IE 3311/IE 5318 Semester Project – Final Report
Due December 12, 2023, by 3:00pm

You have already formed teams of 3 students, selected your state, and submitted a project proposal. The next step is to prepare your final report, which will be due December 12th.

Key deliverables include:

1. Final report (.pdf)
2. Python+Gurobi codes (.ipynb or .py)
3. Data sets used by your code

The second page of this document shows the rubric that will be used to grade the projects.

It is in your best interest to read the rubric very closely and use it when naming the sections of your report. For example, you may want to have sections called "Experiments", "Integer Programming Model", "Districting Plan", "Evaluation of Plan", and "Conclusion."

You are *required* to post your files (report, codes, etc) to the Blackboard. You are *encouraged* to post these same files to a public GitHub repository; if you do, your team will receive 5 bonus points.

	Possible Points	Team Points
Team: _____	100+5	

Report Style and Impression Free of spelling and grammatical errors; readability; appropriate headings; style of report supports key points.	10	
Executive Summary Letter One page or less; well-written; presents situation and rationale for proposed solution.	5	
Introduction Overviews basics of redistricting; briefly discusses project thrust.	5	
Criteria Overviews state and federal redistricting laws/criteria; explains which criteria are required, prohibited, etc; discusses their relative importance; cites sources.	5	
Problem Statement Concise description of problem that will be tackled with OR methods.	5	
OR Model (in words) Description of optimization model(s)'s objective/constraints in words; understandable by the general public; words should accurately capture what the math does.	10	
OR Model (in math) Optimization model(s) for problem; model preamble given (sets, indices, parameters, variables, etc); objective and constraints correctly model the described problem.	10	
Python/Gurobi Code OR model implemented in Python for Gurobi solver; adherence to good coding practices (well-commented, descriptive names, simplicity, well-organized, modular); data is correct, stored in appropriate format, and read by the code.	15	
Experiments Discussion of the computational experiments; description of computer's attributes (e.g., RAM, processor speed) and optimization solver (e.g., version #); reports objective value of optimization model; time required to solve the optimization model(s); if model not solved to optimality, what are the lower/upper bounds at termination.	5	
Plan(s) and Map(s) Proposed plan(s) provided in appropriate digital format; map(s) drawn for the proposed districting plan(s) using website/software (e.g., districtr.org, davesredistricting.org).	10	
Evaluation of Plan(s) Analysis of the proposed map(s); to what extent do they meet criteria (required, prohibited, etc); discuss limitations of plans and/or analysis.	5	
Conclusions Restates major findings and recommendations; nothing new should be introduced.	5	
Overall Quality of Report (emphasis on content, not appearance) Overall is the report well-written; accurate; concise; comprehensive/thorough; well organized; easy to follow; well-integrated; good balance of discussion; salesmanship.	10	
GitHub Repository Uploads code, report, data, experimental results, etc to a public GitHub repository.	5 (Bonus)	

Other Comments: