

SYST 495 Senior System Design Project (2006/2007)

1/20/2005

Instructor: Dr. Andrew G. Loerch

Office: Rm 119 S&T II

Lecture: Senior Design Lab, S&T II

Time: MW 15:00-16:15

Lab: Senior Design Lab, S&T II

Office Hours: Monday 10:30 to 12:00,

Wednesday 10:30 to 12:00

TA – Jason Southerland office hours: by appointment

FE Review Manual, Michael Lindeburg, 2002

http://www.ncees.org/exams/study_materials/fe_handbook/ (17.5 Mbyte pdf file)

<http://www.se.usma.edu/capstoneconference/>

<http://www.sys.virginia.edu/sieds06/>

Objective: Systems 490/495, together, provide the Capstone experience to the Systems Engineering undergraduate program. In addition to providing students the opportunity to utilize the systems engineering processes (e.g. requirements determination, work-breakdown structures, Pert Charts, test and evaluation, life cycle costing, etc.) it requires them to use their analytical skills in system modeling, simulation and decision making. SYST 495 places the primary emphasis on conducting trade-off analysis. Emphasis in these courses is also placed on written and verbal communication skill development and the creative process of engineering design. The students are asked to determine whether a Business Case exists for their designs in the Final Report that they submit in early May. Students are required to manage a complex, unstructured project using the management and teamwork skills that they have developed. The class has been divided into seven project teams, each working on a real problem. Each student **MUST** maintain a personal log of all design activity, to be inspected upon demand. Each student **MUST** submit a weekly time sheet to their team timekeeper. This team timesheet is to be submitted to Dr. Loerch **monthly** (via e-mail) and is open for discussion at all major program reviews as part of the EVM review. All teams will be entered into inter-scholastic senior design competitions at the end of this semester.

Grading: Each student's final grade will be determined as follows:

25% Team Individualized Mid Term Exam

25% Final Project report (written)

20% Faculty / Sponsor Evaluation of Team Presentation

15% Attendance and participation

10% Team Project productivity self evaluation

5% Timesheets/Notebooks

SYST 495 Semester Schedule:

January 22. Review Spring Semester Schedule – the way ahead.

January 29. Presentation by Career Services.

January 31. Submit UVA abstracts for review prior to Feb 2 submission deadline

<http://www.sys.virginia.edu/sieds07/authorkitdocs/index.html>

Feb. 5 and 7. Information flow Presentations (3 teams each)

Feb. 12 - 14. Critical Path and Earned Value Management presentations (3 Teams each)

Feb. 19 - 28. Detailed Presentation on Modeling and Analysis Status

Feb. 26. Response from UVA due

March 5. Mid Term Exam Discussion and Preparation

March 7. Mid Term Exam

March 11-18 Spring Break

March 19 Midterm Exam Pass-back

March 21-28. Individual team work April 6 UVA registration deadline.

March 28. Turn in UVA paper to Dr. Loerch

April 2 – 4. MORS Education and Professional Development Colloquium – USCG Academy

April 3. MTE Pass-Back. UVA paper to Donohue for final review prior to submission

April 4. UVA paper pass-back for final changes (*April 6 registration deadline*)

April 9. UVA Manuscript sent to UVA for peer review

April 9 -11. Analysis results presentations.

April 17. USMA Abstract due for review and submission (approx date)

April 18. DRY RUN for UVA presentation

April 23. DRY RUN for UVA presentation

April 25. DRAFT Final Report due for internal review

April. 27 UVA Conference

April 30. Reports submitted for Faculty and Sponsor evaluation, Final Presentations to Faculty and Sponsors, senior graduation lunch

May 2. leave for USMA at noon

May 3. USMA Conference

May 4. Return from USMA (back by noon)

May 9. Course and Team Final Evaluation, Lessons Learned (13:30-14:30)