Syllabus OR 652
Military OR II – Effectiveness Analysis
Fall 2015

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Office Hours: Before or after class, or by appointment

Text: *Methods of Military Operational Analysis,* Loerch and Rainey, eds.
       Available from the Military Operations Research Society (MORS) at
       http://www.mors.org/Publications/Ebook-and-Purchase

Course Objectives: The purpose of this course is to introduce students to analytical methods for support of national security decisions. The course focuses on analysis at the military service and national levels. The student will have the opportunity to do cases studies on realistic problems, learn relevant techniques that are applies to standard military operations research problems, and to do a project on a national security issues. At the conclusion of the course, successful students will be familiar with a large set of national security problems, and will be able to work in a government agency or defense contractor that supports defense decision makers.

Topic	**Assignment**
Introduction, Presentations, Defining the problem	
Decision Analysis for Military Problems, Affinity Diagram	Read Chapter 19 Homework problem
Homeland Security – Defending the Network	Homework to be assigned
Theater Campaign Modeling, Base of Sand JICM, THUNDER, CEM, TACWAR, GCAM	Read Chapter 2, 3 Case Study #4
Equipment Modernization, Optimization L1Example	Read Chapters 6 and 7, Case Study #1
Strategic Mobility and Deployment	Case Study #2 Read Chapter 9
Force Structure Analysis,	Read Chapter 8

Small Scale Contingencies, MTOFs   Read Chapter 4, Case Study #3

Logistics and Requirements, Army Example   Read Chapter 12

Group Projects   Presentations

Grading: Case Studies   30%
                      Final Exam   30%
                      Project   30%
                      Class & Homework   10%
                                           100%

Group Projects

A group project will be done by everyone in the class, and will count 30% of the course grade. The size of the groups will depend on the number of people in the class. The purpose of the project is to apply the concepts and techniques learned in this class to more realistic problems than any that could be found in a textbook. Thus the project is an important part of the course.

The topic of your project will be up to the group. Ideally, the topic should deal with some problem encountered by one or more of the group members in their other life. The analysis and solution of the problem should make use of the techniques of operations research that you have learned in your program, and it should apply to a military decision problem.

Project grade will be based on a written report of about 10 pages, and a short oral presentation during the last class period. The length of the oral presentation will be based on the number of groups. The grading criteria will be the following:

Written Report   – Is the topic relevant to the course?
                            – Are the techniques used in the analysis used correctly?
                            – Is the analysis complete?
                            – Is the presentation clear and are good mechanics used (organization, format, and grammar)?
                            – Are sources adequately referenced?
                            – Does the analysis support decision making?

Oral presentation   – Is it interesting, and does the class learn anything new?
                              – Does the presentation adhere to the time limit?
                              – Is the presentation of high quality?

I will try to be flexible, particularly for groups that try extremely new or innovative projects. A project proposal is due on 13 October 2015 that explains the topic, identifies the group members, and discusses the anticipated approach (≤ 1 page).

Student Expectations:

Academic Integrity
Students must be responsible for their own work, and students and faculty must take on the responsibility of dealing explicitly with violations. The tenet must be a foundation of our university culture.

Honor Code
Students must adhere to the guidelines of the George Mason University Honor Code [See http://oai.gmu.edu/honor-code/masons-honor-code/].

MasonLive/Email (GMU Email)
Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account. [See https://password.gmu.edu/index.jsp].

Patriot Pass
Once you sign up for your Patriot Pass, your passwords will be synchronized, and you will use your Patriot Pass username and password to log in to the following systems: Blackboard, University Libraries, MasonLive, myMason, Patriot Web, Virtual Computing Lab, and WEMS. [See https://password.gmu.edu/index.jsp].

University Policies
Students must follow the university policies. [See University Policies].

Diversity: George Mason University promotes a living and learning environment for outstanding growth and productivity among its students, faculty and staff. Through its curriculum, programs, policies, procedures, services and resources, Mason strives to maintain a quality environment for work, study and personal growth.

Responsible Use of Computing
Students must follow the university policy for Responsible Use of Computing. [See http://universitypolicy.gmu.edu/1301gen.html].

University Calendar
Students must follow the university policies. [See Catalogue].

Students with Disabilities
Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See http://ods.gmu.edu].

Students are expected to follow courteous Internet etiquette.

Student Services:

University Libraries
University Libraries provides resources. [See http://library.gmu.edu/distance].

Writing Center
The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing. [See http://writingcenter.gmu.edu]. You can now sign up for an Online Writing Lab (OWL) session just like you sign up for a face-to-face session in the Writing Center, which means YOU set the date and time of the appointment! Learn more about the Online Writing Lab (OWL) (found under Online Tutoring).

Counseling and Psychological Services
The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See http://caps.gmu.edu].

Family Educational Rights and Privacy Act (FERPA)
The Family Educational Rights and Privacy Act of 1974 (FERPA), also known as the "Buckley Amendment," is a federal law that gives protection to student educational records and provides students with certain rights. [See http://registrar.gmu.edu/privacy].