

PUBP 6801 Professional Paper (6 credits) - MSEEM Capstone Project

PUBP 6801 SG– (3 Credits – pass-fail)

PUBP 6801 DM – (3 credits - graded) (use this course # for communications and submissions)

Summer 2026

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Course Description & Learning Objectives

The MSEEM Capstone is a 6-credit course divided in two parts each worth 3 credits. Part I requires the development of a capstone project, including the problem definition, data sources, and intellectual motivation for the project. Part II requires the execution of the project. Students must pass part I to move to part II. These two courses can be taken only after the completion of the other MSEEM courses.

The purpose of the Capstone project is to identify and define a real-world problem that is of high interest to you in the area of energy, sustainability and/or environmental management and employ a formal methodology to address the problem. Students are encouraged to rely on methods learned during their MSEEM coursework. During the identification of the problem and the development of the project, students will apply their knowledge and skills in order to deliver valuable solutions. Students can develop the project individually or as a team.

The capstone project is delivered as a professional paper and a slide presentation. It is a policy or management relevant analysis that demonstrates mastery of the knowledge and analytical tools that comprise the MSEEM curriculum. It is recommended, but not required, that the paper is developed in conjunction with a sponsor from industry, business, government agencies or an NGO. Additionally, students might develop their paper in conjunction with a summer internship or collaborate with Georgia Tech or other academic faculty.

The capstone instructor(s) will oversee all professional papers and grade these projects.

Students are encouraged to consider extending work done in the MSEEM classes to create their capstone projects, but the project needs to take these efforts substantially further, or have substantial refinement to what they have done in previous classes. In their proposal students must explain what and how their capstone project is new, innovative and substantially extends past projects. The capstone instructor(s) will approve the proposal if it meets these characteristics.

Learning goals:

1. Capacity to assess the context of energy & environmental problems;
2. Knowledge of the dimensions of environmental ethics and environmental equity and their implications for sustainability practice;
3. Mastery of analytical techniques to estimate and evaluate sustainability metrics;
4. Ability to manage and design appropriate responses to energy & environmental sustainability problems;
5. Application of tools and methods to develop results and recommendations to solve energy and environmental problems.
6. Ability to produce an impactful research paper that advances the state of knowledge on the selected capstone topic.

Grading

The first session of the capstone has a pass/fail grade

- Pass: Attendance to individual, class, and group meetings & submission deliverables

The second session of the capstone has a letter grade

- Preparation and participation in individual instructor, class, and group meetings & required deliverables* – 15%
- Project Synopsis – 5%
- Project Proposal – 15%
- Final Paper Draft – 15%
- Final Paper – 25%
- Final presentation, including slides – 25%

Grading Scale (%):

90 – 100 = A; 80 – 89.9 = B; 70 – 79.9 = C; 60 – 69.9 = D; < 59.9 = F

*full score will be received only if student participates in **all** the meetings and submits all the deliverables on time.

Disability Services:

This class will comply with all reasonable accommodations as proscribed through the Americans with Disabilities Act and/or Georgia Tech regulations. For additional information on requesting accommodation and other services offered by Georgia Tech, please see

<https://disabilityservices.gatech.edu/Links to an external site.>

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Key Dates for Capstone 2026:

Week 1: May 18 Kickoff Meeting [online](#) 11am – 12pm

Project Synopsis due May 20

Memorial Day May 25

Week 2: May 26 – 27 (Individual Instructor Meeting 1 online with both instructors)

Week 3: June 1-6 (Group Meeting 1, bring draft proposal for team peer review)

Week 4: June 8-12 (Group Meeting 2, professional development. bring resume)

*** Project Proposal due June 12***

Week 5: June 15 – 19 (individual instructor meeting 2 (online) Ms. Graff proposal and resume)

Week 6: June 22 – 26 (Group Meeting 3)

Week 7: June 29 – July 3 (Group Meeting 4)

Week 8: July 6 - 10 ***Project Draft Paper due July 10***

Week 9: July 15-16 Individual instructor meeting 3 – Dr. Matisoff – online, initial instructor feedback on draft paper)

Week 10: July 20 – 24 (Individual instructor meeting 4 – Ms. Graff – in person/online, draft paper instructor feedback completed)

Week 11: July 27 – 31 (Group meeting 5)

Week 12: Aug 3 - 6 Deliverables

Final Paper due Aug 3

Presentation due Aug 4

Presentation Days August 5-6

Meetings

During the course of the summer, students will meet together in peer review groups and individually with the instructors to discuss their projects.

- **Two Class Meetings**

- **Meeting 1** – Kickoff all students with instructors in person or online

May 13th, 11am – 12pm

Agenda

- Discussion syllabus meeting schedule and purpose of meetings
- Discuss deliverables and presentation - content and format, examples
- Q&A
- Peer Review Team members
- Recap and final Q&A

- **Meeting 2** – Final Presentation Day all students and instructors **in person**

August 1, 9am-4pm

- **Four Individual Meetings with instructors** (25 mins each) – Fill in [THIS SHEET](#)

Each student must meet four times with instructors.

Matisoff Meeting Room: <https://gatech.zoom.us/j/3748986547> [Links to an external site.](#)

Graff Meeting Room: <https://gatech.zoom.us/j/5380672055>

You must fill in [THIS \(SAME\) SHEET](#) to prepare for meetings with the following:

- *What have you done?*
- *What are any challenges with your project approach and methodology that need to be solved?*
- *Have your analytic methods changed or further developed as you've progressed with the project?*
- *What's next; deliverables for next meeting?*
- **5 Team Meetings** (1.5 hr) – Dates and times should be defined by each team and communicated to the instructors. Deliverables must be submitted on Canvas by the deadlines listed above.
- **Group Meeting 1** (focus: capstone proposal)
 - Each student has 5-8 minutes to present the Capstone project synopsis
 - After that the other students have 3-5 minutes to comment on the capstone and/or ask questions
 - The student has 3-5 minutes to address the questions

- **Deliverable:** a short reflection of the meeting answering the following questions: 1. What did you discuss about your project? 2. What feedback did you receive and how you plan to integrate it? 3. What did you learn from the other projects, and does that change how you think about your project?
- Group Meeting 2 ((focus: professional development)
 - Share current resume
 - Discuss potential improvements with peers
 - Discuss prototype cover letter
 - **Deliverable:** Summary of questions for instructors on resume/cover letter
- Group Meeting 3 (focus: capstone proposal)
 - Each student has 5-8 minutes to present the proposal methodology, data collection timeline, challenges
 - After that the other students have 3-5 minutes to provide peer review on the above and/or ask questions
 - The student has 3-5 minutes to address the questions
 - **Deliverable:** short reflection of the meeting answering the following questions: 1. What did you discuss about your project? 2. What feedback did you receive and how you plan to integrate it? 3. What did you learn from your peers' projects that might inform how you improve your approach?
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- Group Meeting 4 (focus: data collection)
 - Each student has 5-8 minutes to present any revisions to the methodology, initial results and conclusions, challenges
 - After that the other students have 3-5 minutes to provide peer review on the above and/or ask questions
 - The student has 3-5 minutes to address the questions
 - **Deliverable:** short reflection of the meeting answering the following questions: 1. What did you discuss about your project? 2. What feedback did you receive and how you plan to integrate it? 3. What did you learn from your peers' projects that might inform how you improve your project?
- Group Meeting 5 (focus: capstone final paper)
 - Each student has 5-8 minutes to present the current status of the paper and recommendations for further work
 - After that the other students have 3-5 minutes to comment the capstone and/or ask questions
 - The student has 3-5 minutes to address the questions
 - **Deliverable:** short reflection of the meeting answering the following questions: 1. What did you discuss about your project? 2. What feedback did you receive and how you plan to integrate it? 3. What did you learn from your peers' projects that might inform how you improve your final paper?

For further information on the [Georgia Tech attendance and academic absence policy click here](#)

Graded Deliverables

Project Synopsis: (deadline: May 20, 2025)

For the first individual meeting with instructors prepare a well-developed project synopsis (250 words) that provides

- Capstone project title
- definition of the problem
- why it is important
- approach and methodology
- what you expect to learn from the project

Project Proposal (deadline: June 5, 2025)

Students will submit a 2000-3000 word proposal (References do not count towards word target) on Canvas. The proposal should describe the findings from your literature review and what you plan to do next. It should be structured as follows:

1. Introduction & intellectual motivation: Describe here the real-world problem in the area of energy, sustainability and/or environment that you aim to address (*What is it? Why is it important in the energy, sustainability and/or environment context? What is the relevant literature that you are drawing upon? What is the question you are attempting to answer? Summarize the insights from your literature review that help you scope the project. (~1500 -2500 words)*)
2. Method & Data Collection: Describe here the methodology you plan to implement and data you plan to collect to address the problem (*What are going to be your data sources? What analytic methods, qualitative and/or quantitative, will you use to answer the question? What is your timeline for data collection? Describe this methodology and its application to the data, in detail.*) ~(500 – 1000 words)
3. Results: discuss how you plan to present results, conclusions and recommendations
4. References: List the primary resources you will use to identify the problem and the methodology and collect data. Use APA or other formal approach for references.

Draft Final Paper (deadline: July 3, 2025)

Students will submit their draft paper containing everything you've completed on on your project at this point.

- Introduction: Clearly state the purpose and significance of the project and put it into the context of earlier work in the area
- Methods and Data Collection: Describe the methodology and the data sets used for the project. The approach developed and analytic methods used can be either qualitative or quantitative. In both cases it has to be systematic and rigorous
- Results and Discussion: Discuss initial findings and results of your analysis, plus the insights that are emerging. Postulate explanations for initial data
- References: References should be in APA or another formal format

Final Paper (deadline: July 28, 2025)

- Students will submit a 6,000 word – equivalent paper, including an abstract on Canvas by July 30. The word count does not include References & Appendices. Late submission will not be considered.

The Final Paper should be structured as follows:

- Abstract - Briefly summarize your project in approximately 250 words, highlighting major points of your research, why it is important, your purpose, methods, conclusions. (All Learning Goals)
- Introduction: *Clearly state the purpose and significance of the project and put it into the context of earlier work in the area (Learning Goals 1&2)*
- Methods and Data Collection: *Describe the methodology and the data sets used for the project. The approach developed and analytic methods used can be either qualitative or quantitative. In both cases it has to be systematic and rigorous (Learning Goal 3&6)*
- Results and Discussion: *Discuss your findings, the results of your analysis and the insights that emerged. Postulate explanations for data and compare your results with those of others (Learning Goals 4,5,6)*
- References: References should be in APA or another formal format.
- Appendices: Appendices are a great place to use additional figures and tables to discuss your topic.

Final Presentation (slides due July 30, 2025 for loading on projector)

Students will have 10 minutes to present a slide deck on their capstone to the class and the instructors August 1, 2025. **This presentation will be IN PERSON. ALL STUDENTS ARE EXPECTED TO ATTEND FOR THE FULL DAY.**