**Economics/Env Stud 3596 (002) Energy, Ecology, & Economy**

**Fall 2015 Dr. John Sorrentino**

**Temple University Anderson Hall Room 028 &**

**Thursdays, 5:30 – 8:00 PM Lecture Hall 19**

**Course Description**

1. TEXT: ***Environmental & Natural Resource Economics***, 3rd Edition, by Jonathan Harris & Brian Roach, M.E. Sharpe, Inc., Armonk, NY, 2006 [ISBN: 978-0-7656-3792-5]; text sites: <http://ase.tufts.edu/gdae/publications/textbooks/env_nat_res_economics.html> (hard copy & e-Book)

**Blackboard (Bb) Course Site**: <https://tuportal3.temple.edu> – Blackboard - Energy, Ecology & Economy

1. STUDENT COMMITMENT: Please read the assignments before the class period in which they are discussed. (Don’t laugh...) Please make every effort to attend each class (Usual Options: Video, Speaker or Writing or Math-Stat Morsel, Lecture, Student Activity, Question/Problem Presentation, Lab, Assignment). Class participation will count for afairly large % of your grade. As you will be responsible for the material covered in classes missed, you might arrange to copy missed notes, or to have me send you digital forms of class handouts. YOU MAY MAKE UP THE PARTICIPATION-POINT EXERCISES OR QUIZZES IF YOU INFORM TEACHER AHEAD OF YOUR MISSING CLASS, & YOU SUBMIT DOCUMENTATION OF A "VALID" REASON FOR MISSING. (You may miss 10 participation points & still get an “A” in participation.)
2. TEACHER AVAILABILITY: I will have office hours from **2 to 3 PM on Tuesdays & Thursdays in Room 837 Ritter Annex (Main Campus).** You can meet me by appointment in person, or online via WebEx. Besides meeting, you may reach me in the following ways:

**PHONE: 267- 468 - 8370 (Ambler) or 215 - 204 - 8164 (Main)**

**E-mail:** [**sorrento@temple.edu**](mailto:sorrento@astro.temple.edu)

**Ambler Campus Assistant: Ms. Lila Coddington - 267- 468- 8217**

**E-mail:** [**lcodding@temple.edu**](mailto:lcodding@temple.edu)

**Main Campus Assistant: Ms. Linda Wyatt - 215 - 204 - 6638**

**E-mail:** [**ldwyatt@temple.edu**](mailto:ldwyatt@temple.edu)

1. WRITING GOALS: The table below lists the goals, instructions & assignments that the course will be structured around to help students develop the following list of proficiencies: (1) *access existing knowledge, (2) display command of existing knowledge, (3) interpret existing knowledge, (4) interpret & manipulate 3E data, (5) apply existing knowledge, & (6) create new knowledge.* Once a student gets past “accessing,” s/he comes into the realm of 3E *analysis* – the application of logic & math-stat to 3E phenomena. Note that “Math-Stat Morsels” are included in class instruction to enable math-stat proficiency. (Don’t cry. You may find a “Math Morsels” document in Blackboard – Course Documents – Quant Methods Boot Camp )

|  |  |  |
| --- | --- | --- |
| **Goals: Enable Students to Successfully** | **Instructions** | **Assignment** |
| write a synopsis of the 3E concept(s) in a news article | Writing Morsel 1 | 5-Ppt short in-class essay on a short article; no revision |
| write a critique of a single piece of literature | Writing Morsel 2 | 50-pt Essay 1 (20) & Revision\* (30) |
| write a summary of two sides of a policy debate | Writing Morsel 3 | 50-pt Essay 1 (20) & Revision\* (30) |
| write a major research paper & present findings | Writing Morsels 4 & 5 | 100-pt First (25) & Final Drafts (50) of the Research Paper & the Presentation (25)\*\* |

\*See Grading Grids for 50-pt Essays below.

\*\*See Presentation & Research Paper Grading Grids below.

1. GRADES: These will be determined by the following: (400 pts.)
2. **TWO 50-Point essays: 20-pt first draft + 30-pt final draft (100 pts.)**
3. **TWO 25-Point spreadsheets on the subject of the previous assignments (50 pts.)**
4. **A 100-Point Research Project**

**⇒ pick topic by 9/17/15**

**⇒ oral presentation**: 5 minutes in front of class  **(25 pts.)**

**dates: ☺ 11/12/15 ☺ 11/19/15 ☺ 12/3/15**

**⇒ written report:** 10 double-spaced, typed, spell-checked pages

**♦first draft due: (25 pts.)**

**\* Group A by 10/15/15; \* Group B by 10/22/15**

**♦ final draft due: (50 pts.)**

**\* Group A by 11/12/15 ; \* Group B by 11/19/15**

(Some suggested topics will be provided, but students are free to propose their own.)

**4. Final Exam: Spreadsheet Problems (50 pts.): 12/10/15**

**5. Class Participation: (100 + Ppts.)**

**♦ Class Problems & Activities (75+)**

**♦ Discussion Board in Blackboard (25)**

1. **SPECIAL ACCOMMODATIONS**: Any students who need accommodations due to special circumstances are asked to discuss these with me immediately.
2. **RIGHTS & RESPONSIBILITIES**: Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities which can be accessed through the following link:

[**http://policies.temple.edu/getdoc.asp?policy\_no=03.70.02**](http://policies.temple.edu/getdoc.asp?policy_no=03.70.02)

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**VIIII. COURSE SEQUENCE / CALENDAR**:

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Lecture Topic** | **Reading Assignment (Harris Chapter = H#)** | **Class Writing or Math-Stat Activity (other activities/assignments will be listed on a weekly Agenda)** |
|  | **CORE CONCEPTS** |  |  |
| 8/27 | Expectations & Requirements; Overview of 3E Issues | In class | Writing Morsel 1: general writing style, writing 3E, & finding 3E in a news article; 1 page, 5-pt practice essay responding to a news article |
| 9/3 | 3 Es & Development | H 1 & 2 | Math-Stat Morsel 1: exponential growth & economics problems; 5-pt practice spreadsheet |
| **9/4** | **LAST** | **DAY TO** | **DROP** |
| 9/10 | Elements of Ecological Economics | H 7 | Mr. Fred Rowland,  Library Speaker;  Writing Morsel 2: write a critique of a single piece of literature; 20-pt first-draft essay critiquing an article (in class) |
| 9/17 | National Income & Environmental Accounting | H 8 | Math-Stat Morsel 2: input-output analysis & welfare economics; 5-pt practice spreadsheet; students **pick research paper topic** |
| 9/24 | Elements of Environmental Economics | H 3 | Writing Morsel 3: summarizing a policy debate; DUE: 30-pt revised draft essay critiquing a news article |
| 10/1 | Common Property & Public Goods | H 4 | 25-pt spreadsheet quiz 1 |
| 10/8 | Valuing the Environment | H 6; The Economic Value of the World’s Oceans\* | Writing Morsels 4 & 5: information resources & a major research paper; Teacher’s precise paper format & grading approach |
|  | **3E TOPICS** |  |  |
| 10/15 | Agriculture, Food & Environment | H 10 | 20-pt first-draft essay summarizing a policy debate; DUE: 25-pt first draft of 10-page research paper from Group A |
| **10/20** | **LAST DAY** | **TO** | **WITHDRAW** |
| 10/22 | Energy: The Great Transition | H 12 | Math-Stat Morsel 3: energy economics; 5-pt practice spreadsheet; DUE: 25-pt first draft of 10-page research paper from Group B |
| 10/29 | Water: Economics & Policy | H 15; Status of the World’s Groundwater Supplies\*; The Water Crisis in California\* | 25-pt spreadsheet quiz 2 |
| 11/5 | Pollution: Analysis & Policy | H16 | DUE: 30-pt revised draft essay summarizing a policy debate |
| 11/12 | Global Climate Change | H 18; Environmental Updates  Leaving Fossil Fuels Unused to Meet Climate  Targets\* | 25-Pt Presentations |
| 11/19 | Global Climate Change: Policy Responses | H 19; Accounting for Carbon Emission Externalities  in U.S. Environmental Policy\* | 25-Pt Presentations; DUE: 50-pt final draft of 10-page research paper from Group A |
| 11/23-11/27 | **BREAK** | **BREAK** | **BREAK** |
| 12/3 | Final Exam Review | All Previous Spreadsheets & Problems | 25-Pt Presentations; DUE: 50-pt final draft of 10-page research paper from Group B |
| 12/10 | Math-Stat Problems | All Previous Spreadsheets & Problems | Final Exam (50 pts)  5:45 to 7:45 PM |

**\*** In Bb - Content - Harris & Roach Updates

**Supporting Material:**

|  |  |  |
| --- | --- | --- |
| This Course in Blackboard | Intro to Algebra; Math Morsels | Course Documents – Quant Methods Boot Camp |
| Khan Academy | Intro to Equations | <http://www.khanacademy.org/math/algebra/solving-linear-equations/v/simple-equations> |
|  | Solving Two Equations in Two Variables | <http://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/v/solving-systems-of-equations-by-elimination> |
|  | Solving Two Equations in Two Variables | <http://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/v/solving-systems-of-equations-by-multiplication> |
|  | Others As Needed | <http://www.khanacademy.org/> |
| Lynda.com | Excel 2013 Essential Training | TUPortal: Click Lynda.com on the left – Click Continue; Type Excel 2013 Essential Training - Click Search; Click Introduction – Welcome & go on from there as needed |
| Authors’ textbook Website | Additional Material | <http://www.gdae.org/publications/textbooks/ENRE_student.html> |

**Grid for Grading 50-pt Essays (News Article; both drafts)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Attribute*** | ***Max*** | ***Score*** | ***Comment(s)*** |
| **Content (Were 3E concepts correctly captured?)** | **50** |  |  |
| **Organization (Is there a cohesive order to the writing?)** | **20** |  |  |
| **Style (Are there grammar & spelling mistakes?)** | **20** |  |  |
| **Appearance (Was care taken to make the essay attractive to read?)** | **10** |  |  |
| **TOTAL** | **100** |  | Your Grade = [YOUR SCORE /100]\*20 + [YOUR SCORE /100]\*30 |

**Grid for Grading 50-pt Essays (Policy Debate; both drafts)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Attribute*** | ***Max*** | ***Score*** | ***Comment(s)*** |
| **Content (Were the PRO & CON sides correctly captured?)** | **50** |  |  |
| **Organization (Is there a cohesive order to the writing?)** | **20** |  |  |
| **Style (Are there grammar & spelling mistakes?)** | **20** |  |  |
| **Appearance (Was care taken to make the essay attractive to read?)** | **10** |  |  |
| **TOTAL** | **100** |  | Your Grade = [YOUR SCORE /100]\*20 + [YOUR SCORE /100]\*30 |

**Presentation Grading Grid**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PRESENTATION** | **Very Good**  **(1.0)** | **Good**  **(.8)** | **Average**  **(.6)** | **Below Average**  **(.4)** | **Poor**  **(.2)** | **Weighted**  **Score** |
| Content (5) |  |  |  |  |  |  |
| Delivery (5) |  |  |  |  |  |  |
| Spontaneity (2) |  |  |  |  |  |  |
| Appearance (2) |  |  |  |  |  |  |
| Effectiveness (3) |  |  |  |  |  |  |
| Preparation (5) |  |  |  |  |  |  |
| Connection with Audience (3) |  |  |  |  |  |  |
|  |  |  |  |  | **TOTAL:** |  |

**Research Paper Grading Grid**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Attribute*** | ***Max*** | ***Score*** | ***Comment(s)*** |
| **Content** | **50** |  |  |
| **Organization** | **15** |  |  |
| **Style** | **10** |  |  |
| **Appearance** | **10** |  |  |
| **Quality of References** | **15** |  |  |
| **TOTAL** | **100** |  |  |

**Draft Feedback Sheet**

Grade [YOUR SCORE / 100]\*25 for the first draft & [YOUR SCORE / 100]\*50 for the final draft

GENERAL: The paper is expected to be 10 double-spaced, 13-point typed pages with 1 inch margins all around.

***TITLE: Please choose a title other than the task on the Topics sheet.***

1. **Introduction**

In this section, the topic is introduced & the contents of the remaining sections is briefly discussed. What the problem is, & how you deal with it may be the core of the intro.

COMMENT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. **Literature Review**

What do the readings that you done on the topic contain in terms of background information? Include a summary here. Narrow the problem down at the end of this section to what you will analyze in the next sections.

COMMENT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. **Method of Analysis**

Discuss a type of analysis in generic terms that will apply to the topic problem. Show a little bit of math in equation form.

COMMENT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. **Analysis Applied to the Problem**

Apply your method to the problem by breaking the problem into components that can be analyzed with the method.

COMMENT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. **Conclusion**

How you propose to solve the problem. Relate a scenario of the future of the problem. Summarize what you wrote in the previous sections.

COMMENT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. **References** There must be at least 10 references, even though all are not used.

COMMENT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_