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

Form Instructions

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

2. Course prefix, number and complete title of course:
   INTA 635 Great Famines, War and Humanitarian Assistance

3. Catalog course description (not to exceed 50 words):
   Course will explore famines, their various definitions, theories of their causes and consequences; how those
   affected by them cope with the stages through which famines pass, and means by which they may be predicted,
   measured and assessed.

---

4. Prerequisite(s):

   Cross-listed with:

   Stacked with:

---

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

6. Is this a repeatable course? ☑ No
   If yes, this course may be taken __________ times.

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

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

   None

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

   INTA, PSAA

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

9. ☑ I verify that I have reviewed the FAQ for Export Control Basics for Distance Education (http://vpr.tamu.edu/resources/export-
   controls/ExportControlBasicsforDistanceEducationver2413.pdf).

10. Text: Course: Date (excluding punctuation)

    INTA 635: Great Famines

    Text: Date: Code:
    0 3 0 0 0 3 4 5 0 6 0 4 0 0 0 1 3 6 4 1 5 - 1 6 0 0 3 6 3 2

    Approval recommended by:

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

    Leonard A. Bright
    Chair, College Review Committee

    Arnold Vedlitz
    Dean of College

    Chair, GO or UCC

    Submitted to Coordinating Board by:

    Associate Director, Curricular Services

    Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
    Curricular Services – 03/14
"Great Famines, War, and Humanitarian Assistance"
George H.W. Bush School of Government and Public Service
Texas A and M University
INTA 635-600

Professor: Andrew S. Natotsios
Email: anatsios@bushschool.tamu.edu
Telephone 979-862-1154
Office: 1084
Office Hours: Thursdays 12:00-1:30
Class time: Tuesday 9:35-12:15
Classroom: Allen 1107

I. Course Description

The course will explore famines: their various definitions, theories of their causes and consequences, how those affected by them cope with them, the stages through which famines pass, and means by which they may be predicted, measured, and analyzed. Famines will be viewed from three interrelated perspectives: as economic events, in their political context, and finally as public health and nutritional crises. Finally, various humanitarian responses to famine and conflict (since famines in Africa are usually a result of war and drought occurring simultaneously) will be examined, the strengths and weaknesses of each, and how these response programs are affected by conflicts. Specific case studies will be reviewed using the instruments of analysis developed during the course, particularly the entitlement theory of Amartya Sen.

II. Assignments

Four papers are required in the course:

1. A three-page information memo. Subject of paper to be posted on blackboard. This paper is due September 19th and will be worth 15% of the final grade.

2. A three-page paper. Subject of paper to be posted on blackboard. This paper is due October 10th and will be worth 15% of the final grade.

3. A three-page paper/decision memo. Subject of paper to be posted on blackboard. This paper is due November 7th and will be worth 15% of the final grade.

4. A ten to twelve-page paper on a 20th century famine of the student’s choice, describing the economics and politics of the famine and the measures taken by either the host government or by the international aid community in response. Why were these measures successful or unsuccessful? While this paper should use the analytical tools
developed during the course, the paper must include an analysis of the famine using the entitlement theory of Amartya Sen and at least one other writer such as Alex de Waal or Larry Minear. The student must do a thorough literature search on the famine chosen as the paper must deal primarily with the famine itself. Do not waste space and time describing the theories of famine in the course—apply the theory or theories. The paper must include footnotes (not endnotes) and a bibliography at the end. This paper is due in class on December 5th and will be worth 45% of the final grade. Ten percent of your grade will be class participation.

5. You will also participate in oral exercises in class that will be posted online on the dates noted in this syllabus.

III. Course Objectives

Upon completion of the course, students will be able to:

- Write a coherent decision memo or information memo with policy choices for senior aid executives during an emergency or reconstruction program.
- Write an in-depth analysis of the economic, political, and armed group dynamics during a complex humanitarian emergency.
- Have an in-depth understanding of food security, famine theory, emergency response operations, and alternative programmatic approaches in responding to complex emergencies.
- Explain the operation of the international humanitarian response system during emergencies, its strengths and weaknesses.
- Design and present a plan to respond to a complex emergency

IV. Grading Methodology

Each student’s grade will be determined by the grades of the four papers as well as an additional 10% reflecting the student’s attendance and participation in class discussions.

Your papers will be graded on several criteria: thorough analysis of the causes and dynamics of the crisis applying at a minimum Sen’s entitlement theory, Minear’s (and Anderson as a secondary source) description of the politics of the crisis, quality of writing and organization of the paper. Late papers will result in a reduction of one half grade for every day late (an A will be reduced to an A- after one day’s tardiness, a B+ after two days, and so on). If your paper will be late, notify me on the day the papers are due.

Grading:

The standard Bush School scale will apply:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Extraordinary, excellent work and mastery of concept</td>
</tr>
<tr>
<td>B</td>
<td>Good work and solid command of concept</td>
</tr>
</tbody>
</table>


2
V. Academic Integrity

Writing will make up much of the grade in this class. You should note that plagiarism is a violation of the TAMU Honor System. The University defines plagiarism as “the act of passing off as one’s own the ideas or writings of another” and notes that “plagiarism can be said to have occurred without any affirmative showing that a student’s use of another’s work was intentional.” (TAMU Honor System brochure, p. 4). Thus, plagiarism can occur either intentionally or through negligence. Be sure to cite all sources you use, and if you’re unsure whether or not to cite something, either ask your TA or err on the side of caution. If I suspect the originality of a student’s work, I may use the new electronic search systems of the university to check for plagiarism. DO NOT PUT YOUR INTEGRITY AND REPUTATION AT RISK BY ENGAGING IN THIS BEHAVIOR. I FIND IT PARTICULARLY OFFENSIVE IN A COURSE DEALING WITH LIFE AND DEATH ISSUES.

Americans with Disability Act (ADA): The Americans with Disabilities Act (ADA) is a federal non-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this law requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Disability Services Office in Cain Hall, Rm. B118 or call 845-1637. For more information visit http://disability.tamu.edu.

VI. Course Schedule

1. Course introduction, requirements, reading list, source material, and approach.
   - Food Security defined
   - Theories of Famine
   - Famine typology
   - Famine as a process, not an event
   - Kaplan’s Chaos Theory

Reading Assignment


2. September 5. The economics of famine.

3
• Food availability decline theory of Thomas Malthus
• Exchange entitlement theory of Amartya Sen
• Micro-economic forces and famine
• Shocks, time sequencing, price increases, and famine

**Reading Assignment**


3. The politics of famine.

• Totalitarian famines
• War and famine
• Famine as an act of execution
• The political consequences of famines: France (1789), Ireland, (1845), Japan (1930’s), Sahelian famine (1973), and North Korea (1997).
• The politics of the international humanitarian response system
• Foreign policy and famine: the diplomacy of catastrophe
• Military intervention in complex humanitarian emergencies

**Reading Assignment**


4. Diagnostic tools.

• Pre-famine and trailing indicators
• Early warning systems: FEWS net
• Field assessments and program evaluations
• Famine from the perspective of the survivors
• Making choices: increased family mortality or absolute destitution
• Coping mechanisms
• Building local capacity, avoiding destitution, and strengthening people’s coping mechanisms

**Reading Assignment**


First paper due at the beginning of class on September 19th.

5. Humanitarian assistance during conflict.
   - Do No Harm and the law of unintended consequences
   - Disasters and Development: the gap. Cuny hypothesis.
   - Developmental relief
   - The microeconomics of aid during conflict: economics of chaos
   - Standard Operating Procedures for aid agencies in conflict areas: the collective wisdom.

Reading Assignment


1st CLASS EXERCISE September 26th: Darfur Food Security and Market Intervention Assessment case study.

6. Famine as a public health crisis.
   - Moderate and acute malnutrition
   - Disease as the major killer: immune system collapse
   - The biology of starvation
   - Changed disease environment hypothesis of Alex de Waal
   - Mass migration and mortality
   - Water and sanitation

Reading Assignment


Eric James, Managing Humanitarian Relief: An Operational Guide for NGOs, Practical
7. Programmatic responses to famine.

- British Famine Code of India
- Chinese Imperial System
- Sen and Dreze work
- Cuny market-based approach
- Employment and livelihood schemes
- External food aid, local purchase, and market interventions
- Program monitoring and evaluation

Reading Assignment
Frederick Cuny with Richard Hill, Famine, Conflict, and Response, Kumarian Press, 1999. (From Chapter 4 onwards; Read the remainder of the book)

Jean Dreze and Amartya Sen, Hunger and Public Action, Clarendon Paperback. (Chapters 5-8; 10-11)

Second paper due at the beginning of class on October 10th.

8. The moral dilemmas of humanitarian aid.

- International humanitarian law
- The de Waal Hypothesis: non-intervention
- Accountability of international aid system and the recipients
- Foreign policy and humanitarian assistance
- The Sphere Standards

Reading Assignment


- Chaotic evolution or intelligent design?
- The program delivery system options in failed states both during and after crisis
- Non-governmental organizations
- International Organizations: the UN Big Four (WFP, UNICEF, UNDP, and UNHCR), ICRC, and IOM
• Donor aid agencies: OFDA/DCHA of USAID and ECHO/EC
• USAID/DCHA Bureau: OFDA, FFP, OIT, CMM, OMA, and DART teams. The Field Officers Guide of OFDA.
• PRM and IO in DOS.
• Coordination mechanisms: UN OCHA, DCHA/OFDA and EU/ECHO
• Donor funding systems: US and EU.
• USAID food aid and local purchase accounts
• Attempts at reform: the DFID proposals

Reading Assignment
(order TBD)


2nd CLASS EXERCISE NOVEMBER 7th: See blackboard.


• Defined: five characteristics of complex humanitarian emergencies
• State fragility, failed states, and recovering states
• Collier’s four traps of failed states
• Douglass North and Limited Access Orders and state failure
• State failure as a development challenge: a failure of governance
• International response to state fragility and failure-innovations and reform
• Post-Conflict reconstruction

Reading Assignment
(order TBD)


7

- Code of Conduct, Red Cross Principles, and Bellagio Principles
- The UN Charter, Refugee rights, Geneva Conventions
- The Responsibility to Protect doctrine-R2P
- On strategy in humanitarian emergencies
- What we know and what we do not know about response
- Ten guiding principles of humanitarian operations

Reading Assignment
http://carlisle-www.army.mil/usawc/Parameters/96summer/natsios.htm

Roger Riddell, Does Foreign Aid Really Work? (Chapter 18 and 19).

(Humanitarian Law Readings will also be posted on-line)

Fourth paper due at the beginning of the class on November 28th. This research paper will be your final exam.

VII. Required Book List
(in addition to specific articles listed in syllabus/blackboard)


Roger Riddell, *Does Foreign Aid Really Work?*, Oxford University Press. (DO NOT PURCHASE—POSTED TO BLACKBOARD)


**VIII. Selected Additional Readings**


Conor O Grada, *Famine: A Short History*, Princeton University, 2009,
I was checking with IR faculty, and have just heard — as expected — that there is no problem with this. So: Political Science has no problem with it!

Bob

Robert Harmel
Interim Head
Political Science

Yes, I just spoke with the assistant head who stated that they will respond today or so.

Leonard Bright, Ph.D.
Associate Professor
Faculty Senate Representative
Assistant Dean of Graduate Education
Bush School of Government and Public Service
Texas A&M University
College Station, TX
lbright@tamu.edu
Phone: 979-862-3028

I got it but I assumed someone from Political Science would respond. pat

Patricia A. Hurley
Associate Dean of Liberal Arts and Professor of Political Science
Texas A&M University
4223 TAMU, College Station, TX 77843-4223
Phone: 979-845-8541  e-mail: pat-hurley@tamu.edu
Can someone follow-up with me regarding the email below? This was sent last Thursday. Did you receive it?

Leonard Bright, Ph.D.
Associate Professor
Faculty Senate Representative
Assistant Dean of Graduate Education
Bush School of Government and Public Service
Texas A&M University
College Station, TX
Jbright@tamu.edu
Phone: 979-862-3028

Pat and/or Robert

Attached is a new course that the Bush School's international Affairs Department would like to propose, entitle “Great Famines, War, and Humanitarian Assistance”. Attached is the syllabus. Please let me know if there are objections from your end and if you support it.

Leonard,

Leonard Bright, Ph.D.
Associate Professor
Faculty Senate Representative
Assistant Dean of Graduate Education
Bush School of Government and Public Service
Texas A&M University
College Station, TX
Jbright@tamu.edu
Phone: 979-862-3028
Texas A&M University
Departmental Request for a New Course
Undergraduate + Graduate + Professional
* Submit original form and attach a course syllabus.*

1. Request submitted by (Department or Program Name): Texas A&M Institute for Neuroscience
2. Course prefix, number and complete title of course: NRSC 616 - Advanced Developmental Neurotoxicology
3. Catalog course description (not to exceed 50 words):
   Study of mechanisms of toxicity of substances potentially devastating to the developing brain and spinal cord including lead, mercury and other heavy metals, alcohol, nicotine (smoking), pesticides, flame retardants, and others.

4. Graduate status or approval of instructor
   Cross-listed with: VIBS 616
   Stacked with: 

5. Is this a variable credit course? ☐ Yes ☑ No If yes, from _______ to _______
6. Is this a repeatable course? ☐ Yes ☑ No If yes, this course may be taken ______ times. 
   Will this course be repeated within the same semester? ☐ Yes ☑ No

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

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

9. Prefix  Course #: Title (excluding punctuation)
    NRSC 616 ADV DEV NEUROTOXICOLOGY

    Lect Lab Std 100 4 TIP and Exam Codes
    0 3 0 0 0 3 2 6 $ 5 0 1 0 0 2 1 6 5 5 1 4 1 0 0 3 6 3 2

    Approval recommended by:
    Dr. Jane Welsh
    Department Head or Program Chair (Type Name & Sign) Date 4/15/14
    Dr. Evelyn Tiffany-Castiglion
    Department Head or Program Chair (Type Name & Sign) Date 40 10 14

    Submitted to Coordinating Board by:
    Associate Director, Curricular Services

    Date Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Curricular Services – 3/10
Syllabus

NRSC 616/VIBS 616 Advanced Developmental Neurotoxicology

Instructor: Dr. Louise C. Abbott
Credit Hours: 3
Format: lecture/discussion
Day, start time, Room #:

Tuesdays
9:00AM - 9:50 AM and
10:00 AM - 10:50 AM

Thursdays
9:00AM - 9:50 AM
Room 206 building 1026 (VMA)

Office hours: 10:00 AM - 11:45 AM Fridays

Office: Building 507 (VMS building)
Room 270A (inner office)
Phone: 845-2828 (Dept. office)
Email: labbott@cvm.tamu.edu

Course Overview:
This course will cover the effects of exposure to toxic substances on the developing central nervous system (CNS), which includes the brain and spinal cord and focus on the proposed mechanisms by which these toxicants act. One out of four Americans will suffer from a CNS-related disorder at some point in their life. The discipline of toxicology is focused on increasing our understanding of the extent, causes and underlying mechanisms of CNS-related disorders that are related to exposure to toxic agents. The developing CNS is even more vulnerable to toxic insult than the mature CNS. The suffering caused by CNS-related disorders that occur in the developing individual must then be endured for a lifetime. 4% to 8% of children born in the US exhibit anatomical and/or functional deficits associated with the CNS, often resulting from developmental exposure to toxic agents such as lead, mercury and alcohol. For these very serious reasons this course will develop awareness of the principles of developmental neurotoxicology. We will focus on the common toxicants that are already known to be potentially devastating to the developing CNS: lead, mercury, alcohol, nicotine (smoking), pesticides, and other heavy metals such as manganese and cadmium. A significant proportion of class time will be devoted to discussing current primary literature that will be assigned by the instructor.

Prerequisites:
Graduate status or approval of instructor
Resources:
Journal Articles - TBA
Embryology textbooks on reserve at the Medical Sciences Library
Class notes/lecture PPTs found on ecampus

Exams and Assignments:
There will be 2 written midterm exams taken during the semester, an oral presentation and a written paper that will be due on the last day assigned for the class.

In addition you will be assigned a minimum of 11 articles from research journals to read for specific classes and you will be expected to be able to answer questions during class discussion of those papers. You also will be asked to prepare written assignments for 10 of the articles based on reading these articles.

A written paper will be due at the end of the course and this paper will follow the format of a synthesis paper. Possible topics and the exact format for the paper will be described in a handout that will be provided and will be discussed during the second or third week of class. The possible topics for your papers and the mechanics of how you will prepare those papers as well as your oral presentations will be discussed in more detail during class time. You will be able to access the handout describing all requirements and exact deadlines from ecampus.

I reserve the right to provide extra questions on the exams, give pop quizzes or provide additional work that would provide BONUS POINTS to students taking the class. Because these mechanisms are BONUS points, these points are NOT reflected in the point totals. The number of possible bonus points that will be made available will not exceed 5% of the point total. Therefore, the maximum number of bonus points that I could offer will be 25. I do not guarantee that I will offer that many bonus points throughout the course. There could be less than 25 bonus points, but there will NOT be more than 25 bonus points made available throughout the course.

Point totals:
Midterm Exams - 2 @ 75 points each 150
Oral presentation 75
Written paper 100
Written Assignments during the semester
10 @ 10 points each 100
Participation in class discussion 25
TOTAL 450
A = 405 - 450
B = 360 - 404
C = 315 - 359
D = 293 - 314
F = < 293

The final grade will be based on the total number of points earned in the class as described above. There will be no curving of the grade distribution but as the instructor I reserve the right to adjust the thresholds for letter grade cut offs based on overall class performance. I WILL NOT adjust the distribution upwards. I will only adjust the distribution downwards, if necessary.
(i.e., I will not make the cut off for an A to be greater than 405 points, but I could make it 400 points, JUST AS AN EXAMPLE).

**ABSENCES**

Please see the university rules for descriptions of EXCUSED absences at [http://student-rules.tamu.edu/rule7.htm](http://student-rules.tamu.edu/rule7.htm)

Days of religious observance: By state law, if a student misses class due to an obligation of his or her religion, the absence is excused. A list of days of religious obligation for the current academic year can be found at [http://dof.tamu.edu/faculty/policies/religiousobservance.php](http://dof.tamu.edu/faculty/policies/religiousobservance.php)

**NRSC 616/VIBS 616 - Advanced Developmental Neurotoxicology**

**Tentative course schedule:**

<table>
<thead>
<tr>
<th>Class topics</th>
<th>Assignments and exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1</strong> Early development and start neural tube development</td>
<td>Article 1</td>
</tr>
<tr>
<td><strong>Week 2</strong> The 6 principles of development</td>
<td>Article 2</td>
</tr>
<tr>
<td>Neural tissue histology</td>
<td>Article 3</td>
</tr>
<tr>
<td><strong>Week 3</strong> synaptogenesis and neurotransmission</td>
<td>Article 4</td>
</tr>
<tr>
<td><strong>Week 4</strong> Toxicology review</td>
<td>Article 5</td>
</tr>
<tr>
<td><strong>Week 5</strong> Toxicology review</td>
<td>Article 6</td>
</tr>
<tr>
<td><strong>Week 6</strong> Introduction to neurotoxic syndromes</td>
<td>Exam 1 (Thursday)</td>
</tr>
<tr>
<td><strong>Week 7</strong> Mercury neurotoxicity and Minimata disease</td>
<td>Article 7</td>
</tr>
<tr>
<td><strong>Week 8</strong> Mercury neurotoxicity and autism</td>
<td>Article 8</td>
</tr>
<tr>
<td><strong>Week 9</strong> Effect of alcohol in the developing CNS</td>
<td>Article 9</td>
</tr>
<tr>
<td><strong>Week 10</strong> Effect of alcohol in the developing CNS</td>
<td>Article 10</td>
</tr>
<tr>
<td><strong>Week 11</strong> Developmental Neurotoxicity of smoking (nicotine)</td>
<td>Article 11</td>
</tr>
<tr>
<td><strong>Week 12</strong> CNS effects of prenatal lead exposure</td>
<td>Exam 2 (Thursday)</td>
</tr>
<tr>
<td><strong>Week 13</strong> CNS effects of prenatal lead exposure</td>
<td>Oral presentations:</td>
</tr>
<tr>
<td></td>
<td>(Tuesday)</td>
</tr>
<tr>
<td><strong>Week 14</strong> Developmental neurotoxicity of pesticides</td>
<td>Oral presentations:</td>
</tr>
<tr>
<td></td>
<td>(Tuesday)</td>
</tr>
<tr>
<td><strong>Week 15</strong> Developmental neurotoxicity of flame retardants</td>
<td>Written paper due</td>
</tr>
<tr>
<td>(PBDEs - polybrominated diphenyl ethers)</td>
<td>on last class day</td>
</tr>
<tr>
<td><strong>Final week</strong></td>
<td>NO examination</td>
</tr>
</tbody>
</table>
Americans with Disabilities Act (ADA) Policy Statement

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

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

Academic Integrity Statement:   AGGIE HONOR CODE

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

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

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

Pledge
On all quizzes and examinations at Texas A&M University, the following Honor Pledge shall be pre-printed and signed by the student at the time the examination / quiz is taken:

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

CLASSROOM COMMUNICATION FORM

The next page is a standard TAMU classroom communication form. Please feel free to use this form should you feel the need to do so during the semester.
CLASSROOM COMMUNICATION CONCERNS

Student Inquiry # ___________________________ Date ________________
Student ___________________________ Major Class ___________________________
ID# ________ Local Phone ________________
Address ________________________________________________________________
Signature ______________________________________________________________
Professor _______________ Course ______ Section ______ Semester__________

Specific Concerns

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

The intent of this policy is to provide a mechanism for improving classroom communication and for this purpose only. It is intended not only to detail how a student may register a specific problem in a class but also to provide a route for a faculty member seeking information on how to improve his or her teaching effectiveness.

The proper procedures for students to follow in registering concerns or praise about classroom communications are:

1. A student first reports concern to the Instructor in charge of the course.

2. If the issue is not resolved at this level, the student should report the concern to the Instructor's Department Head for resolution and complete the Classroom Communication Concerns form. These forms are available in the departmental offices and in each Academic Dean's office.

3. If the issue is still not resolved or if the issue cannot be discussed with the instructor, the student should then bring the matter to the Academic Dean for Graduate or Undergraduate Programs in the college in which the course is offered. The student is asked to complete a reporting form for the "Classroom Communication Concerns" if one has not been completed.

4. The Academic Dean for Graduate or Undergraduate Programs works with the respective Department Heads to investigate and resolve each complaint about classroom communications in conjunction with the Instructor.

5. A "Response" space for the Instructor is included in the reporting form for "Classroom Communications Concerns."

6. The Department Head completes the form describing the investigation and the actions taken. The Academic Dean for Graduate or Undergraduate Programs signs the completed form and forwards a copy to the Provost's Office. The entire process is to be completed within seven class days from the time that the concern was registered. A summary of action taken will be made available to the student filing the "Classroom Communication Concerns."

7. If the issue cannot be resolved at the Department Head level through the Academic Dean, an appeal should be made by the student to the Dean. If further appeal becomes necessary, it should be made to the Office of the Provost.

8. See University Regulations for procedures to file complaints for sexual harassment, discrimination, and grade appeals.
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus. •

Form Instructions:
1. Request submitted by (Department or Program Name): College of Engineering
2. Course prefix, number and complete title of course: SYEN 641 Systems Engineering Methods and Frameworks
3. Catalog course description (not to exceed 50 words): Concepts, methodologies, methods and tools for discovery, definition, analysis, design, creation and sustainment of systems involving information, physical and human elements; architecture modeling methods include IDEF/UPDM; systems engineering frameworks include DoDAF/MoDAF; and Zachman; analysis tools include executable architectures to assess consistency, interoperability and performance.

4. Prerequisite(s): Math 304 or approval of instructor

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

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

7. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
      Master of Engineering in Systems Engineering
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      MS or ME in Industrial Engineering, Civil Engineering, Electrical and Computer Engineering, Mechanical Engineering, Aerospace Engineering, Petroleum Engineering and Computer Science and Engineering

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

9. Prefix Course # Title (excluding punctuation) LECT Lab SUII CIP and Fund Code Admin. Unit Acad. Year FICE Code Approval recommended by:

   SYEN 641 SYSTEM ENGR METHODS FR MK

   Lect. Lab SUII CIP and Fund Code
   0 3 0 0 0 3 1 4 2 7 0 1 0 0 6 0 9 6 5 1 4 - 1 5 0 0 3 6 3 2

   John Crescione 1/16/14
   Department Head or Program Chair (Type Name & Sign) Date

   John Crescione 1/16/14
   Chair, College Review Committee Date

   John Crescione 3/20/14
   Dean of College Date

   Chair, GC or UGC Date

   Submitted to Coordinating Board by:

   John Crescione 3/20/14
   Associate Director, Curricular Services Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu
Curricular Services – 3/10
COURSE NUMBER: SYEN 641
COURSE NAME: SYSTEMS ENGINEERING METHODS AND FRAMEWORKS

COURSE DEVELOPER: Dr. Richard J. Mayer, 4068 Emerging Technologies Building: 979-260-5274; rmayer@kbsi.com

Text books: None; Current Literature, Open Source Standards, Instructor handouts.

Course Content:
This course is designed to provide the students with an understanding of the concepts, methodology, methods and tools of systems discovery, definition, analysis, design, creation, and sustainment. The main focus of the course is to develop the students’ critical thinking skills to 1) define and analyze the as-is system, 2) develop and communicate the to-be system requirements, 3) transition these requirements into the design specification of a new or modified system, and 4) evaluate the value, correctness, interoperability, and performance of a system design.

Course Learning Objectives:
The student will learn the component methods for systems architecting including: function modeling, process modeling, information and data modeling, ontology modeling and representation, software and system behavioral and structural design, systems dynamics modeling. The student will also learn the standard frameworks for structuring the systems development process and documenting the resulting artifacts. Finally the student will learn the core techniques for system architecture analysis including: requirements analysis, allocation, assessment, and design traceability, 2) design verification, validation, and completeness (VV&C), 3) cost / performance/risk tradeoff analysis, and 4) simulation based architecture execution.

COURSE OVERVIEW:
This course will start with the study of component systems as simple or complex hybrids, involving information, computation, mechanical, and human elements. Later in the course we will study “capabilities” that are formed as collections of interoperating systems – referred to in the current vernacular as a system of systems, or SOS. We will study the way engineered orchestration of the interoperability and combined performance of the collection will result in a desired capability. Throughout the course we will study methods, languages, and techniques that enable us to ‘view’ and analyze the as-is system, develop and communicate the to-be system requirements, and transition these requirements into the design specification of a new or modified system. The initial modeling methods focus will be the IDEF function, information, process, and ontology modeling methods. Other system design modeling methods and languages to be covered are UML and SysML. In depth review of the language stack for ontology modeling will be covered including RDF, OWL, DL, and Common Logic. Our study will be performed within the context of the systems development life cycle and the use of frameworks for applying the systems engineering discipline. The DoD Architectére Framework (DoDAF) will be the primary structure studied. Other enterprise architectural frameworks such as MoDAF, FEAf, and the Zachman AF will be surveyed. The primary analysis tools covered will
be simulation based. Particular focus will be given to the use of systems dynamics models and colored Petri nets. The generation and use of executable architectures as a means to rapidly assess consistency, interoperability and performance will be studied in detail.

Topics to be covered

- Week 1 – System Architectures and Function Modeling Introduction
- Week 2 – Function Modeling and Introduction to Architecture Frameworks
- Week 4 – System Discovery, Definition, Design & Process Architectures
- Week 5 – System Creation & Sustainment; Process & Object State Architectures
- Week 6 – Information Architecture Method Theory & Practice
- Week 7 – Data Architectures and Introduction to Ontology Modeling Methods
- Week 8 – Ontology Languages & Logic Based Architecture Analysis Methods
- Week 9 & 10 – UML and SySML Based Architecture Methods
- Week 11 – DoDAF Framework Systems, Services, Data and Information, and Standards View
- Week 12 – Architectures to Executable Models & Systems Dynamics Simulation
- Week 13 – Analysis of Alternatives with Executable Architectures
- Week 14 – Project Presentations

Evaluation

- Homework
  - Weekly
  - 30% of the grade
- MidTerm: After Week 7
  - 30% of the grade
- Final Exam: As scheduled
  - 10% of the grade
- Project Report: Due last day of class
  - 30% of the grade

The instructor reserves the right to assign written reports on outside topics which will be reviewed and used to determine the individual's class grade in borderline cases. Class participation will be noted and assessed. Final grades will be assigned as follows. There are no exceptions
### Average Grade | Course Grade
---|---
100 ≥ CA ≥ 90 | A
90 > CA ≥ 80 | B
80 > CA ≥ 70 | C
70 > CA ≥ 60 | D
60 > CA ≥ 0 | F

**GENERAL POLICIES:**
Plagiarism and “copying” will not be tolerated and will result in a grade of zero (0) for all students involved, regardless of active or passive participation. Students will be expected to have completed any HW assignments and be comfortable with the lecture material covered during the week. General HW assignments will not be graded. A departmental website directory will be maintained on the “cannibal” course drive of the ISEN website. This site will be used to archive all PPT class presentations, selected handout materials and other courseware. Cheating on any Quiz will result in a grade of zero and immediate referral to appropriate University officials.

**CLASS ATTENDANCE:**
In a course of this nature, class attendance, participation, and the timely completion of assignments is critical. Specifically, class attendance is an individual student responsibility. Absences that permit making up a major examination or the timely fulfillment of a written assignment will be authorized by the instructor. The exception is University Calendar excused absences or sickness supported by a letter from an authorized physician. A University authorized excused absence is only a holiday posted to the University calendar. Students are referred to the current copy of University Regulations for comprehensive guidelines. It is the responsibility/obligation of the instructor to provide students with realistic due dates for homework assignments and dates for examinations far enough in advance to permit student preparation. Major quizzes will be announced 7-10 days in advance. Class attendance might be kept by the instructor and can affect the final course grade in borderline cases.

Absences will be authorized (and work permitted to be made up or handed in for evaluation) for reasons deemed sufficient by the instructor or by the University. Authorized absences generally cover the following:

- Illness/injury (Requires a doctor’s note)
- Participation in an activity appearing on the University authorized list
- Death or major illness in a student’s immediate family (must be documented)
- Participation in legal proceedings that require the student’s presence (Court service, etc.)
- Religious holy days that are on the University Calendar

**JOB INTERVIEW TRIPS AND SOCIAL EVENTS ARE NOT ALLOWABLE ABSENCES**
**CLUB OR ORGANIZATIONAL TRIPS ARE NOT ALLOWABLE ABSENCES**
**CONFERENCES ARE NOT ALLOWABLE ABSENCES**
To qualify as an “authorized” absence, the student is totally responsible for providing written evidence to the instructor to substantiate the reason(s) for any absence. Please note: The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unauthorized absence. Please note that plant trips and travel for purpose of obtaining future employment are not technically authorized absences. However, if the student plans on missing a class, he/she must notify the instructor at least one day in advance of the missed class period, detailing the nature of the absence. Students will usually be permitted a “reasonable” number of absences for this purpose at the discretion of the instructor. Communication is most effective via e-mail at drdon@tamu.edu.

It will be the stated class policy that if a student misses a scheduled major examination or fails to meet an assigned project deadline due to an unauthorized absence, the student will receive a “0” for that specific examination/project/assignment. Excessive class absences will result in lowered instructor evaluation. Failure to participate in class discussions may result in lowered instructor evaluation and a lower grade. Any late graded assignments will not be accepted unless specifically approved by the lab instructor.

Promptness
There is no excuse for habitual late arrival to class lectures. The class will start as soon as soon as the instructor arrives and will finish when the instructor dismisses class, within the bounds of the formal class duration. The instructor will make every attempt to arrive on time and the same is expected of students. If a student arrives more than 15 minutes late, that student can be denied attendance that day. This is not simply being “picky or mean”. Late arrivals disrupt class, cause irritation and interruption, and builds poor character.

POP QUIZ POLICY:
Students are expected to attend class on any days that an “authorized” absence is not in effect. To strengthen class participation, the instructor reserves the right to adopt and use a “pop quiz” policy if necessary. Pop quizzes can be administered during the semester at any class time. These quizzes will cover basic material covered in the preceding class period or on the same day the quiz is given. Pop quizzes might be used to determine final grades in “borderline cases”, but will not be averaged into all other semester exercises to determine the final grade assignment.

Missed Test Policy (Major Test)
If a test is missed, you must have a written authorized excuse. If possible, please let me know before the test; otherwise, I must be notified within two days of your return to school. Make up exams will be given in accordance with University Rules (see Rule 7 at http://student-rules.tamu.edu).”

The American Disabilities Act (ADA)
The ADA is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all
students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Service for Students with Disabilities in Cain Hall, Rm. B118, or call 845-1637. (For additional information visit http://disability.tamu.edu.)

Academic Integrity

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

It is the responsibility of students and instructors to help maintain scholastic integrity at the university by refusing to participate in or tolerate scholastic dishonesty. (For the Honor Council rules and procedures, see the web site http://aggiehonor.tamu.edu)