

Syllabus

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Course description. In this capstone course, students will work in teams on a semester-long project that applies operations research and statistical methods to real-world problems in the military, business, and society. Students will present their project work in a written report and in a presentation on USNA Capstone Day.

Course objectives. This course is the culmination of the operations research major. You will be required to manage a long-term project, during which you will:

- (1) formulate operations research and statistical models to solve a real-world problem,
- (2) analyze the results of these models to provide a recommendation,
- (3) communicate your formulation and analysis through both a written report and oral presentation.

Schedule. See the next page for a tentative schedule.

Week	Week of	Tuesday	Thursday
1	1/6		Friday 1/10: Project idea briefs Submit group and project preferences
2	1/13	Course policies Writing overview Writing the introduction Standards-based grading	Getting started: purpose of project, relevant OR techniques, data Preparing for a biweekly meeting
3	1/20	No class (Monday schedule)	Biweekly meetings - Introduction outline
4	1/27	Writing the data section	Exploratory data analysis
5	2/3	Giving a presentation - Introduction - Data	Biweekly meetings - Introduction draft - Data section outline
6	2/10	Presentations - combined class	Presentations - combined class
7	2/17	Model formulation	Biweekly meetings - Presentation feedback - Data section draft
8	2/24	Writing the model section	Model formulation
9	3/3	Model formulation	Biweekly meetings - Working baseline model - Model section outline
	3/10	Spring Break	Spring Break
10	3/17	Writing the results section	Generate results
11	3/24	Giving a presentation - Model - Results	Biweekly meetings - Model section draft - Results section outline
12	3/31	Presentations - combined class	Presentations - combined class
13	4/7	Generate results	Biweekly meetings - Presentation feedback - Results section draft
14	4/14	Writing the conclusion	Finishing touches
15	4/21	Finishing touches	Biweekly meetings - Draft of entire project report - Final concerns
16	4/28	Finishing touches	Wednesday 4/30: Capstone Day - Final presentations - Final project report