

MATH 188. Writing Project Guidelines

As this course meets the Integrative Experience requirement for HMC students, there will be a paper and an oral presentation involving a critical analysis of the relationship of the mathematical methods of game theory to contemporary society and decision-making.

In your paper and presentation, you'll model a real-life situation of your choice using the techniques of decision analysis and game theory, or choose an existing model to critique. Some examples could include:

* I. Choose a past historical event or a situation, model the agents and strategies involved, and use your model to explain why events transpired the way they did.

* II. Choose a current situation or event, model the agents and strategies involved, and then use your model to (a) suggest a course of action or (b) make a prediction about what will happen

* III. Choose a current social choice problem and understand it in terms of ideas from cooperative game theory.

Your paper should also contain a critical analysis of the methods used. For instance, does mathematics provide a good model for decision making in the context you describe? What's missing in the model? As people often make decisions based on such models, what would be appropriate or inappropriate uses of this model? How do societal considerations influence the model, and what implications does the model have for society?

Intended Audience: the average HMC student

Length: 5 - 10 pages

First Draft: due Wednesday, Nov 21. (Bring 3 copies for peer review.)

Final Draft: due Friday, Dec 14, at noon.

Writing Center consultation: strongly encouraged

MATH 188. Evaluation Rubric for Papers

(Please staple to front of paper before handing in, and answer the first two questions.)

1. NAME: _____

2. DID YOU CONSULT WITH SOMEONE AT THE WRITING CENTER? (yes/no)

3. (To be filled out by evaluators) ON A SCALE OF 1 TO 5, DOES THIS PAPER:

_____ clearly define the problem to be solved?

_____ clearly define the model that will be used to address the problem?

_____ clearly state the assumptions that are made in the model?

_____ contain an analysis of the solution, and is the mathematics correct?

_____ define all terms and variables, and clearly label all diagrams?

_____ give acknowledgement where it is due?

_____ have correct spelling, punctuation, grammar?

_____ have an overall, well-written style?

_____ give historical context or relevant background for the problem?

_____ explain the sources for the model?

_____ describe advantages and limitations of the model?

_____ suggest and explore ways the model might be improved?

_____ describe appropriate and inappropriate uses for the model?

_____ discuss several implications that the model might have for society?

_____ discuss several ways that societal considerations influence the model?

_____ exhibit creativity in planning, design of the model, analysis?

_____ make sense to an HMC student not in the class?

EVALUATORS: FEEL FREE TO INCLUDE ADDITIONAL FEEDBACK AND COMMENTS.