Coordinating Seminar – TCOM 750

George Mason University
Fall 2014
Fairfax Campus – Nguyen Engineering Building 1110
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Office Hours: By appointment

1. Announcements

TCOM 750 will meet in University Hall, room 1110, Wednesdays, 7:20 – 10:00 p.m., 27 August to 17 December. The Final Exam will be given on Wednesday, 17 December, from 7:20 – 10:00 pm.

Inclement Weather
Please be safe. The class will follow the GMU inclement weather policy. As an aid the Mason Alert system can Notify you whenever the University is closed, or closing, due to weather related issues. To receive these alerts, you must add this option to your Mason Alert account. To join this alert group:

- Log on to Mason Alert at https://alert.gmu.edu
- Click the “My Alerts” tab.
- Click the “Optional Alert” bar.
- Review the full list of alerts and join the “Weather related closing group”.
- When finished, click the “Home” tab.
- All of your registered devices and group memberships will be listed.

2. Expected Background

College-level telecommunications engineering, business or engineering statistics and basic business planning are required, although students will be expected to learn, and master, design cost-effective design concepts that require some numerical manipulation. Concepts learned earlier in TCOM classes will be re-enforced with a number of examples to explain the concepts in detail.

3. Expected Learning Experience

TCOM 750 is the required class for all students in the telecommunications program and is the capstone class to introduce you to applying those design concepts in a thoughtful and considered manner. You will be required to do extensive research on current industry trends as well as research on provided requirements documents and alternative designs for proposed technologies. The class emphasizes an approach based on a Request for Proposal (RFP) and response process. The main material for the course will be Power Point slides. Subsequent lectures will be distributed on Blackboard. You will also be required to select a topic relevant to the syllabus and give a 5- and a 10-minute presentation to the class during the semester.
NOTE: All lectures and homework assignments and solutions will be distributed through Blackboard or GMU Email accounts. You must activate your GMU Email account. It is a simple matter to have your Email forwarded to a preferred address from the GMU address. Please remember to clean out your GMU account regularly to avoid storage problem and rejected Emails.

4. Required Books - None

5. Lecture Notes - Power Point slides will be posted on Blackboard before each lecture.

6. Homework

1. Homework Exercises will be assigned periodically (approximately once per week for the first one-third of the course) and are due the following week at the beginning of class unless otherwise specified.

2. Homework will be collected in soft copy only, unless otherwise directed. Please show all intermediate steps so partial credit may be given, even if you have not reached the correct solution.

3. PLEASE put your name and ID number on each file or sheet of paper and staple the sheets together. The required file naming format is: lastname_G00012345_TCOM750_HWx.ppt.

4. Late homework will only be accepted with prior permission, and if the graded homework has not yet been handed back to the class.

5. To help with travel commitments one assignment may be dropped from the total number of homework.

6. Students are encouraged to work together on homework problems, but they should only submit their own written work.

IMPORTANT NOTE: Students are encouraged to find, and use, any and every source they may locate to answer a question or for their term paper. HOWEVER: if elements of their paper have been downloaded from the web or transcribed from another source, STUDENTS MUST WITHOUT FAIL acknowledges the source document. If the elements used are exact copies, those passages must be within quotation marks to note they are not original statements of the student. This includes written sections, diagrams, and pictures. Failure to acknowledge a source used is considered to contravene the copyright act and may also be subject to honor code proceedings if the student claims the work to be original when it is copied from another person or source. The resource Turnitin.com may be used as a resource to review papers for plagiarism.

8. Semester Project

Student teams will be required to submit a team presentation paper on a topic to be provided in the form of an engineering proposal in the general field of digital communications. Recent topics for this project in the past have included:

- Development of a micro-satellite engineering center at GMU.
- Development of a micro-satellite proposal.
- City of Fairfax feasibility study for an 802.11 city-wide wireless network
- One Laptop Per Child (OLPC) Remote Area Communications
- Micro Grid System and Communications
- Unmanned Aerial Vehicle Communications Support for State and Local
- Southwest Asia Remote Village Communications
- Cloud Computing to promote Business Continuity
- Integration of autonomous cars

The semester project is designed to develop awareness of the multifaceted impact of digital communications technology on our everyday lives, teach organization and teamwork, and give an appreciation for the difficulties of developing communications solutions for an imperfect world. It is also a way of getting students used to writing technical papers and business proposal that will be required in their work careers. Students will work in groups on the semester project, but may be graded individually based on their participation. We use the Blackboard system and the semester project is to be done in and presented in Blackboard.

References cited may be either placed as footnotes on the page where the reference is cited or sequentially in a numbered index at the end. Full references shall be given (all authors, journal name, volume, number, date, pages [start and stop]) and, for web references, the full URL and the date the material was extracted.

9. Final Exam

The final exam is the semester project presentation and will be given on Wednesday, 17 Dec 2014.

10. Course Grades

Final Grades will be determined by a weighted average of the homework (lowest score being dropped from calculation), class participation, 5 and 10 minute presentations and final exam in the following manner:

Final Presentation - 50%
Group Participation – 20%
Homework – 15%

In class Presentation(s) and Participation – 15% of team assigned area (Group Participation) compared to other teams (did you help your team score or hurt it), then individual class assignments – were they were turned in on time and did you follow the preparation instructions, and finally class participation.
11. Miscellaneous

Campus Resources Some campus policies and resources (Academic Integrity, use of GMU email accounts, the Writing Center, University Libraries, Counseling and Psychological Services (CAPS), and the Office of Disability Services) available for you can be found at:

University Catalog: http://catalog.gmu.edu
University Policies: http://universitypolicy.gmu.edu
Diversity Statement: http://ctfe.gmu.edu/professional-development/mason-diversity-statement/
Calendar of Religious Holidays: http://ulife.gmu.edu/religious_calendar.php

12. Course Outline/Schedule

Note: We will be adjusting this a little depending on the class project and class capabilities.

Class 01: 27 Aug – Proposal Process and Requirements Analysis
Class 02: 03 Sep – Disruptive Innovation/Innovators Dilemma/Telecom Trends
Class 03: 10 Sep – Making Things Stick
Class 04: 17 Sep – Tipping Points/Effective Presentations
Class 05: 24 Sep – No Class
Class 06: 01 Oct – Systems Engineering and Integration
Class 07: 08 Oct – Business Intelligence/Semester Project
Class 08: 15 Oct – Strategy
Class 09: 22 Oct – Proposal Coaches
Class 10: 29 Oct – Technology Innovation
Class 11: 05 Nov – Ethics and Research/Guy Fawkes Day
Class 12: 12 Nov – Analysis/Business Continuity
Class 13: 19 Nov – SWOT/Individual Presentations
   26 Nov – No Class – Thanksgiving Break
Class 14: 03 Dec – Individual Presentations/Team Meetings
Class 15: 10 Dec – Individual Presentations/Team Meetings
Class 16: 17 Dec – Final