# SYLLABUS

## SYST 489 - Senior Seminar

# Fall 2009

**Professor:** Dr. Peggy Brouse

**Assignment Submission:** Blackboard usage is required in the class; instructions are below.

**Work Phone:** (703) 993-1502 (with voice mail)

**FAX:** (703) 993-1706

**E-mail:** pbrouse@gmu.edu

**Office:** GMU:  Engineering Building - Room 2215

**Office Hours:** Thursday 12:00 – 2:00 p.m. and by appointment

**Course Description:** This course is designed to introduce the students to several important topics in systems engineering, provide additional experience to the students in writing and giving presentations, and obtain feedback on the curriculum for the B.S. in Systems Engineering.  Several lectures will be devoted to ethics in systems engineering.  Writing and making presentations for systems engineering will also be covered early in the semester. Lecture series presenters will present material that is not part of the required course load to expand the horizons of the students.  Each student will write a short paper on each of these presentations.  In addition, students will work in teams to critique and redesign the curriculum in Systems Engineering.  Each group will deliver a written product and provide at least one briefing to the class.  The best critique and redesign will be presented to the faculty.

**Course Hours:** Tuesday and Thursday  10:30 am - 11:45 am in Engineering Building 2211

**Text:**
1. <u>Introduction to Engineering Communication, 2d edition</u> (2009), Hillary Hart.  Pearson Prentice Hall.  ISBN 978-0-136044208

2. <u>Engineering Ethics: An Industrial Perspective (2006),</u>   Gail Baura.  Academic Press ISBN 978-0-12-088531-2

**Grades:** On following pages

| Topic | Lecture | Deliverables |
|-------|---------|--------------|
| Technical Writing | Hart – Chapter 1 – Engineering and Communication [10]<br>Hart – Chapter 2 – Discovering Ideas and Facts [16]<br>Hart – Chapter 3- Organizing Ideas and Facts [8]<br>Hart – Chapter 4 – Writing: It's About Control [20]<br>Hart – Chapter 5 – Displaying Data in Written Documents [23]<br>Hart – Chapter 6 – Revising [17]<br>Hart – Chapter 8 – Producing Engineering Documents | **Individual:**<br>Long paper on bleeding edge technology (20 pages) in IEEE format |
| Giving Presentations | Hart – Chapter 7 – Do I Really Have to Stand Up and Talk in Front of All Those People [23] | **Individual:**<br>Bleeding Edge Annotated Outline Presentation<br>Bleeding Edge Final Presentation<br><br>**Group:**<br>Ethics Case Presentation<br>Curriculum Review Draft and Final Presentation |
| Ethics | Ethics Lecture | **Individual:** Case write-ups (every case except the one your group presents)<br><br>**Group**: Team presentation and discussion lead.  Team paper. |
| Curriculum Review | | **Group**: Determine subject of curriculum review<br>Brief subject<br>Interview professors, students<br>Draft review<br>Final review<br>In-class brief<br>Brief faculty |
| Technology Review | Attend speaker series lecture | **Individual:**<br>Short paper on lecture attended (3 pages) |
| Professionalism | | **Individual:**<br>Evaluated by instructor |

## Exact Grade Breakdown

| | Individual | |
|---|---|---|
| | Ethics - Writeups (5 at 2% each) | 10% |
| | Bleeding Edge Annotated Outline Presentation | 5% |
| | Bleeding Edge Presentation | 5% |
| | Bleeding Edge Paper Draft | 5% |
| | Bleeding Edge Paper | 10% |
| | Seminar Review Paper | 10% |
| | Professionalism | 10% |
| | **Group** | |
| | Ethics Case Presentation | 10% |
| | Ethics Case paper | 10% |
| | Curriculum Review Subject | 5% |
| | Curriculum Review Draft Presentation/Paper (2.5% each) | 5% |
| | Curriculum Review Final Presentation/Paper (7.5% each) | 15% |

**Writing Intensive Statement**
This course fulfills all/in part the Writing-Intensive requirement in the Systems Engineering undergraduate major. It does so through the five ethic write-ups, bleeding edge paper outline, bleeding edge draft paper, bleeding edge final paper and the seminar review paper. The bleeding edge paper will be completed through a draft/feedback/revision process. The due date for each is below; I will provide comments on each.

**Disabilities Statement**
If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 993-2474. All academic accommodations must be arranged through the DRC

# CLASS SCHEDULE

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|---|---|---|
| Week 1> | 1/3 September | ◆    Background; Introductions; Honor Code<br>◆    Group assignments, In-class writing assignment<br>◆    Present past curriculum review subjects |
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| Week 2> | 8/10 September | ◆  IT & Engineering Liaison Librarian presentation - Theresa Calcagno<br>◆  **DEGREE AUDIT ASSIGNMENT – WORTH 2 POINTS**<br>◆  Blackboard demo |
| | | |
| Week 3> | 15/17 September | ◆  University Career Services 10 minute presentation – Charlotte Strauss<br>◆  Discussion of Problem Statement and Need Statement<br>◆  Lecture Hart, Chapter 1<br>◆  Lecture: EVMS<br>◆  Review Research Paper Info sheet<br>◆  Seminar Review Paper info sheet<br>◆  Ethics Case Paper info sheet |
| | | |
| Week 4> | 22/24 September | ◆  Group work day<br>◆  Group: 5 min presentation of curriculum review subject |
| t | | |
| Week 5> | 29 September/<br>1 October | ◆  Lecture Hart<br>◆  Group - Ethics case choices due |
| | | |
| Week 6> | 6/8 October | ◆  Review ABET Objectives and Outcomes<br>◆  Lecture Hart |
| | | |
| Week 7> | 13/15 October | •  NO CLASS ON TUESDAY; MONDAY CLASSES MEET ON TUESDAY<br>•  Lecture Hart |
| | | |
| Week 8> | 20/22 October | ◆  Individual: 5 min presentations on bleeding edge paper (annotated outline)<br>◆  Individual: 5 min presentations on bleeding edge paper (annotated outline); Individual: Write up (annotated outline) on bleeding edge paper due<br>◆  Lecture: Ethics |
| | | |
| Week 9> | 27/29 October | ◆  Lecture: Ethics<br>◆  Group Work Days on Ethics Cases and final paper |
| | | |
| Week 10> | 3/5 November | ◆  Group Presentation: Ethics Case 1<br>◆  Group Presentation: Ethics Case 2,<br>    Individual: Write up (draft paper) on bleeding edge paper due |
| | | |
| Week 11> | 10/12 November | ◆  Work day on Curriculum Review<br>◆  Group Presentation: Ethics Case 3 |
| | | |
| Week 12> | 17/19 November | ◆  Group Presentation: Ethics Case 4 |

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|---|---|---|
| | | ♦ Group Presentation: Ethics Case 5 |
| | | |
| Week 13> | 24/26 November | ♦ Group: 5 min presentation of curriculum review draft, Group: Write up (draft) on curriculum review due<br>• NO CLASS ON THURSDAY; THANKSGIVING |
| | | |
| Week 14> | 1/3 December | ♦ Individual: Presentations of bleeding edge paper– final, Final bleeding edge paper due |
| | | |
| Week 15> | 8/10 December | ♦ Individual: Presentations of bleeding edge paper<br>♦ Group: Final curriculum review due<br>♦ Individual: short paper on lecture attended due<br>♦ Individual:  Evaluation of Others in Group due<br>♦ Group: Presentation to faculty on curriculum review (everyone attends)> will be coordinated with SYST490 presentations to faculty |

# How to Access Blackboard?

- Go to   http://courses.gmu.edu

- Enter Blackboard ID and password:
  Students need a Blackboard ID and password to login. Their Blackboard ID is their Mason mail user name (e.g. the Blackboard ID for jdoe@gmu.edu would be jdoe)

- If you do not know your Mason mail user name, go to http://mail.gmu.edu and click on "Activating My Account" icon, follow the steps.

- All assignments have due dates and submissions after the due date/time will not be possible, since Blackboard will automatically block "submit my homework" option.

- From time to time, Blackboard works too slowly. Especially from a dial-up internet connection, Blackboard access may not be so efficient all the time; students are encouraged to submit their work earlier than the deadline.

- If you experience any problem while accessing/using Blackboard, please. send an e-mail to Dr. Brouse, pbrouse@gmu.edu