments of 1972, Texas A&M University shall treat pregnancy (childbirth, false pregnancy, termination of pregnancy and recovery therefrom) and related conditions as a justification for an excused absence for so long a period of time as deemed medically necessary by the student’s physician. Requests for excused absence related to pregnancy should be directed to the instructor.

**MAKE-UP WORK POLICY**

Students with excused absences will receive adequate time and opportunities to submit the required deliverables that are delayed due to those absences. To submit work under the “make-up” policy requires documentation as specified in the TAMU student rules (see Student Rules: Rule 7 – http://student-rules.tamu.edu).

Students with unexcused absences will receive no credit for missed deliverables.
**Late Work Policy**

Any course deliverable turned in late will not be graded. “Late” means submitting deliverable any time after the assignment deadline has passed.

**Exception:** Students with excused absences will receive adequate time and opportunities to submit work they missed due to absence. Students must provide documentation and notice to the instructor as specified in TAMU student rules. (Student Rules: Rule 7 -- [http://student-rules.tamu.edu](http://student-rules.tamu.edu)).

**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 White Creek Apartments (Building 62) at 701 West Campus Boulevard or call 979-845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu).

**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. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. You can learn more about the Honor Council Rules and Procedures as well as your rights and responsibilities at the following URL:

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

For each assignment or project that is submitted for grading in this course, students must affirm their commitment to the Aggie Honor Code with the following statement.

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

Even if you do not explicitly state the above, by submitting any course deliverable, you affirm your adherence to the Aggie Honor Statement for that deliverable.

“Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one’s work, should the instructor request it, is sufficient grounds to initiate an academic dishonesty case.” ([http://aggiehonor.tamu.edu/RulesAndProcedures/HonorSystemRules.aspx](http://aggiehonor.tamu.edu/RulesAndProcedures/HonorSystemRules.aspx))

I will follow the steps and processes outlined in the Honor Council Rules and Procedures in all cases of academic misconduct in this class (see [http://aggiehonor.tamu.edu/RulesAndProcedures](http://aggiehonor.tamu.edu/RulesAndProcedures)).
**STATEMENT ON PLAGIARISM**

As commonly defined, plagiarism consists of passing off as one's own, ideas, words, writing, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. If you have any questions regarding plagiarism, please review additional information provided under Student Rule 20 and Aggie Honor System Rules under “Plagiarism” (see Student Rule 20 [http://student-rules.tamu.edu](http://student-rules.tamu.edu) and Aggie Honor System Rules [http://aggiehonor.tamu.edu/RulesAndProcedures/HonorSystemRules.aspx](http://aggiehonor.tamu.edu/RulesAndProcedures/HonorSystemRules.aspx)).

**FOOD AND DRINK IN THE CLASSROOM**

We have beautiful, state-of-the-art classrooms in the Wehner Building. We want to maintain the high quality of these classrooms for current and future students. Thus, it is necessary for you to adhere to the established policy of no beverages (except water), food, tobacco products, or like items within the Wehner Building classrooms.

**COURSE SCHEDULE**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to Course</td>
</tr>
<tr>
<td>2-3</td>
<td>Transformation</td>
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</table>
| 4-5  | Direct Tax  
  - Tax Provision Tools & ASC 740  
  - Tax compliance  
  - International (US-based compliance, BEPS, Transfer Pricing)  
  - State and Local Tax  
  - Workflow (including Sharepoint, workflow management tools)  
  - Fixed assets  
  - Design and Integration with ERP |
| 6-7  | Indirect Tax  
  - Sales & Use  
  - VAT  
  - Excise  
  - Property  
  - Design and Integration with ERP systems |
| 8-9  | Emerging Technologies – Big Data and Analytics |
| 10-11| Global Mobility / Asset Management |
| 12   | Conclusion to Course & Final Exam |
New Course Proposal

Date Submitted: 02/22/18 11:30 am

Viewing: **CSCE 712 : Digital Forensic Engineering**

Last edit: 03/05/18 9:55 am

Changes proposed by: smilingsheila

<table>
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<th>Programs referencing this course</th>
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<tr>
<td>CERT-CYBE: Certificate in Cybersecurity Engineering</td>
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<tr>
<td>Name</td>
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<tr>
<td>Daniel Ragsdale</td>
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<tr>
<td>Sheila Dotson</td>
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<tr>
<td>Digital Forensic Engineering</td>
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<th>Abbreviated Course Title</th>
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<tr>
<td>DIGITAL FORENSIC ENGR</td>
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<table>
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<tr>
<th>Catalog course description</th>
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<tbody>
<tr>
<td>Fundamentals and hands-on practice of computer and network forensics; exposure to technical principles, digital forensic tools and legal requirements on handling of digital information undergoing digital forensic analysis.</td>
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<th>Prerequisites and Restrictions</th>
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In Workflow

1. CSCE Department Head
2. Curricular Services Review
3. EN Committee Preparer GR
4. EN Committee Chair GR
5. EN College Dean GR
6. GC Preparer
7. GC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services
13. Banner

Approval Path

1. 03/05/18 9:28 am Scott Schaefer (schaefer): Approved for CSCE Department Head
2. 03/05/18 9:59 am Sandra Williams (sandra-williams): Approved for Curricular Services Review
3. 03/27/18 1:40 pm Jennifer Veracruz (jveracruz): Approved for EN Committee Preparer GR
4. 04/09/18 6:19 pm Harry Hogan (h-hogan): Approved for EN Committee Chair GR
5. 04/09/18 6:21 pm Harry Hogan (h-hogan): Approved for EN College Dean GR
6. 04/24/18 8:59 am LaRhesa Johnson (lrjohnson): Approved for GC Preparer
7. 05/03/18 4:35 pm LaRhesa Johnson (lrjohnson): Approved for GC Chair
| Semester | 3 |
| Credit Hour(s) | |
| Contact Hour(s) (per week): | |
| Lecture: | 3 |
| Lab: | 0 |
| Other: | 0 |
| Total | 3 |

- Repeatable for credit? No
- Three-peat? No
- CIP/Fund Code: 1104010002
- Default Grade Mode: Letter Grade(G)
- Alternate Grade Modes: Satisfactory/Unsatisfactory
- Method of instruction: Lecture
- Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education) No
- Will this course be taught as a distance education course? No
- Is 100% of this course going to be taught in Texas? Yes
- Will classroom space be needed for this course? Yes

This will be a required course or an elective course for the following programs:

<table>
<thead>
<tr>
<th>Program(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CERT-CYBE) Certificate in Cybersecurity Engineering</td>
</tr>
<tr>
<td>(MS-CPSC) Master of Science in Computer Science</td>
</tr>
<tr>
<td>(MS-CECN) Master of Science in Computer Engineering</td>
</tr>
<tr>
<td>(MS-CEEN) Master of Science in Computer Engineering</td>
</tr>
<tr>
<td>(PHD-CPSC) Doctor of Philosophy in Computer Science</td>
</tr>
<tr>
<td>(PHD-CECN) Doctor of Philosophy in Computer Engineering</td>
</tr>
<tr>
<td>(PHD-CEEN) Doctor of Philosophy in Computer Engineering</td>
</tr>
</tbody>
</table>

**Course Syllabus**

- Syllabus: Upload syllabus
- Upload syllabus: [712 syllabus.pdf](712%20syllabus.pdf)
- Letters of support or other documentation: No
- Additional information
- Reviewer Comments: Scott Schaefer (schaefer) (02/22/18 10:26 am): Rollback: Dotson asked for rollback to fix syllabus. Sandra Williams (sandra-williams) (03/05/18 9:59 am): Syllabus shows "lab activities" but form shows no lab
contact hours. Moving forward as my assumption is that "lab activities" are incorporated into lecture and not necessarily the traditional lab.

Reported to state?

Add
Course title and number: CSCE 712 Digital Forensics Engineering  
Term (e.g., Fall 200X): Spring 2019  
Meeting times and location: TBD

Course Description and Prerequisites
Fundamentals and hands-on practice of computer and network forensics; exposure to technical principles, digital forensic tools, and legal requirements on handling of digital information undergoing digital forensic analysis.

Prerequisites: Graduate classification

Learning Outcomes or Course Objectives
At the end of the class, students will be able to:
- Demonstrate knowledge of the computer systems, networking stacking and packet traffic, as well as techniques to access, analyze, and capture the needed information to meet the digital forensic objectives
- Monitoring and analysis of data packet flows
- Monitoring and analysis of computing processes and functions
- Data analysis
- Hard drive analysis

Instructor Information
Name: Jyh-Charn (Steve) Liu  
Telephone number: 979-845-8739  
Email address: liu@cs.tamu.edu  
Office hours: By appointment  
Office location: HRBB 502B

COMMUNICATIONS: Emails will be used extensively. All emails related to this class should be sent to liu@cse.tamu.edu. The ecampus portal will contain the majority of the material.

Textbook and/or Resource Material
Optional references
Grading Policies

Absences
University excused absences will be handled consistent with Student Rule 7 http://student-rules.tamu.edu.

Grading Scale

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

Grade penalty for missing assignments:
Automatic final grade of D for missing 3 assignments. Automatic final grade of C for missing 2 assignments.

Penalty for late submission is as follows: same day after class (-10%), next day (-20%), two days (-30%), four days or more (not accepted)

Weekly plan and technical topics: A detailed plan will be communicated to students in a different document

Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Technical Themes</th>
<th>Lecture Topics</th>
<th>Lab Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview</td>
<td>Digital forensics overview</td>
<td>Lab 1: tools</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Review of OS and networking</td>
<td>Lab 2</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Cyber Forensics Tools and the Testing Thereof</td>
<td>Lab 3</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Forensic Modeling and Principles</td>
<td>Lab 4</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Forensic Duplication</td>
<td>Lab 5</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Forensics Analytics</td>
<td>Lab 6</td>
</tr>
<tr>
<td>7-8</td>
<td></td>
<td>File Carving</td>
<td>Lab 7</td>
</tr>
<tr>
<td>9-10</td>
<td></td>
<td>Mobile Device Forensics</td>
<td>Lab 8</td>
</tr>
<tr>
<td>11-12</td>
<td></td>
<td>Network Surveillance and Accountability</td>
<td></td>
</tr>
<tr>
<td>13-14</td>
<td></td>
<td>Network Attack Traceback and Attribution</td>
<td>Final project</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Final project presentation</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: There will be 2 scheduled tests to assess students’ understanding of basic knowledge.
Note 2: The activity plan is subject to change, and all changes will be communicated to students in classroom and posted on class portal.

Other Pertinent Course Information

Equipment
- Bring your own device (BYOD): Students should bring their own computer Linux OS capable of running development tools in order to work collaboratively with classmates during lab hours.

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, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. 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.”

SCHOLASTIC DISHONESTY will not be tolerated. Plagiarism is the presentation of the work of someone else without giving him or her due credit. Any such incidents will be dealt with in accordance with the procedures outlined in the University Student Rules. Some specific rules:

1. In most cases, you are encouraged to discuss assignments, but the final product submitted for grade must be the individual work of the person turning it in.
2. If code from two or more students is essentially identical, and it is determined to the satisfaction of the instructor that the code is the product of a group effort, the assignment may be rejected with no credit for any of the students involved.
3. Always be prepared to answer the questions: “What is your contribution?” “Where did you get this design?” “What is your responsibility and contribution in the team?”
4. Using third party codes and tools to solve challenging computing problems is critical to most software reverse engineering, and therefore is allowed. When doing so, it is a must to have full disclosure prior reporting results. Claiming credit without such disclosure will be considered cheating.

Copyright Notice: The handouts used in this course are copyrighted and cannot be copied without permission. By “handouts,” this means all materials generated for this class, which includes but is not limited to, syllabi, quizzes, exams, lab and homework problems, lab handbook, lab manuals, in-class materials, review sheets, and Web site materials. You must obtain the instructor’s explicit permission to video/record the class contents.
Course Change Request

New Course Proposal

Date Submitted: 04/10/18 2:57 pm

Viewing: ENTO 632 : Professional Grant and Contract Writing in Entomology

Last edit: 05/07/18 2:34 pm
Changes proposed by: rhapes

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
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<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebecca Hapes</td>
<td><a href="mailto:rhapes@tamu.edu">rhapes@tamu.edu</a></td>
<td>979-845-9733</td>
</tr>
</tbody>
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Course prefix       | ENTO       | Course number | 632
Department           | Entomology |
College/School       | Agriculture & Life Sciences |
Academic Level       | Graduate   |
Effective term       | 2019-2020  |

Complete Course Title
Professional Grant and Contract Writing in Entomology

Abbreviated Course Title
PROF GRANT & CONTRACT WRITING

Catalog course description
Scientific and academic professional development; art of CV and grant writing; process of peer review evaluations of work.

Prerequisites and Restrictions
Graduate classification or approval of instructor.

Should catalog prerequisites / concurrent enrollment be enforced?
No

Crosslistings
No

Stacked
No

Semester
Credit Hour(s) 3
Contact Hour(s) (per week): Lecture: 3 Total 3 Lab: 0 Other: 0
Repeatable for credit? No
CIP/Fund Code 2607020002
Default Grade Mode Letter Grade(G)
Method of instruction Lecture

Will sections of this course be taught as non-traditional? (i.e.,

In Workflow
1. ENTO Department Head
2. Curricular Services Review
3. AG Committee Preparer GR
4. AG Committee Chair GR
5. AG College Dean GR
6. GC Preparer
7. GC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services
13. Banner

Approval Path
1. 04/10/18 3:06 pm Pete Teel (pteel): Approved for ENTO Department Head
2. 04/10/18 3:45 pm Sandra Williams (sandra-williams): Approved for Curricular Services Review
3. 04/10/18 3:52 pm Dawn Kerstetter (dkerstetter): Approved for AG Committee Preparer GR
4. 04/18/18 3:21 pm David W. Reed (dwreed): Approved for AG Committee Chair GR
5. 04/18/18 3:25 pm David W. Reed (dwreed): Approved for AG College Dean GR
6. 04/24/18 9:00 am LaRhesa Johnson (lrjohnson): Approved for GC Preparer
7. 05/07/18 2:35 pm LaRhesa Johnson (lrjohnson): Approved for GC Chair
**Course Syllabus**

**Syllabus:** Use course syllabus form

---

**Meeting times and locations**

Thursdays, 12:45-3:35 PM
HPCT 205

---

**Learning outcomes**

- Improve communication skills by presenting research proposals to their fellow classmates
- Follow the steps to successfully submit a grant proposal through the proper funding agency
- Develop critical thinking skills by participating in peer-review panels for fellowships, grants
- Appraise the quality of grant proposals in light of peer review evaluations and comments
- Create an impactful, professional Curriculum Vitae with all the proper sections
- Interpret scientific articles and write proposals in light of the literature review
- Identify fields in which a graduate degree in entomology can lead to employment

**Instructor information**

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>E-mail</th>
<th>Office hours</th>
<th>Office location</th>
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<tbody>
<tr>
<td>Juliana Rangel-Posada</td>
<td>979-845-2781</td>
<td><a href="mailto:jrangel@tamu.edu">jrangel@tamu.edu</a></td>
<td>By email appointment</td>
<td>315 Minnie Belle Heep</td>
</tr>
<tr>
<td>Hojun Song</td>
<td>979-845-2781</td>
<td><a href="mailto:hsong@tamu.edu">hsong@tamu.edu</a></td>
<td>By email appointment</td>
<td>118-119 Biological Control Facility</td>
</tr>
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**Textbook and/or Resource Material**


There will also be several articles accessible online to prepare for and discuss in class

**Grading scale**

Grade Points
A 900 +
Grading Policies

<table>
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<tr>
<th>Activity</th>
<th>Weight</th>
<th>How is grade determined</th>
<th>Additional work for graduate students</th>
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<tr>
<td>Questions to the readings (5 total, 20 pts each)</td>
<td>100</td>
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<tr>
<td>Research proposal sample</td>
<td>75</td>
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<tr>
<td>Peer-Review of Research Proposal Sample</td>
<td>25</td>
<td></td>
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<tr>
<td>Pre-proposal title and hypotheses</td>
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<td>Pre-proposal draft</td>
<td>100</td>
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<tr>
<td>Peer-Review of Pre-proposal draft</td>
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<td></td>
<td></td>
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<tr>
<td>Curriculum Vitae</td>
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<td>Peer-Review of Curriculum Vitae</td>
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<tr>
<td>Final, reviewed and edited proposals</td>
<td>150</td>
<td></td>
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<tr>
<td>Panelist review of applicants' proposals</td>
<td>50</td>
<td></td>
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<tr>
<td>Power Point presentation of proposals</td>
<td>150</td>
<td></td>
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<tr>
<td>Peer-Review of Power Point presentation of proposals</td>
<td>50</td>
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</table>

Attendance and Make-up Policies

University rules related to excused and unexcused absences are located online at Student Rule 7.

The university's attendance policy states that class attendance is the responsibility of individual students. We will expect you to attend every lecture as it is essential to fulfill the course requirements successfully. If you need to be absent, we expect an emailed explanation prior to the class period. If you do not notify us of planned absences in advance, we will not accommodate requests. 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. Examine the course calendar to schedule any planned absences. We will require scanned documents that verify university-approved absences. Falsification of documentation is a violation of the Honor Code. Rules for excused/unexcused absences are described by Rule 7, found at http://student-rules.tamu.edu/rule07

Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required readings</th>
<th>Assignment due date</th>
<th>Major exam date</th>
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<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required readings</th>
<th>Assignment due date</th>
<th>Major exam date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course overview and introduction (H. Song, J. Rangel) Review grant programs listed by Dr. Hannah Burrack, NCSU: <a href="http://bit.ly/MhDoYf">http://bit.ly/MhDoYf</a> Discussion of grant/fellowship target programs, due dates Writing for clarity and concision: - Complete reading 1 in class, create 1-2 questions from the reading, group discussion - Purdue Online Writing Exercise, eliminating wordiness exercises - Group exercise on eliminating wordiness Writing for clarity and concision</td>
<td>Determine scope of proposal topic, choose target program; Prepare a 1-2 paragraph writing sample, bring to next class; Email us a question from readings 2 and 3 by 4 Sep. - Please email us with subject: &quot;ENTO 689 readings 2 and 3 questions&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Writing for clarity and concision, continued - Group discussion of questions from readings 2 and 3 Peer-review of 1-2 page writing sample Draft title and hypotheses for proposal Guest lecture: AGLS Library Resources</td>
<td>Email us edited proposal title and hypotheses by 10 Sep.; Email us a question from readings 4 and 5 by 10 Sep. - Please email us with subject: &quot;ENTO 689 readings 4 and 5 questions&quot;</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>NSF's Graduate Research Fellowship: Step by Step Revised 1-2 page writing sample due in class - Group discussion of questions from readings 4 and 5 Guest lecture: Career Center, Grant Resources - Components of an engaging Curriculum Vitae (CV) Proposal submission and evaluation process - What does a grant panel look like? Organization of panels for each proposal - Decision based on expertise, agency, and due dates</td>
<td>Prepare and email us your CV by 18 Sep for peer review next class</td>
<td></td>
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<tr>
<td>Week</td>
<td>Topic</td>
<td>Required readings</td>
<td>Assignment due date</td>
<td>Major exam date</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>4</td>
<td>Peer review of classmate’s CV in class&lt;br&gt;Guest lecture: EndNote Tutorial, Medical Sciences Library</td>
<td>Email peer reviews of CVs to applicants/instructors by 28 Oct. for applicants to edit; Edit/re-format your peer-reviewed CV; Email the instructors your edited, peer-reviewed CV by 23 Sep; Prepare and email us drafts of proposals Set 1 by 24 Sep; Drafts of proposals Set 1 available on e-Campus by next class (27 Sep)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>NSF’s Dissertation Improvement Grants (DIG): Step by Step&lt;br&gt;Guest lecture: Grant writing and working in industry&lt;br&gt;- Experiences in grant writing from an industry perspective&lt;br&gt;Proposals set 1 peer reviewed in class prior to panel next week</td>
<td>- Email peer reviews of set 1 to applicants/instructors by 29 Sep for applicants to edit - Applicants set 1 email edited proposals to panelists/instructors by 1 Oct - Panelists set 1 prepare review with panelist duties for Panel of Set 1 on 4 Oct</td>
<td></td>
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<tr>
<td>6</td>
<td>NSF’s Dissertation Improvement Grants (DIG): Step by Step&lt;br&gt;PANEL 1. Proposals set 1 peer-reviewed by panel with panelist duties&lt;br&gt;- Conduct panel review of proposals set 1 using panelist &amp; non-panelist duties</td>
<td>Edited, finalized proposals set 1 emailed to instructors by applicants by 8 Oct.; Prepare and email us drafts of proposals Set 2 by 9 Oct.; Drafts of proposals Set 2 available on e-Campus by next class (11 Oct)</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Pre-doctoral fellowships from USDA: Step by Step&lt;br&gt;Guest lecture: Dr. Adrienne Brundage, Entomology Instructor&lt;br&gt;- Group discussion on becoming an entomology instructor</td>
<td>Proposals set 2 peer reviewed in class prior to panel next week; - Email peer reviews set 2 to applicants/instructors by 13 Oct. for applicants to edit; - Applicants set 2 email edited proposals to panelists/instructors by 16 Oct.; Panelists set 2 prepare review with panelist duties for Panel of Set 2 on 18 Oct.</td>
<td></td>
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<tr>
<td>8</td>
<td>PANEL 2. Proposals set 2 peer-reviewed by panel with panelist duties&lt;br&gt;- Conduct panel review of proposals set 2 using panelist &amp; non-panelist duties&lt;br&gt;- Email panel reviews to applicants/instructors set 2 for them to finish editing proposals&lt;br&gt;Guest lecture: Extension professional grant opportunities&lt;br&gt;- Group discussion on their experiences in grant writing&lt;br&gt;- Advise on grant/fellowship writing for award success</td>
<td>Edited, finalized proposals set 2 emailed to instructors by applicants by 21 Oct.; Prepare and email us drafts of proposals Set 3 by 23 Oct.; Drafts of proposals Set 3 available on e-Campus by next class (25 Oct)</td>
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<tr>
<td>Week</td>
<td>Topic</td>
<td>Required readings</td>
<td>Assignment due date</td>
<td>Major exam date</td>
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</tbody>
</table>
| 9    | Guest lecture: Discussing research faculty/academic careers  
- Discussion on their experiences in grant writing  
- Advise on grant/fellowship writing for award success | Proposals Set 3 peer reviewed in class prior to panel next week;  
- Email peer reviews set 3 to applicants/instructors by 27 Oct. for applicants to edit;  
- Applicants set 3 email edited proposals to panelists/instructors by 29 Oct.;  
- Panelists set 3 prepare review with panelist duties for Panel of Set 3 on 1 Nov. |  |
| 10   | PANEL 3. Proposals set 3 peer reviewed by panel with panelist duties  
- Conduct panel review of proposals set 3 using panelist & non-panelist duties  
- Email panel reviews to applicants/instructors set 3 for them to finish editing proposals  
Guest lecture: USDA-ARS investigator  
- Discussion on his experiences in grant writing and working for the USDA  
- Advise on grant/fellowship writing for award success | Edited, finalized proposals set 3 emailed to instructors by applicants by 6 Nov; Students are given proposals from various PIs to create peer review for next week |  |
| 11   | Guest lecture: Sponsored Research Office  
- Post-award processes and how to maneuver Maestro  
So you got a grant, now what?  
- Reporting benchmarks, audits, ethics, progress reports  
- Group discussion | Prepare individual Power Point presentations of research proposals; |  |
| 12   | Work on individual Power Point presentations of research proposals | - Work on proposals and CV if due date for grant/fellowship is later in the year |  |
| 13   | Work on individual Power Point presentations of research proposals | Email peer reviews of Power Point presentations to applicants/instructors by 1 Dec. |  |
| 14   | Power Point Presentations of Proposal Research Projects in class, set 1 | Email peer reviews of Power Point presentations to applicants/instructors by 6 Dec. |  |
| 15   | Redefined day for Thursday classes. Last day of class  
Power Point Presentations of Proposal Research Projects in class, set 2  
- Mock panel for other PIs' proposals and course wrap up |  |  |
Please select the appropriate ADA statement for your location

**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, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit [http://disability.tamu.edu](http://disability.tamu.edu).

**Academic Integrity**

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

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

<table>
<thead>
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<th>Letters of support or other documentation</th>
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<td>Additional information</td>
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</table>
| Reviewer Comments                        | **George Cunningham (gbcunningham) (05/03/18 11:18 am)**: Need to change title to make discipline specific.  
**LaRhesa Johnson (lrjohnson) (05/07/18 2:34 pm)**: Updated the title per the GC request and the department’s approval. |

Key: 18553
## New Course Proposal

**Date Submitted:** 04/05/18 12:23 pm

**Viewing:** GEOP 619: Finite Element Methods in Geophysics

**Last edit:** 04/09/18 11:36 am

Changes proposed by: david-w-sparks

### Contact Senate Number

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<thead>
<tr>
<th>Name</th>
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<tr>
<td>David Sparks</td>
<td><a href="mailto:david-w-sparks@tamu.edu">david-w-sparks@tamu.edu</a></td>
<td>979-458-1051</td>
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<td>GEOP</td>
<td>619</td>
<td>Geology &amp; Geophysics</td>
<td>Geosciences</td>
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<td>Undergraduate</td>
<td>2019-2020</td>
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<table>
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<th>Complete Course Title</th>
<th>Abbreviated Course Title</th>
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<tbody>
<tr>
<td>Finite Element Methods in Geophysics</td>
<td>FINITE ELEMENT METHODS GEOPHYS</td>
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**Catalog course description**

Fundamental concepts of finite element methods, formulation of two and three-dimensional boundary-value problems in geophysics, including heat conduction, elasticity, seismic wave propagation and gravity and magnetic modeling; emphasis on the Galerkin method and isoparametric concept; data processing and programming techniques such as MPI-based parallel computing.

<table>
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<th>Prerequisites and Restrictions</th>
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<td>Concurrent Enrollment: No</td>
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<td>Should catalog prerequisites / concurrent enrollment be enforced?: No</td>
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<th>Lab:</th>
<th>Other:</th>
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<th>Repeatable for credit?</th>
<th>Three-peat?</th>
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**CIP/Fund Code**

4006030002

---

**In Workflow**

1. GEPL Department Head
2. Curricular Services Review
3. GE Committee Preparer GR
4. GE Committee Chair GR
5. GE College Dean GR
6. GC Preparer
7. GC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services
13. Banner

---

**Approvals Path**

1. 04/05/18 2:15 pm Michael Pope (mcpope): Approved for GEPL Department Head
2. 04/09/18 11:37 am Sandra Williams (sandra-williams): Approved for Curricular Services Review
3. 04/09/18 3:13 pm Roxanna Russell (rrussell): Approved for GE Committee Preparer GR
4. 04/12/18 12:53 pm Christian Brannstrom (cbrannst): Approved for GE Committee Chair GR
5. 04/12/18 12:54 pm Christian Brannstrom (cbrannst): Approved for GE College Dean GR
6. 04/24/18 9:00 am LaRhesa Johnson (lrjohnson): Approved for GC Preparer
7. 05/03/18 4:35 pm LaRhesa Johnson (lrjohnson): Approved for GC Chair
Default Grade Mode Letter Grade(G)
Alternate Grade Modes Satisfactory/Unsatisfactory
Method of instruction Lecture
Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education) No
Will this course be taught as a distance education course? No
Is 100% of this course going to be taught in Texas? Yes
Will classroom space be needed for this course? Yes

This will be a required course or an elective course for the following programs:

Required (select program)

Elective (select program)

<table>
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<tr>
<th>Program(s)</th>
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<tr>
<td>(PHD-GEOP) Doctor of Philosophy in Geophysics</td>
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<tr>
<td>(PHD-GEOL) Doctor of Philosophy in Geology</td>
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<tr>
<td>(MS-GEOP) Master of Science in Geophysics</td>
</tr>
<tr>
<td>(MS-GEOL) Master of Science in Geology</td>
</tr>
</tbody>
</table>

**Course Syllabus**

- Syllabus: Upload syllabus
  - [Duan_SYL_GEOP619_v2.pdf](Duan_SYL_GEOP619_v2.pdf)
- Letters of support or other documentation: No
- Additional information
- Reviewer Comments: Sandra Williams (sandra-williams) [04/09/18 11:36 am]: Minor edits made to catalog course description.
- Reported to state? Add

Key: 18546
GEOP 619 Finite Element Methods in Geophysics
Credit: 3

Course Description and Prerequisites
This course explores fundamental concepts of finite element methods, formulation of two- and three-dimensional boundary-value problems in geophysics, and pertinent data processing and programming techniques. The Galerkin method and isoparametric concept are emphasized. Heat conduction, elasticity, and seismic wave propagation problems are used as examples in developing finite element methods. Other geophysical problems, such as resistivity, gravity and magnetic modeling, may be covered depending on the interests of the students. Students will have chance to learn and practice MPI-based parallel computing in this class.

Prerequisite: Graduate classification or approval of instructor. The background knowledge required is linear algebra, vector calculus, differential equations and elasticity that are typically included in a standard undergraduate science or engineering degree curriculum. A working knowledge of a scientific computing language, such as MATLAB or FORTRAN 90, is desirable.

Learning Outcomes
Upon completion of the course, student are expected to be able to
1) derive the weak formulation of boundary-value problems,
2) set up data processing arrays,
3) program relevant subroutines,
4) develop finite element models of problems in his/her interests.
All of above learning outcomes will be evaluated through homework assignments and class projects.

Instructor
Dr. Benchun Duan
Office: Halbouty 153
Office Hours: TR 11am – 12pm or by appointment
Email: bduan@geos.tamu.edu, Phone: 845-3297

Textbooks and Readings
Lectures will be primarily built on the materials from the following textbook:
Thomas J. R. Hughes (2000), The Finite Element Method: Linear static and dynamic finite element analysis, Dover, Mineola, N.Y.
Materials from other FEM books may also be used in lectures. Examples of FEM applications in Geophysics will be from journal papers.
Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework assignments</td>
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<td>Project</td>
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<td>Final</td>
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<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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Letter grades: A=85-100%, B=75-84%, C=65-74%, D=60-64%, F<60%.

**Homework assignments:** The homework assignments are designed for the students to grasp lecture materials, and will be given at regular intervals (e.g., every week) during the semester. The students will be asked to derive formulas, set up data processing arrays, and write relevant subroutines in her/his favorite computer language.

**Project:** The students will be asked to work on a class project to solve a scientific problem in her/his interest using Finite Element Methods (FEM) during the semester. An MPI-parallel FEM code EQdyna developed in the instructor’s group on dynamic earthquake rupture and seismic wave propagation will be provided for the students to use in her/his project, though the students are free to choose other FEM codes. Students will learn and practice parallel computing on cluster systems at Texas A&M High Performance Research Computing (http://hprc.tamu.edu). A research report is required at the end of the semester. More details will be discussed in class at the beginning of the semester.

**Final:** A final exam will be given at the end of the semester on lecture materials.

**Course Outline**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Recommended Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to FEM</td>
<td>Various FEM books</td>
</tr>
<tr>
<td></td>
<td>Variational methods: Ritz vs. Galerkin</td>
<td>Hughes Sec 1.1-1.4</td>
</tr>
<tr>
<td>2</td>
<td>1D example: Strong &amp; weak forms</td>
<td>Hughes Sec 1.5-1.9</td>
</tr>
<tr>
<td>3</td>
<td>1D example: Galerkin method</td>
<td>Hughes Sec 1.5-1.9</td>
</tr>
<tr>
<td>4</td>
<td>1D example: element stiffness matrix &amp; force vector, assembly of global matrix</td>
<td>Hughes Sec 1.10-1.15</td>
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<td>Heat conduction: strong &amp; weak forms, Galerkin formulation, element matrix</td>
<td>Hughes Sec 2.1-2.5</td>
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<td>Heat conduction: data processing arrays</td>
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<td>Linear elastostatics: strong &amp; weak forms</td>
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<td>Linear Elastostatics: Element matrix, data processing arrays and global assembly</td>
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<td>Degenerated elements &amp; high-order elements</td>
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<td>Elastodynamics</td>
<td>Hughes Sec 7.2-7.3, 8.1, 9.1</td>
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<td>FEM in seismology</td>
<td>Journal articles</td>
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</table>
Absence/Makeup Policy

This class will follow the University’s policy for excused absences and missed work. Assignments will not be accepted after the due date without an excuse that meets the University approved absence standard. If a student must miss an exam or assignment due date, he/she must notify me in advance, if feasible, or within 48 hours after the date. For more information, please see Section 7 of the student rules: http://student-rules.tamu.edu/rule07.

Academic Integrity Statement and Policy

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

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

Americans with Disabilities Act (ADA) Policy Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu

Copyright and Plagiarism Policy

All materials used in this class are copyrighted. These materials include but are not limited to syllabus, lecture notes, handouts, homework, and exams. Because these materials are copyrighted, you do not have the right to copy the handouts, unless permission is expressly granted.
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. Plagiarism is one of the worst academic sins, because the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.

If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, http://student-rules.tamu.edu/, under the section "Scholastic Dishonesty."

The Writing Center

The University Writing Center offers services for both undergraduate and graduate students.

The University Writing Center (UWC), located in Evans Library 1.214, offers help to writers at any stage of the writing process including brainstorming, researching, drafting, documenting, revising, and more; no writing concern is too large or too small. These consultations are highly recommended but are not required. While the UWC consultants will not proofread or edit your papers, they will help you improve your proofreading and editing skills. If you visit the UWC, take a copy of your writing assignment, a hard copy of your draft or any notes you may have, as well as any material you need help with. To find out more about UWC services or to schedule an appointment, call 458-1455, visit the web page at writingcenter.tamu.edu, or stop by in person.
**New Course Proposal**

Date Submitted: 04/16/18 2:51 pm

Viewing: **INTA 694 : Economic Restructuring in Latin America**

Last edit: 04/17/18 3:12 pm

Changes proposed by: jwood

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<tr>
<td>Janeen Wood</td>
<td><a href="mailto:jwood@tamu.edu">jwood@tamu.edu</a></td>
<td>979-458-2276</td>
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<tr>
<td>Economic Restructuring in Latin America</td>
<td>ECON RESTRUCT LATIN AMERICA</td>
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<table>
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<tr>
<td>Studies Latin America’s economic development; understand economic antecedents to recent reforms as well as resulting impact of these reforms on workers, growth, and living standards; critically evaluate arguments related to the political economy of international trade, finance and development.</td>
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| Will sections of this course be taught as non-traditional? (i.e.,) | No |

**In Workflow**

1. INTA Department Head
2. Curricular Services Review
3. GB Committee Preparer
4. GB Committee Chair
5. GB College Dean
6. GC Preparer
7. GC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services
13. Banner

**Approval Path**

1. 04/16/18 5:10 pm
   Gregory Gause
   (gregory.gause): Approved for INTA Department Head

2. 04/17/18 1:29 pm
   Sandra Williams
   (sandra-williams): Approved for Curricular Services Review

3. 04/17/18 5:12 pm
   Rane Cunningham
   (rane): Approved for GB Committee Preparer

4. 04/17/18 5:14 pm
   Blease Graham
   (cole_graham): Approved for GB Committee Chair

5. 04/17/18 9:54 pm
   Frank Ashley (fashley): Approved for GB College Dean

6. 04/24/18 9:00 am
   LaRhesa Johnson
   (lrjohnson): Approved for GC Preparer

7. 05/03/18 4:35 pm
   LaRhesa Johnson
   (lrjohnson): Approved for GC Chair
Will this course be taught as a distance education course? No

Is 100% of this course going to be taught in Texas? Yes

Will classroom space be needed for this course? Yes

This will be a required course or an elective course for the following programs:

<table>
<thead>
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<th>Program(s)</th>
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<tbody>
<tr>
<td>(MIA-INTA) Master of International Affairs in International Affairs</td>
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</table>

Course Syllabus

Syllabus: Upload syllabus

Upload syllabus: INTA 694 Economic Restructuring in Latin America.pdf

Letters of support or other documentation: No

Additional information

Reviewer Comments

Sandra Williams (sandra-williams) (04/09/18 11:44 am): Rollback: 693 courses are reserved for Professional Study and can be taken on an S/U basis (see student rule 10). Please update catalog course description to conform to our catalog style guide for course description (visit our website for more information: http://registrar.tamu.edu/Our-Services/Curricular-Services/Catalog/Style-Guide-for-Catalog-Course-Descriptions). Also, the syllabus has the wrong Aggie Honor Code website.

Sandra Williams (sandra-williams) (04/09/18 6:42 pm): Rollback: Please update catalog course description to conform to our catalog style guide for course description (visit our website for more information: http://registrar.tamu.edu/Our-Services/Curricular-Services/Catalog/Style-Guide-for-Catalog-Course-Descriptions).

Sandra Williams (sandra-williams) (04/17/18 1:28 pm): Update received and moving forward, however, the link to student rule 7 in the syllabus is not correct and will need to be fixed.

Rane Cunningham (rane) (04/17/18 3:13 pm): The link to student rule 7 in the syllabus has been corrected.

Key: 18551
I. Course Overview

This course studies Latin America's economic development. The goal of the course is to understand the economic antecedents to recent reforms as well as the resulting impact of these reforms on workers, growth, and living standards. The course also addresses other major economic topics relevant to Latin America.

II. Required Texts

The Puzzle of Latin American Economic Development Franko, P. Other articles will supplement the text.

III. Course Objectives

By the end of the semester, students are expected to be able to

- be able to explain economic development in Latin America,
- read and understand mainstream academic economic research in the field of international, labor, and macroeconomics as it applies to Latin America
- critically evaluate arguments related to the political economy of international trade, finance, and development, and
- achieve clarity of written and oral expression of the above goals.

IV. Assignments and Evaluation

There are eight quizzes, one (1) paper, and two country reports. Each quiz is worth 5% of your total grade (40% for all eight quizzes). The quizzes draw heavily from reading assignments. The paper is worth 40%. Class participation makes up the other 20%, which includes a class presentation on the current economic situation and characteristics of a Latin American country. The syllabus contains the relevant due dates. You may, and should, work with other students in this class.

Empirical Research Paper: You are to examine an economic issue of your choice related to the Latin America. Each student must research, write, and submit his/her own paper. The paper should include a thorough review of the literature relevant for your issue, a statistical summary of the relevant economic variables, and an original result. The paper should be no longer than 20 pages, including tables, charts, maps, and other such figures. The body of text should have no less than 2500 words.

Paper Guidelines

Papers must have 1-inch margins, 12 pt font size and be double-spaced. All style rules apply (spelling, page numbers, grammar, etc.). Papers are due on the last day of class. PAPERS THAT DO NOT STRICTLY ADHERE TO THESE STYLE GUIDELINES WILL NOT BE
V. Grading

The standard Bush School scale will apply:

- 90%-100% A Extraordinary, excellent work and mastery of concept
- 80%-89% B Good work and solid command of concept
- 70%-79% C Adequate work and sufficient understanding of concept
- 60%-69% D Poor work, little understanding of concept
- 0%-59% F Lack of work, no understanding of concept

Grades are as objective as possible and are relative to the rest of the class.

VI. Make-up Policy

If an absence is excused, the instructor will either provide the student an opportunity to make up an 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.

The reasons absences are considered excused by the university are listed below. 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.

- 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.
- Death or major illness in a student's immediate family.
- Illness of a dependent family member.
- Participation in legal proceedings or administrative procedures that require a student's presence.
- Religious holy day. NOTE: Prior notification is NOT required.
- Injury or illness that is too severe or contagious for the student to attend class.
  - 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)
  - 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 or (ii.) Confirmation of visit to a health care professional affirming date and time of visit.
- Required participation in military duties.
- Mandatory admission interviews for professional or graduate school that cannot be rescheduled.
- Other absences may be excused at the discretion of the instructor with prior notification and proper documentation. 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.
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, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu.

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“Our Aggie does not lie, cheat or steal nor tolerate those who do.” Every student is expected to adhere to this code; violation can result in disciplinary action. More information about Honor Council Rules and Procedures can be found at http://aggiehonor.tamu.edu/.

Plagiarism

As commonly defined, academic dishonesty/plagiarism consists of presenting as one’s own ideas, the words, writings, etc., that belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and submit it in as your own, even if you have the permission of the person. It does not matter from where the material is borrowed—a book, article, material from the internet, or the paper of another student in the class—all constitute plagiarism unless the source of the work is fully identified and credited. It is important when using a phrase, a distinctive idea or concept as well as a sentence or longer excerpt to credit the source in the text, a footnote or end note (most Bush School courses use the American Political Science Review citation format). Plagiarism is a violation of academic and personal integrity at Texas A&M University and carries severe consequences (See Student Rules on Academic Dishonesty).

Tips for Success

People who miss class get lower grades because class discussion features prominently in exams. Therefore, it is an excellent idea to never miss class. Study Guides are generally long, and therefore starting early and working on a section each day will prevent cramming pains and will also help you prepare for class. Readings are all listed and should be read BEFORE class. Read actively and write down questions. Visit me to make sure you are clear on ideas presented in class. Problems at the end of each chapter are often very relevant and helpful: practice these to prepare for exams. Check your email at least twice each week.
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<td>Overview and Introduction</td>
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<td>Review of Economics</td>
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<td>Defining Development</td>
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<td>Import Substitution Industrialization</td>
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<td>Argentina and Brazil</td>
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<tr>
<td>15</td>
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Weekly Readings: Read BEFORE coming to class

Purchased Texts

F* Franko, Chapter * (entire chapter)

Additional Readings


Bown Bown, Chad; Daniel Lederman, Samuel Pienknagura, Raymond Robertson (2017) Better Neighbors: Toward a Renewal of Economic Integration in Latin America World Bank Group, Washington D.C.


New Course Proposal

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Robert Randall</td>
<td><a href="mailto:r-randall@tamu.edu">r-randall@tamu.edu</a></td>
<td>979-845-4568</td>
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Course prefix: OCEN
Course number: 684

Department: Ocean Engineering
College/School: College of Engineering
Academic Level: Graduate
Effective term: 2019-2020

Complete Course Title: Professional Internship
Abbreviated Course Title: PROFESSIONAL INTERNSHIP

Catalog course description:
Ocean Engineering research and design experience at government or industry facilities away from the Texas A&M campus; project supervised jointly by faculty and personnel at these locations; projects selected to match student's major. May be taken three times for credit.

Prerequisites and Restrictions:
Graduate classification and approval of committee chair and department head.

Should catalog prerequisites / concurrent enrollment be enforced?
No

Crosslistings:
No
Crosslisted With

Stacked:
No
Stacked with

Semester Credit Hours (per week):
1-3

Contact Hour(s):
1-3

Lecture: 0
Lab: 0
Other: 1-3

Repeatable for credit?
Yes

Number of times repeated for credit: 3
Maximum number of hours: - OR -

When will this course be repeated?
Within a student's career

CIP/Fund Code: 1424010006
Default Grade Mode: Satisfactory/Unsatisfactory(S)

Method of instruction:
Practicum

In Workflow
1. OCEN Department Head
2. Curricular Services Review
3. EN Committee Preparer GR
4. EN Committee Chair GR
5. EN College Dean GR
6. GC Preparer
7. GC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services
13. Banner

Approval Path
1. 02/16/18 4:27 pm
   Robert Randall (r-randall): Approved for OCEN Department Head
2. 02/20/18 1:22 pm
   Sandra Williams (sandra-williams): Approved for Curricular Services Review
3. 03/27/18 1:40 pm
   Jennifer Veracruz (jveracruz): Approved for EN Committee Preparer GR
4. 04/09/18 6:20 pm
   Harry Hogan (h-hogan): Rollback to EN Committee Preparer GR
5. 04/10/18 2:10 pm
   Jennifer Veracruz (jveracruz): Approved for EN Committee Chair GR
6. 04/24/18 9:01 am
   LaRhesa Johnson (lrjohnson): Approved for EN College Dean GR
Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education)

No

Will this course be taught as a distance education course?

No

Is 100% of this course going to be taught in Texas?

No

Will classroom space be needed for this course?

No

This will be a required course or an elective course for the following programs:

Required (select program)

Elective (select program)

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<td>(MEN-OCEN) Master of Engineering in Ocean Engineering</td>
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<tr>
<td>(PHD-OCEN) Doctor of Philosophy in Ocean Engineering</td>
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</table>

Course Syllabus

Syllabus: Upload syllabus

Upload syllabus  
OE Curriculum cat 140 2017-18 5-8.pdf

Letters of support or other documentation

No

Additional information

Reviewer Comments

Harry Hogan (h-hogan) (04/09/18 6:20 pm): Rollback: updated syllabus needs to be added (by IV)

Janet Gonzales (janet-gonzales) (05/04/18 1:17 pm): Rollback: LaRhesa Johnson requested the roll back on May 3 - this was prematurely sent forward to the FS consideration.

LaRhesa Johnson (lrjohnson) (05/08/18 4:29 pm): Updated syllabus attached to add Student Rule 7
Course title and number  OCEN 684 Professional Internship
Term  Fall, Spring and Summer
Meeting times and location  Daily work at internship location

Course Description and Prerequisites
Ocean engineering research and design experience at government or industry facilities away from the Texas A&M campus; project is supervised jointly by faculty and personnel at these locations; project is selected to match student’s major. May be taken three times for credit. Prerequisites: Graduate classification and approval of graduate advisory committee chair and department head.

Learning Outcomes or Course Objectives
Course objectives: The objective is for the graduate student to gain experience working under the supervision of an experienced engineer in the ocean engineering field.

Learning outcomes: 1. Conduct engineering work. 2. Collaborate with engineers in the field/office. 3. Assist in solving real world engineering problems.

Instructor Information
Name  TBD
Telephone number  TBD
Email address  TBD
Office hours  TBD
Office location  Haynes Engineering Building

Textbook and/or Resource Material
No textbook is required.

Grading Policies
The course grade will be satisfactory or unsatisfactory based on the professors grading of the professional internship report. Organization, writing, and technical description of the engineering work accomplished during the internship are the basis of course grade.

Grading Scale
Satisfactory (S)/Unsatisfactory (U)

Course Topics, Calendar of Activities, Major Assignment Dates
This course is for graduate students to obtain work experience in the Ocean Engineering field. The student is located at an industry location and reports to an industry supervisor. A report of the work experience is submitted to the students graduate advisor at the completion of the semester enrolled in the OCEN 684 Professional Internship

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>NA</td>
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</tr>
</tbody>
</table>
Other Pertinent Course Information

Departmental Policy

- A Degree Plan must be submitted and approved by the student’s graduate advisory committee chair and the department head.
- Before a student is permitted to register for OCEN 684, the student must submit in writing to the Ocean Engineering Graduate Office:
  - Letter from the Employer of the Internship and contact information
  - Immediate supervisor and location of internship
  - Period of employment (start and end date)
  - Professor that will supervise the professional internship
  - After two semesters of graduate course work
- The Degree Plan must be complete in order to receive credit for OCEN 684.
- A satisfactory grade (S) will not be issued until the Degree Plan has been approved by the Department Head.
- OCEN 684 can’t be taken until at least two semesters of graduate course work has been completed (minimum of 18 credit hours).
- Registration for OCEN 684 must be completed by the start of the semester for which OCEN 684 credit is requested.
- OCEN 684 credit hours may not be changed to either OCEN 685 or OCEN 691 credit hours.
- OCEN 684 credit hours must be on students degree plan to receive credit.

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, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. 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.”
Course Change Request

New Course Proposal

Date Submitted: 03/08/18 9:21 am

Viewing: **PHPM 678 : Qualitative Research in Public Health**

Last edit: 03/08/18 6:34 pm
Changes proposed by: monica-a-garza

Contact Senate Number

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monica Garner</td>
<td><a href="mailto:magarner@sph.tamhsc.edu">magarner@sph.tamhsc.edu</a></td>
<td>979-436-9483</td>
</tr>
</tbody>
</table>

Course prefix | PHPM           
Department    | Health Policy & Management 
College/School | Public Health 
Academic Level | Graduate 
Academic Level (alternate) | Undergraduate 
Effective term | 2019-2020 

Complete Course Title
Qualitative Research in Public Health 

Abbreviated Course Title
QUAL RESEARCH IN PUBLIC HEALTH

Catalog course description
Focuses on qualitative research within public health; discusses various qualitative research theories, methods of data collection and data analysis, qualitative research design, research ethics, and disseminating qualitative data.

Prerequisites and Restrictions
Doctoral classification.

Concurrent Enrollment
No

Should catalog prerequisites / concurrent enrollment be enforced?
No

Crosslistings
No

Stacked
No

Semester
3

Credit Hour(s)
(per week):
Lecture:
Lab: 0
Other: 0

Repeatable for credit?
No

Three-peat?
No

CIP/Fund Code
5107010014

Default Grade Mode
Letter Grade(G)

Approval Path
1. 03/08/18 9:23 am 
Monica Garner  
(monica-a-garza): Approved for PHPM Reviewer
2. 03/08/18 9:35 am 
Mike Morrisey  
(morrisey): Approved for PHPM Department Head
3. 03/08/18 6:34 pm 
Sandra Williams  
(sandra-williams): Approved for Curricular Services Review
4. 04/09/18 8:12 am 
Rick Danko  
(danko): Approved for PH Committee Preparer
5. 04/16/18 4:47 pm 
Szu-hsuan Lin  
(micheyszu): Approved for PH Committee Chair
6. 04/17/18 8:09 am 
Jay Maddock  
(maddock): Approved for PH College Dean
7. 04/24/18 9:01 am 
LaRhesa Johnson  
(lrjohnson): Approved for GC Preparer
8. 05/03/18 4:36 pm 
LaRhesa Johnson  
(lrjohnson): Approved for GC Chair
Alternate Grade Modes

Method of instruction: Lecture

Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education)

No

Will this course be taught as a distance education course?

No

Is 100% of this course going to be taught in Texas?

Yes

Will classroom space be needed for this course?

Yes

This will be a required course or an elective course for the following programs:

<table>
<thead>
<tr>
<th>Required (select program)</th>
<th>Program(s)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(PHD-HRSA) Doctor of Philosophy in Health Services Research</td>
</tr>
</tbody>
</table>

Course Syllabus

Syllabus: Upload syllabus

Upload syllabus: PHPM 678 PHPM Qual Spring 2019.docx

Letters of support or other documentation: No

Additional information

Reviewer Comments

Sandra Williams (sandra-williams) (02/21/18 8:30 pm): Rollback: Please update catalog course description to conform to our style guide for course descriptions (http://registrartamu.edu/Our-Services/Curricular-Services/Catalog/Style-Guide-for-Catalog-Course-Descriptions); incomplete CIP Code (must be 10-digits); form/syllabus prerequisites do not match; syllabus attendance policy appears to include instructions on how to complete section.

Sandra Williams (sandra-williams) (03/07/18 8:22 am): Rollback: Please update course description on form.

Szu-Hsuan Lin (micheyszu) (04/16/18 4:47 pm): SPH CC approved the course on April 13, 2018

Reported to state?

No
Instructor Information

Course title and number: PHPM 678, Qualitative Research in Public Health
Term: Spring 2019
Meeting times and location: TBD
Instructor Name(s): Lesley E. Tomaszewski, PhD
Teaching Assistant(s): n/a
Telephone number: (979) 436-9461
Email address: leslyt@tamu.edu
Office hours: By appointment
Office location: SPH Administration Building rm 131

Course Description

Focuses on qualitative research within public health; discusses various qualitative research theories, methods of data collection and data analysis, qualitative research design, research ethics, and disseminating qualitative data to diverse audiences.

Prerequisites

Doctoral classification

Course Objectives

<table>
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<tr>
<th>Core Competencies</th>
<th>Course Objectives</th>
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<tbody>
<tr>
<td>D1.3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population’s health</td>
<td>Identify and define the primary purposes and goals of qualitative research. Discuss ethical consideration when conducting qualitative research within public health. Describe strategies for collecting data within the public health setting.</td>
</tr>
<tr>
<td>D.1.8. Explain behavioral and psychological factors that affect a population’s health</td>
<td>Develop a qualitative research protocol. Design qualitative data collection tools such as focus group interview questions and surveys. Create a plan to disseminate qualitative data to various audiences.</td>
</tr>
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</table>

Textbook and/or Resource Material

ISBN: 978-1-4462-5309-0

Additional readings will be posted on eCampus through the course of the semester.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings &amp; Assignments</th>
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</table>
| 8 | Data Collection: Using Documents | Green & Thorogood, Chapter 7: Physical and Virtual Documentary Sources  
|---|---|---|
| 9 | Data Management: Analysis | Green & Thorogood, Chapter 8: Beginning Data Analysis  
**Assignment DUE: Research Topic and Sampling** |
| 10 | Data Management: Rigor Part 1 | Green & Thorogood, Chapter 9: Developing Qualitative Analysis  
**Assignment DUE: Research Topic and Sampling** |
| 11 | Data Management: Rigor Part 2 | Green & Thorogood, Chapter 10: Reading, Appraising and Integrating Qualitative Research  
**Assignment DUE: Research Topic and Sampling** |
| 12 | Data Management: Mixed Methods | Green & Thorogood, Chapter 11: Mixing Methods and Designs  
**Assignment DUE: Proposed Data Collection Protocol** |
| 13 | Dissemination of Research Results | Green & Thorogood, Chapter 12: Writing Up and Disseminating  
**Assignment DUE: Proposed Data Collection Protocol** |
**Assignment DUE: Proposed Data Collection Protocol** |
| 15 | In-class presentations of proposed research protocol | Devers, K. J. (1999). How will we know “good” qualitative research when we see it? Beginning the dialogue in health services research. *Health services research*, 34, 1153-1188  
**Assignment DUE: Data Coding** |
Grading Policies

Grading Scale

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<td>B</td>
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<td>70-79</td>
<td>C</td>
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<td>64-69</td>
<td>D</td>
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<tr>
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<table>
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<tr>
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<td>Research Topic and Sampling</td>
</tr>
<tr>
<td>30%</td>
<td>Proposed Data Collection Protocol</td>
</tr>
<tr>
<td>20%</td>
<td>Presentation of Proposed Research</td>
</tr>
<tr>
<td>20%</td>
<td>Coding</td>
</tr>
<tr>
<td>100%</td>
<td>TOTAL</td>
</tr>
</tbody>
</table>

Student performance will be evaluated through an online participation in the weekly discussion postings, in-class assignments, a group presentations and a case study manuscript paper about a management or policy topic of your choosing. More information about these assessments is provided below.

**Participation (10 percent).** In-class participation is based on you being on time and prepared for class (please make sure to read the textbook chapters before coming to class), paying attention during class (includes guest lectures and group presentations), contributing to class and group discussions, creating a safe and respectful place for all students, and completing in-class assignments prior to leaving class.

**Research Topic and Sampling (20 percent).** Describe a research topic you would like to explore using qualitative research and how you would determine your sampling strategy. In this assignment, you will need to answer the following questions:

- What is the research topic?
- What are the characteristics of the setting and those involved?
- What makes this topic appropriate for qualitative research?
- What can be gained from using qualitative research rather than quantitative?
- What sampling strategy would you use for this topic?
  - Explain the strategy’s main features and the types of situations in which this strategy is beneficial.
- Why this sampling strategy?
- What are the advantages of using this sampling strategy?
- What are some potential challenges with this sampling strategy?

After answering these questions, provide at least two research questions linked to your research topic.

Example of a good research question is: *Under what circumstances do rural African-Americans teenagers between the ages 14 and 16 choose not to wear helmets while riding bicycles?*

Papers should be at least 3 (max 6) pages, single spaced, and 12-pt font.

**Proposed Data Collection Protocol (30 percent).** Develop a data collection protocol to collect data for your research topic. You will need to determine the qualitative instrument best to use to answer your research topic and how you will collect the data. Please make sure to:

- Identify what qualitative instrument you will use and why
- Provide a proto-type
- Explain how you will go about collecting the data
- Explain how you will go about analyzing the data

Papers should be at least 3 (max 6) pages, single spaced, and 12-pt font.

**Presentation of Proposed Research (20 percent).** For this assignment (using presentation software such as PowerPoint), you will need to use information from two assignments (Research Topic and Sampling and Proposed Data Collection Protocol):

- Introduce the presentation (state the purpose & importance)
- Describe the research topic and research questions
- Describe your sampling strategy
- Describe your proposed data collection protocol problem
- Lead class in 10 minute discussion relating to your presentation.

The presentation will be up to 20 minutes long with 10 minutes for class discussion.

**Coding (20 percent)** Code and develop categories and themes for a qualitative data set that I will provide you. You may use any qualitative software you choose (NVivo, NUDIST, AtlasTI, Excel), but you must be able to attach your coded transcripts to this assignment. I must be able to see how you developed themes and categories from your coding process. Please remember that coding takes a long time and it is filled with revisions, so you will need to demonstrate the ability to develop categories and themes from the codes.

**Attendance and Make-up Policies**

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

**Other Pertinent Course Information**

Every effort will be made to ensure that power point lecture files, notes, articles and assignments are available online in a timely manner. Written assignments will be delivered thru the Blackboard course website. Handouts, changes in assignments or the schedule of class modules will be announced on the Bb course webpage. E-mail contact will be initiated with all students the first week of class. If you do not have access to your assigned TAMHSC e-mail account, it is your responsibility to make the instructor aware of that fact so that other arrangements may be made. You are expected to use Blackboard e-mail address for all official correspondence.

**eCampus (Blackboard)**

Plagiarism Virtual Course

Plagiarism is the leading form of academic dishonesty that the School of Public Health has to address. As a SPH student, you are responsible for knowing what plagiarism is and how to avoid it. All SPH students are automatically enrolled in Plagiarism Virtual Course on eCampus. This virtual course provides you with information and examples related to plagiarism in an effort to reduce the number of reported incidents. Please find a tutorial and resources under "Content." In addition, please find Turnitin, a software package that allows you to check whether you may have plagiarized your document. Please see Phuong Huynh: phuong@sph.tamhsc.edu for additional information.

**Course Evaluation**

Constructive feedback from students on course evaluations is taken very seriously at the School of Public Health. I am asking for your assistance in helping the School in its assessment of courses and faculty through your participation in the evaluation of your courses. As public health professionals you will one day have the responsibility to evaluate colleagues and health initiatives. The School views providing feedback on the School's courses as part of your professional responsibility.

**SPH Mission**

The Texas A&M School of Public Health is committed to transforming health through interdisciplinary inquiry, innovative solutions, and development of leaders through the Aggie tradition of service to engage diverse communities worldwide.

**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, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu.

**Academic Integrity**

Academic integrity is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. Students are expected to adhere to all TAMUS, TAMU, HSC, and School policies regarding academic integrity and classroom conduct. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used, or tampering with the academic work of another student. Individuals found guilty of academic dishonesty may be dismissed from the degree program, and at a minimum will receive an F for the course. It is the student’s responsibility to have a clear understanding of how to reference other individuals’ work, as well as having a clear understanding in general as to the various aspects of academic dishonesty. A tutorial on this issue is available at: http://SPH.tamhsc.edu/academic-affairs/academic-integrity.html. A plagiarism tutorial can be found in Blackboard. Information on the Aggie Honor Code can be found at http://aggiehonor.tamu.edu.

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

**Copyright Statement**

The materials used in this course are copyrighted. These materials include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless permission is expressly granted by the instructor.

**FERPA**

The Federal Education Rights & Privacy Act requires that we advise students that by registering for this course, their HSC assigned e-mail address will be revealed to classmates and the instructor. By continuing your enrollment in the course you acknowledge your understanding of this policy. By enrolling in this course you agree to the following statement: “I understand that as a result of registering for this course, my HSC/Blackboard assigned e-mail address will be revealed to classmates and the instructor.”

**Equal Opportunity Statement**

The Texas A&M Health Science Center is an Equal Opportunity/ Affirmative Action employer. Inquiries regarding nondiscrimination policies may be directed to the Human Resources Officer by phone at (979) 436-9208, email hr@tamhsc.edu, or by mail at 200 Technology Way, College Station, TX 77845.

**DISCLAIMER**

This syllabus is representative of materials that will be covered in this class; the schedule and topics list are subject to change. These changes will be discussed in class and subsequently communicated via email or posted as announcements. If you have any problems related to this course, please feel free to discuss them with the instructor.
Title IX

Title IX of the Education Amendments of 1972 protects people from sex discrimination in educational programs and activities at institutions that receive federal financial assistance. Texas A&M University and the Texas A&M Health Science Center are committed to maintaining a learning environment that is free from discriminatory conduct based on gender. As required by Title IX, the University does not discriminate on the basis of sex in its education programs and activities, and it encourages any student or non-student who thinks that he or she has been subjected to sex discrimination, sexual harassment (including sexual violence) or sexual misconduct by another student, member of the faculty or staff, or campus visitor or contractor, to immediately report the incident to any of the individuals persons or offices listed below.

WHERE TO REPORT:
James Nachlinger,
Executive Director, Payroll and HR Services
Title IX Coordinator
979-436-9207
nachlinger@tamhsc.edu

The University encourages students to immediately consult with or report incidents of sex discrimination, sexual harassment (including sexual violence) or sexual misconduct to the TAMHSC Title IX Coordinator. Students may also report incidents of sex discrimination, sexual harassment (including sexual violence) or sexual misconduct to any School of Public Health administrator, university administrator, official or unit supervisor, who is then responsible for promptly notifying any of the above Title IX coordinators of the reported incident.
APPENDIX A: COMPETENCIES

D1. MPH & DrPH Foundational Public Health Knowledge

Profession & Science of Public Health
D1.1. Explain public health history, philosophy and values
D1.2. Identify the core functions of public health and the 10 Essential Services
D1.3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
D1.4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
D1.5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
D1.6. Explain the critical importance of evidence in advancing public health knowledge

Factors Related to Human Health
D1.7. Explain effects of environmental factors on a population's health
D1.8. Explain biological and genetic factors that affect a population's health
D1.9. Explain behavioral and psychological factors that affect a population's health
D1.10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
D1.11. Explain how globalization affects global burdens of disease
D1.12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)

D2. MPH Foundational Competencies

Evidence-based Approaches to Public Health
D2.1. Apply epidemiological methods to the breadth of settings and situations in public health practice
D2.2. Select quantitative and qualitative data collection methods appropriate for a given public health context
D2.3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
D2.4. Interpret results of data analysis for public health research, policy or practice

Public Health & Health Care Systems
D2.5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
D2.6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

Planning & Management to Promote Health
D2.7. Assess population needs, assets and capacities that affect communities’ health
D2.8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
D2.9. Design a population-based policy, program, project or intervention
D2.10. Explain basic principles and tools of budget and resource management
D2.11. Select methods to evaluate public health programs

Policy in Public Health
D2.12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
D2.13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
D2.14. Advocate for political, social or economic policies and programs that will improve health in diverse populations
D2.15. Evaluate policies for their impact on public health and health equity
Leadership
D2.16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
D2.17. Apply negotiation and mediation skills to address organizational or community challenges

Communication
D2.18. Select communication strategies for different audiences and sectors
D2.19. Communicate audience-appropriate public health content, both in writing and through oral presentation
D2.20. Describe the importance of cultural competence in communicating public health content

Interprofessional Practice
D2.21. Perform effectively on interprofessional teams

Systems Thinking
D2.22. Apply systems thinking tools to a public health issue

D3. DrPH Foundational Competencies

Data & Analysis
D3.1. Explain qualitative, quantitative, mixed methods and policy analysis research and evaluation methods to address health issues at multiple (individual, group, organization, community and population) levels
D3.2. Design a qualitative, quantitative, mixed methods, policy analysis or evaluation project to address a public health issue
D3.3. Explain the use and limitations of surveillance systems and national surveys in assessing, monitoring and evaluating policies and programs and to address a population’s health

Leadership, Management & Governance
D3.4. Propose strategies for health improvement and elimination of health inequities by organizing stakeholders, including researchers, practitioners, community leaders and other partners
D3.5. Communicate public health science to diverse stakeholders, including individuals at all levels of health literacy, for purposes of influencing behavior and policies
D3.6. Integrate knowledge, approaches, methods, values and potential contributions from multiple professions and systems in addressing public health problems
D3.7. Create a strategic plan
D3.8. Facilitate shared decision making through negotiation and consensus-building methods
D3.9. Create organizational change strategies
D3.10. Propose strategies to promote inclusion and equity within public health programs, policies and systems
D3.11. Assess one’s own strengths and weaknesses in leadership capacities including cultural proficiency
D3.12. Propose human, fiscal and other resources to achieve a strategic goal
D3.13. Cultivate new resources and revenue streams to achieve a strategic goal

Policy & Programs
D3.14. Design a system-level intervention to address a public health issue
D3.15. Integrate knowledge of cultural values and practices in the design of public health policies and programs
D3.16. Integrate scientific information, legal and regulatory approaches, ethical frameworks and varied stakeholder interests in policy development and analysis
D3.17. Propose interprofessional team approaches to improving public health

Education & Workforce Development
D3.18. Assess an audience’s knowledge and learning needs
D3.19. Deliver training or educational experiences that promote learning in academic, organizational or community settings
D3.20. Use best practice modalities in pedagogical practices
New Course Proposal

Course Change Request

Date Submitted: 11/29/17 1:57 pm

Viewing: VIBS 676 : Speciation Genetics

Also Known As: EEBL 676, GENE 676

Last edit: 11/29/17 1:57 pm
Changes proposed by: kathiesmith

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Kathie Smith</td>
<td><a href="mailto:KSmith@cvm.tamu.edu">KSmith@cvm.tamu.edu</a></td>
<td>979-845-2851</td>
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Course prefix: VIBS

Course number: 676

Department: Vet Integrative Biosciences

College/School: Veterinary Med & Biomedical Sc

Academic Level: Graduate

Effective term: 2018-2019

Complete Course Title:
Speciation Genetics

Abbreviated Course Title:
SPECIATION GENETICS

Catalog course description:
Introduction to the ability to speciate into biologically diverse forms via microevolutionary processes; literature on the origin of species beginning with Darwin and continuing through contemporary work; overview of several major topics in speciation with special emphasis on the genetics of speciation in this genomic era.

Prerequisites and Restrictions:
GENE 603 and BIOL 610 or BIOL 466, or equivalent.

Should catalog prerequisites / concurrent enrollment be enforced?
Yes
Enforced Prerequisites / Concurrent Enrollment

<table>
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Crosslistings: Yes

Crosslisted With: EEBL 676, GENE 676

Stacked: No

Semester: 3

Credit Hour(s): 3

Contact Hour(s): Lecture: 3, Lab: 0, Other: 0, Total: 3

Repeatable for credit?: No

CIP/Fund Code: 2613100002

Default Grade Mode: Letter Grade (G)

Method of instruction: Lecture

Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education): No

Will this course be taught as a distance education course?: No

Is 100% of this course going to be taught in Texas?: Yes

Will classroom space be needed for this course?: Yes

This will be a required course or an elective course for the following programs:

<table>
<thead>
<tr>
<th>Program(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(MS-BIMS) Master of Science in Biomedical Sciences</td>
</tr>
<tr>
<td>(PHD-BIMS) Doctor of Philosophy in Biomedical Sciences</td>
</tr>
</tbody>
</table>

Course Syllabus
Syllabus: Upload syllabus

Upload syllabus Speciation Genetics VIBS 676 (Katju).docx

Letters of support or other documentation: Yes

Upload files: VIBS 676.doc

Additional information

Reviewer Comments

Sandra Williams (sandra-williams) (03/08/17 9:00 pm): Edits made to form to conform to catalog style guide.

Sandra Williams (sandra-williams) (03/08/17 9:02 pm): Rollback: What are the cross-listed courses - must be listed on form/syllabus? Schedule of topics shows "489"; 15 weeks?

Sandra Williams (sandra-williams) (07/14/17 9:19 am): CIP code not valid. Contacted department via email.

Sandra Williams (sandra-williams) (07/14/17 4:34 pm): Update received.

Stacie Blankenship (stacieblankenship) (09/15/17 12:05 pm): Rollback: Faculty Senate would like for it to be sent back to the Biology department for additional information.

Jianhua Huang (jhuang) (10/02/17 11:36 am): The Biology Graduate Programs Committee reviewed the VIBS 676 syllabus and want the following changes for the syllabus goes back to the Faculty Senate: The term “Biology” taken out of the title. The title course can be renamed Biological Speciation and Genetics, or Bio-Speciation and Genetics, or Speciation and Biological Genetics, or Evolutionary Speciation and Genetics, or just Speciation and Genetics BIOL610 or BIOL466 added as a prerequisite (BIOL466 is a temporary replacement for BIOL610, until we hire a replacement faculty to teach the course)

LaRhesa Johnson (lrjohnson) (10/05/17 3:01 pm): Rollback: Rollback due to comments submitted by Biology. Please address comments and resubmit.
29 November 2017

MEMORANDUM

TO: Dr. Jane Welsh, Professor and Interim Department Head
Department of Veterinary Integrative Biosciences

FROM: Thomas D. McKnight,
Professor and Head of Biology

SUBJECT: VIBS/EEBL/GENE 676 Speciation Genetics

I am writing to confirm that the Department of Biology supports creation of VIBS/EEBL/GENE 676 Speciation Genetics as a full graduate course with a permanent number. This course does not overlap with any course our department currently teaches or with any courses we plan to teach in the near future. Thank you for allowing me to review this course before submitting it for approval.
VIBS/EEBL/GENE 676
Speciation Genetics
Course Syllabus

Fall Semester 2018
3 Credit Hours

Brief Course Description

The purpose of this course is to provide graduate-level students with an introduction to the one of the most fundamental processes in populations and living systems, namely the ability to speciate into biologically diverse forms via microevolutionary processes. In this course, we will review the literature on the origin of species beginning with Darwin and continuing through contemporary work. The course aims to provide an overview of several major topics in speciation with special emphasis on the genetics of speciation in this genomic era.

This course uses a combinatorial approach of formal lectures, student-led short presentations on assigned readings from the primary literatures and seminar-style discussions. Following lecture delivery, a short presentation of the assigned readings from the primary literature will be led individually by two students but all students are expected to fully participate in the discussion thereafter. This course has an extremely heavy reading component comprising both text chapters from Coyne and Orr (2004) as well as readings from the primary literature. All students are required to read the assigned material prior to each class.

Students are strongly encouraged to ask questions. But students also need to come prepared to the class, both by reading the assigned material and also devoting careful thought to it. This is a graduate-level course and in order to draw out participation, students may be called on to explain key concepts from the readings to the remainder of the class.

Prerequisites
GENE 603 Genetics (or equivalent)
BIOL 610 Evolution, BIOL 466 (or equivalent)

A basic knowledge of evolution and genetics is assumed. Students are expected to be familiar with the basic concepts of the textbook Evolutionary Biology by Douglas Futuyma. If you have not taken a course in Evolution, you should read Chapters 15 and 16 of this book immediately. Both chapters will be provided as pdf files.

Meeting Times & Important Dates
• VIBS/GENE/EEBL will meet every Tuesday and Thursday from 11:10 am – 12:25 pm in Room XXX – VENI/VEDI/VICI.
• There are no midterm or final examinations.
• Term Paper Due November 27, 2018
Learning Outcomes and Overall Course Objectives

The origin of species was one of the most germane questions posited by Darwin in his theory of evolution and as such occupies a unique position of interest in the field of evolutionary biology. Darwin recognized that species not only evolve but also divide. However, he viewed the process of new species formation as intertwined with adaptation, his notion being that new species originated from a struggle for existence among individuals leading to the successful establishment of genotypes/phenotypes that were more adapted to a novel ecological niche.

This upper-level course is intended to provide graduate students in genetics and evolutionary biology/ecology a strong historical framework into the study of biodiversity and the origin of species. The initial lectures will focus on the early recognition of ‘species’ by the ancient Greeks, the efforts to classify them taxonomically under Linnaeus, the early hypotheses and focal studies in the pre-Darwinian era under Lamarck and Buffon (among others) that influenced Darwin, culminating in Darwin’s release of the ‘Origin of Species.’ We will then trace the trajectory of speciation biology in the post-Darwinian era, from the early Naturalists/Mutationists split and debate, and the formalization of the field in the 1930s with the Modern Synthesis when Mendelism, biogeography and natural selection were reconciled. Under famous evolutionary biologist, Theodosius Dobzhansky, much effort was expended in dissecting the role of ‘reproductive isolating mechanisms’, a set of diverse traits that serve to impede gene flow thereby enabling divergence among populations and the onset of the speciation process. In parallel, theoretical work by population geneticists and naturalists in the 1940s and 1950s complemented the genetic strides being made by starting the discussion in what constitutes a ‘species’ (referred to as species concepts). Although interest in the formation of new species over the next three to four decades waned due to a focus on studying the genetic variation within species, the field was resurrected in the 1980s and has made remarkable strides with the advent of the genomic era.

Within the historical framework outlined above, students will gain familiarity with the major concepts in speciation biology, namely the set of varied and competing species concepts, the major geographic models facilitating population divergence and the origin of incompatibility, and the various classes of pre-mating and post-mating reproductive isolating barriers. The study of speciation and speciation genetics in the current era is focusing on (i) the relative roles of the two dominant evolutionary forces, selection versus drift, in promoting speciation, (ii) the incorporation of mathematical theory, ecology and comparative studies, (iii) and the genetic basis of reproductive isolation with the use of modern high-throughput sequencing technology. We will specially focus on investigations into the genetic basis of speciation in this modern genomic era. Our first attention will be given to which of several competing genetic models best explain Haldane’s Rule, the preferential effect of sterility or inviability on hybrids of the heterogametic sex. Next, we will examine the concept of adaptive speciation and whether the adaptive traits in question originate as novel mutations or ancestral standing genetic variation. Lastly, we will examine in depth the particular genes involved in speciation and the role for gene expression in speciation.
Grading Policies and Attendance

Class attendance is deemed essential and mandatory for this course. While some component of the class time is assigned to lectures, the remaining time is used for accomplishing class goals via journal club and seminar-style discussions, student-led presentations and active participation by students in the audience. Repeated class absence will influence the grade fraction set aside for participation as well as submitted article summaries which are due at the beginning of the lecture, unless an explanation and documentation of extenuating circumstances of absence are provided. If the student is seeking an excused absence, “the student must notify his or her instructor in writing (acknowledged e-mail message is acceptable) prior to the date of absence if such notification is feasible.” If prior notification is not possible (e.g., emergency), “the student must provide notification by the end of the second working day after the absence.” Please refer to university-approved excuses for missed deadlines as described in the TAMU Student Rules and found at: http://student-rules.tamu.edu/rule07.

All assignments should be received by their posted deadlines in order to receive full credit. Assignments submitted past the deadline will only be considered for credit under extenuating circumstance (accident, illness or emergency) with permission from the Instructor. Please refer to University Rules (http://student.rules.tamu.edu) for further explanation.

Grading Scale

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

Course Breakdown

One-page summaries of assigned articles from the primary literature 20%
Student-led group discussion 20%
Participation in discussion of primary literature 20%
Term Paper 40%

Student-led Group Discussions on Assigned Readings from the Primary Literature

Commencing in the third week, two students will lead a discussion on class topics of the week. The designated students will be assigned a paper from the primary literature on the topic being discussed. These papers will form the basis of a general discussion and will be e-mailed out as pdf files to the entire class.

When leading a discussion, students should prepare an overview of the specific paper from the primary literature that have been assigned to them. This overview should include an outline of the key points, tables or illustrations, a bibliography of the relevant papers, and a list of questions to generate discussion in powerpoint format. The lead student will present the salient points of the assigned paper for 15 minutes, followed by 20 minutes of discussion by the entire class in journal club style.
One-page summaries of articles from primary literature

To facilitate discussion, all students are required to turn in a one-page summary for each assigned article per lecture (Document Summary_reading.doc; typed summaries only). These should be printed out and turned in at the beginning of the class (please do NOT send these to me electronically). These summaries should describe the following:

- The main question being addressed?
- What the authors did?
- What the authors found?
- The significance of the findings.
- Two or three questions for further discussion.

The summary document will be sent you electronically in the first week of class. Please save it and use it for submission of all reading summaries through the length of the semester.

Term Paper

Each student will write a term paper reviewing an important topic in speciation, due at the beginning of class on April 19th. I will assign three to four review topics within the first three weeks of class. Each student must select one topic and convey their topic selection to me at the earliest, but no later than February 15th, 2018. Students are also encouraged to decide on a review topic of their own choice but must consult me regards its feasibility and get my permission to pursue the topic before proceeding. The main body of the term paper (excluding bibliography) must adhere to a single-spaced six-page limit or less, font size 12.

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, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. 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.”
Week 1:
Lecture 1 – Historical Perspective, Major Themes and Players (Part 1)
- Organizational meeting (discussion of syllabus, course format, and grading)
- Historical perspective on human recognition of biodiversity: ancient Greece (pre-Socratic, Plato and Essentialism, Aristotle)

Lecture 2 – Historical Perspective, Major Themes and Players (Part 2)
- Historical perspective on human recognition of biodiversity: Linnaeus and the advent of modern taxonomy
- Speciation biology in the pre-Darwin era and the 19th century
  - Pre-Darwinian naturalists Lamarck and Buffon
  - Cuvier and Catastrophism vs. Lyell and Uniformitarianism
  - Darwin and The Origin of Species
  - Mendel and the Mechanism of Heredity

Week 2:
Lecture 3 – Historical Perspective, Major Themes and Players (Part 3)
- Speciation biology in the post-Darwin era of early 20th century
  - Rediscovery of Mendel’s laws
  - Naturalists vs. Mutationists
  - Early genetic and theoretical insights: Haldane’s Rule, Bateson’s model for the genetics of interspecific sterility

Lecture 4 – Historical Perspective, Major Themes and Players (Part 4)
- Speciation biology and genetics under the Modern Synthesis
  - Phase I (1926-1936)
  - Phase I (1937-1947)
- DNA! DNA! DNA! (1979-present)

Week 3:
Lecture 5 – Species Concepts and Definitions
- The reality of species
  - Sexually reproducing eukaryotic taxa
  - Groups with little or no sexual reproduction
- Typological Species Concept
- Mayr’s Biological Species Concept (BSC)
  - Advantages and Disadvantages

Lecture 6 – Species Concepts and Definitions
- Phylogenetic Species Concept (PSC)
- Genotypic Cluster Species Concept (GCSC)
- Recognition Species Concept (RSC)
- Cohesion Species Concept (CSC)
- Ecological Species Concept (EcSC)
- Evolutionary Species Concept (EvSC)
- Why are there species?
Week 4:
Lecture 7 – Studying Speciation
- The problem of speciation
- Identifying and measuring Reproductive Isolation
  - Absolute strength of isolating barriers
  - Relative strength of isolating barriers
  - Prezygotic vs. Postzygotic isolation
  - Which isolating barrier caused Speciation?

Lecture 8 – Studying Speciation
- Comparative studies of Isolating Barriers
- Identifying and measuring Reproductive Isolation
  - How fast does Reproductive Isolation appear?
  - Which traits promote the evolution of Reproductive Isolation?

Week 5:
Lecture 9 – Geographic Modes of Speciation
- Allopatric Speciation
  - Vicariant
  - Peripatric

Lecture 10 – Geographic Modes of Speciation
- Parapatric Speciation

Week 6:
Lecture 11 – Geographic Modes of Speciation
- Sympatric Speciation
  - Theory (Disruptive Sexual Selection)
  - Theory (Disruptive Natural Selection)

Lecture 12 – Geographic Modes of Speciation
- Sympatric Speciation
  - Experimental Evidence
  - Evidence from Nature (habitat islands, host races and host-specific species)
  - Allochronic (temporal) isolation in sympatry
  - Comparative studies of the biogeography of speciation

Week 7:
Lecture 13 – Isolating Barriers
- Premating, Prezygotic Barriers
  - Ecological Isolation (Habitat, Temporal/Allochronic, & Pollinator Isolation)

Lecture 14 – Isolating Barriers
- Premating, Prezygotic Barriers
  - Nonecological Isolation (Behavioral, Mechanical & Mating System Isolation)
Week 8:
Lecture 15 – Isolating Barriers
- Gametic (Postmating, Prezygotic Barriers)
  - Copulatory Behavioral & Gametic Isolation (Habitat, Temporal/Allochronic, & Pollinator Isolation)

Lecture 16 – Isolating Barriers
- Postzygotic Barriers
  - Extrinsic (Ecological Inviability & Behavioral Inviability)
  - Intrinsic (Hybrid Inviability & Hybrid Sterility)

Week 9:
Lecture 17 – Genetic Basis of Postzygotic Isolation (Intrinsic Postzygotic Isolation)
- Haldane’s Rule (Phenomenon, Causes)

Lecture 18 – Genetic Basis of Postzygotic Isolation (Intrinsic Postzygotic Isolation)
- How many genes?
- Genomic location of these genes
- Are duplicate genes important?
- What are these ‘speciation’ genes?
- Molecular divergence of ‘speciation’ genes due to selection or drift?

Week 10:
Lecture 19 – Speciation by Polyploidy
- Classification of polyploids
- Genetic pathways to polyploidy

Lecture 20 – Speciation by Polyploidy
- Incidence of polyploidy
- Ecology and persistence of polyploids
- Why is polyploidy rarer in animals than in plants?

Week 11:
Lecture 21 – Recombinational or Hybrid Speciation
- Early theory into the genetics of hybrid speciation
- Recent theory into the tempo and model of hybrid speciation
- Frequency and fitness of hybrids in nature

Lecture 22 – Recombinational or Hybrid Speciation
- Artificial hybrids
- Natural recombinational Speciation
- Data meet Theory

Week 12:
Lecture 23 – Reinforcement
• Definition and historical background
• Data from Selection Experiments in the Laboratory
• Evidence from Nature: Case studies for and against
• Evidence from Nature: Comparative approaches
• Reinforcement for Postzygotic Isolation

*Lecture 24 – Reinforcement*
• Evidence from Nature: Comparative Studies
• Reinforcement for Postzygotic Isolation
• Alternative Explanations
• Distinguishing the Alternatives

**Week 13:**
*Lecture 25 – Selection vs. Drift in Speciation*
• Speciation by Selection
  o Natural selection
  o Sexual Selection
  o Mathematical-theories of selection-based speciation

*Lecture 26 – Selection vs. Drift in Speciation*
• Speciation by Drift
  o Peak Shift Models
  o Theoretical criticisms
  o Recent Peak Shift Models
  o Data (evidence from the laboratory and nature)

• **Term Papers Due!**

**Week 14:**
*Lecture 27 – Speciation and Macroevolution*
• Speciation Rate
  o Theory and Speciation Rates
  o Calculating Speciation Intervals
  o Extreme Rates of Speciation
  o Effect of Biogeography

*Lecture 28 – Speciation and Macroevolution*
• Factors Affecting Speciation Rates
  o Test for the Effects of Key Factors
  o Distinguishing speciation from extinction
  o The Data

**Week 15:**
*Lecture 29 - Concluding Remarks*
• Speciation research in the Genomic Era
• Future of Speciation Research