Course Policy Statement

Last updated: 30 January 2018

1 Basic information

Time and place. TR9 (section 3401) TR10 (section 5601) CH121

Instructors. Assoc. Prof. Nelson Uhan CH348 uhan@usna.edu

Extra instruction. My schedule is posted outside my office door. Feel free to stop by without notice if you have a quick question. If you need extensive help, or if you want to guarantee that I will be available, contact me to schedule an appointment.

Course website. https://www.usna.edu/Users/math/uhan/sa475b/

Most course materials (e.g. this course policy statement, syllabus, project guidelines) and important course announcements will be posted on the course website.

2 Course organization

Capstone project. The main focus of this course is your capstone project. You will work in teams on a semester-long project that applies operations research and statistical methods to improve the operations of some part of USNA.

Class. Class time will primarily be devoted to working on your project. Use this time wisely! This is a great time to ask questions. A few classes may be devoted to lessons on operations research techniques or technical writing.

Weekly contribution messages. Every week, you will be required to submit a brief message (1-3 sentences) that describes your contributions to your project for that week. Each individual on a team must submit their own contribution message. These messages will be used to keep track of your progress and individual contributions. Contribution messages are due on Thursdays at 23:59.

Written report. You will be required to submit a written report that describes your work at the end of the semester. You will work on and submit this report in pieces throughout the semester. I will provide feedback on these pieces so that you can incorporate them into your report as the semester progresses.

Presentations. You will be required to present a poster or give a presentation on Capstone Day, which will take place on Wednesday 25 April. USNA students and faculty, as well as distinguished guests from elsewhere, will be in attendance.

3 Grading

Course grading. Your course grade will be based on your performance on a number of standards in 3 areas:

(1) meeting deadlines,

(2) formulation and analysis,

(3) written report and presentation.

See the rubric on page 3 for the list of standards.

For each standard, you will receive a score of **E**xemplary, **S**atisfactory, or **U**nsatisfactory. Your scores on the standards will be converted to a letter grade as follows:

	Meeting deadlines	Formulation and analysis	Written report and presentation
A	S in all standards	S or E in all standards E in at least 50% of standards	S or E in all standards E in at least 50% of standards
B	S in all standards	S or E in all standards	S or E in all standards
C	S in all standards	S or E in at least 75% of standards	S or E in at least 75% of standards
D	S in all standards	S or E in at least 50% of standards	S or E in at least 50% of standards

To earn a particular letter grade, you must meet the requirements in all three areas. You will receive the highest grade you qualify for.

I reserve the right to lower the benchmarks described above if I deem it necessary. I will not raise these benchmarks.

Late submissions. Late submissions will not be accepted under any circumstances. If you need an extension, please discuss your situation with me before the deadline.

4 Academic honesty and classroom conduct

Academic honesty. All work you submit must represent your own scholarly and creative efforts. In your written reports and presentations, make sure to cite all your sources. See *Policies Concerning Graded Academic Work* (USNAINST 1531.53B) and *Brigade Honor Program* (USNAINST 1610.3J) for more information regarding academic honesty.

Classroom conduct. You are expected to behave professionally in class. Unprofessional conduct includes, but is not limited to: sleeping (stand in the back or the side of the classroom if necessary) and frequent non-class-related use of electronic devices in class (e.g. browsing Facebook, texting your friends). Persistent poor classroom conduct will be reported to your company officer.

/s/
Nelson A. Uhan
Mathematics Department
USNA

Grading rubric

	Exemplary	Satisfactory	Unsatisfactory
Meeting deadlines			
Weekly contribution messages		All messages submitted on time	Otherwise
Written reports		All reports submitted on time	Otherwise
Presentations and posters		All presentations and posters prepared on time	Otherwise
Formulation and analysis			
Identifying the problem	Clearly describes the problem; provides sufficient background information and motivation for the problem	Describes the problem adequately; provides some background information and motivation for studying the problem	Description of problem is unclear or missing key details; background information or motivation is insufficient
Identifying an appropriate modeling framework	Chooses an appropriate modeling framework and explains why it is appropriate	Chooses an appropriate modeling framework	Does not choose an appropriate modeling framework
Literature review	Reviews at least 10 relevant works; selected works are a reasonable representation of the existing literature; clearly describes how the works are related to each other and to the project	Reviews at least 10 relevant works; describes how the works are related to each other and to the project, for the most part	Reviews works without connecting them to each other or the project
Identifying and analyzing inputs	Provides a clear and detailed description of the input data used; presents a correct analysis of the input data (e.g. distribution fitting) if appropriate	Provides an adequate description of the input data used; few minor details are missing; presents a correct analysis of the input data (e.g. distribution fitting) if appropriate	Description of the input data used is unclear or missing key details, or input data analysis is incorrect or inappropriate
Modeling assumptions	Recognizes and properly justifies all assumptions	Justifies key assumptions; might miss more subtle assumptions	Does not justify or recognize one or more major assumptions
Correctness and complexity of model	Model correctly captures major features and some subtleties of the problem	Model correctly captures major features of problem, for the most part	Model is too simple or too complicated to give useful information
Implementing the model	Successfully implements the model in a suitable programming language or software package	Correctly implements the model in a suitable programming language or software package, for the most part	Fails to implement the model
Reporting outputs	Correctly and clearly describes the complete output of the model, using tables or diagrams when appropriate	Correctly describes the primary outputs of the model, for the most part	Presents the outputs in an unclear or incorrect manner, or fails to present the outputs at all
Interpreting outputs	Provides a correct and detailed interpretation of the outputs	Provides a correct interpretation of the outputs, for the most part	Provides a flawed interpretation of the outputs, or fails to interpet the outputs at all

(cont.)

	Exemplary	Satisfactory	Unsatisfactory
Written report and presentation			
Grammar, spelling, punctuation (GSP)	Text contains no GSP errors	Text has a few minor GSP errors; i.e. errors that are likely typos	Text has serious GSP errors or a distracting number of minor GSP errors
Organization	Presents ideas in a logical order	Presents ideas in a mostly logical order	Does not present ideas in a logical order
Clarity	Text is clear and concise	Text is clear and readable for the most part	Text is wordy, awkward, or unclear
Completeness	Text provides good depth and detail; ideas are fully developed and supported	Text provides adequate depth; a few needed details or ideas are omitted; major ideas are adequately developed and supported	Additional depth is needed in places; important details or ideas are often omitted, not developed, or not supported
Tone	Appropriate for an academic journal or professional memo	Appropriate for a student paper	Too informal, too many superlatives
Technical language	All technical language is used correctly; all mathematical symbols and variable names are explained in words	Technical language is used correctly, for the most part; most mathematical symbols and variable names are explained in words	Technical language is consistently incorrect or imprecise; mathematical symbols and variables names are not defined in words
Citations and references	All sources are correctly documented; in-text citations and reference list follow APA style exactly	Most sources are correctly documented; in-text citations and reference list have a few minor errors in following APA style	Fails to correctly document sources; in-text citations and reference list have major errors in following APA style
Appearance and formatting (AF)	Consistent and professional appearance throughout: font sizes for text, captions, and section headings are appropriate and consistent; sizes of tables and graphs are appropriate; equations are properly formatted	Report has a few minor AF issues	Report has serious AF issues or a distracting number of minor AF issues
Presentation or poster session	Professional demeanor; slides/poster clearly summarize the problem, model, analysis, and results	Professional demeanor; slides/poster adequately summarize the problem, model, analysis, and results	Unprofessional demeanor; slides/poster fail to adequately summarize the problem, model, analysis and results