TABLE OF CONTENTS

Capstone Introduction
- Capstone Overview .................................................................................................................. 2
- Capstone Process and Requirements .......................................................................................... 3

Project Development and Selection
- Capstone Project Parameters .................................................................................................... 6
- Choosing a Capstone Project ....................................................................................................... 7
- Option 1: Client-Initiated Projects ............................................................................................... 8
- Option 2A: Student-Initiated Projects (Individual) ...................................................................... 9
- Option 2B: Student-Initiated Projects (Team) ............................................................................ 10

Assignment Milestones
- Project Prospectus .................................................................................................................... 12
- Capstone Project Report - First Half Draft .................................................................................. 15
- Capstone Project Report - Complete Draft ................................................................................ 21
- Capstone Project Final Report .................................................................................................. 23
- Executive Summary (Separate Document) .................................................................................. 27
- Capstone Poster ....................................................................................................................... 28

Additional Guidance
- Working with Your Client .......................................................................................................... 30
- Roles and Expectations .............................................................................................................. 34
- Frequently Asked Questions ...................................................................................................... 36
CAPSTONE
INTRODUCTION
CAPSTONE OVERVIEW

*capstone* [kap-stohn], noun.
1. a finishing stone of a structure.
2. the crowning achievement, point, element, or event.

The “capstone” of the Master of Urban and Regional Planning degree at the University of Colorado Denver represents the culmination of what the student has learned during the MURP program. A MURP Capstone is a *real-world, client-based planning project*. Completing a unique, self-directed project gives students the opportunity to demonstrate the skills and knowledge they have gained, integrate and synthesize what they have learned, and pursue their individual passions. Working with a real client enables students to apply their creativity and problem-solving abilities in a real-world context and demonstrate their professional competencies to both the faculty and potential employers.

Students work with a client organization or agency to complete a project that is of significance and practical use to the organization. By the end of the Capstone semester, the student will produce a professional-quality project deliverable that addresses the client’s needs and conforms to the MURP program’s expectations for quality graduate-level work.

A Capstone project is not merely a narrow technical exercise, nor a lofty theoretical undertaking. Rather, the project should reflect knowledge of relevant literature and precedents, exhibit urban and regional planning competencies, demonstrate an awareness of potential impacts on multiple constituencies, and address the formulation of policy goals or design decisions.

Capstone projects are all unique, but each is expected to be a high-quality professional project, complete with excellent writing, accurate documentation of sources, and effective presentation of data. Through the course of the semester, the student will submit two drafts of the project and meet with their Capstone course instructor for feedback. The quality of the Capstone project will be evaluated by the course instructor with input from the client. Successful completion of a Capstone project (or master’s thesis) is a requirement for graduation from the University of Colorado Denver Master of Urban and Regional Planning program.
CAPSTONE PROCESS AND REQUIREMENTS

Below is an outline of the steps that students should follow in order to complete their Capstone project requirement. (More information about each of these follows.)

During the semester before enrolling in Capstone, students must:

1. **Attend the Capstone orientation session.** All students are required to participate in a Capstone orientation session before they enroll in the course. The orientation prepares students to identify and propose a project and client, and to develop a project prospectus in preparation for the beginning of the course.

2. **Register for the 6-credit Capstone course, URPL 6900.** Planning Workshop (URPL 5060) is the only official prerequisite for this course, but it is strongly recommended that students complete all core courses prior to the Capstone semester. Most students enroll in the Capstone course during their final spring semester in the MURP program. Students are allowed to take the Capstone course and Planning Project Studio (URPL 6000) concurrently, although it is not recommended because of the work required in both of these courses.

3. **Identify a Capstone client and project.** Students have two options for identifying a Capstone project:
   - **Option 1: Client-Initiated Projects.** Consult the MURP Planning Capstone webpage (http://murp.cudenvercap.org/planning-capstone-2016-2017/) for a list of client-initiated, faculty-approved Capstone projects. Review the available projects and select those that best match your professional skills and interests. **Complete and submit a Project Ballot by the deadline.** MURP faculty will match students and projects and will notify you about the project for which you have been selected.
   - **Option 2: Student-Initiated Projects.** Seek out a client using your own professional network. Clients may work in various levels of government, private firms, or non-profit organizations. Contact the client and work with them to develop a project proposal that both meets their needs and relates to your area of planning interest (see the Project Parameters section). **Complete and submit the Student-Initiated Project Proposal (Individual or Team) form by the deadline.** (See pages 9 and 10.)

4. **Work with your client to develop your Project Prospectus.** Regardless of which of the two options described above used for identifying your Capstone project, you will develop a project Prospectus with your client. The Prospectus is a fleshed-out version of...
the project Proposal. For a full description of the elements that must be included in the Prospectus, see page 12. You should write a draft of the Prospectus, then get your client’s input. Discussing the project with them thoroughly at this early stage will ensure that you have shared expectations about the process and the deliverables, as well as a plan to tackle any expected challenges.

During the Capstone course semester, students must:

5. **Submit the full project Prospectus to your course instructor** by the deadline (see page 12). If you do not have an approved project by the add/drop deadline for the semester, you will be required to drop the course. This may impact your graduation schedule!

6. **Submit the First Half Draft to your course instructor** by the deadline (see page 15). Schedule a discussion session with your Capstone instructor.

7. **Submit the Complete Draft to your course instructor** by the deadline (see page 21). Schedule a discussion session with your Capstone instructor.

8. **Submit the Complete Draft to your client** for their review and comment by the deadline. Schedule a meeting with your client if necessary.

9. **Submit your Final Capstone Report and other deliverables** by the deadline (see page 23). Submit the final project deliverables to your Capstone instructor and your client, formatted according to the specific instructions provided in this handbook.

10. **Make a 20-minute presentation of your project to your client.** The details of where, when, and to whom your presentation is made is up to you and your client, but should be considered as a formal presentation lasting a minimum of 20 minutes.

11. **Participate in the Capstone Poster Open House.** Produce a poster that depicts your Capstone project and prepare a brief verbal summary of your project to give to Open House attendees (see page 28). The posters will be displayed at an exhibition held at the end of the Capstone semester. Clients, other professionals, and the university community will be invited to the event.

12. **Receive an evaluation from your client.** The evaluation of your project will be turned in directly from your client to your Capstone instructor.

13. **Submit a completed Capstone Exit Survey** to the MURP Program.
PROJECT DEVELOPMENT AND SELECTION
CAPSTONE PROJECT PARAMETERS

A Capstone project should:

- Be related to urban and/or regional planning
- Address a clearly defined issue or problem
- Be of significance and practical use to the client organization or agency
- Have clear expectations for final deliverables
- Be of sufficient scope and magnitude to challenge the student’s skills
- Be achievable during a 15-week semester, with the student devoting approximately 12-15 hours a week to it
- Be supported by a specific individual at the client organization who will be available to answer questions, review a draft of the project, make necessary information available to the student, and provide a final evaluation of the student’s work
- **Not** be conducted as part of the student’s ongoing work responsibilities
- **Not** be conducted for financial compensation

The Capstone “deliverable” may be a report, a plan or plans, drawings, and/or other professional-quality work appropriate to the project. The final Capstone project will include the specific deliverable(s) agreed upon with the client, as well as a presentation of the student’s background research and methodology, an executive summary, and supplemental exhibits or appendices as appropriate to the project. (See page 23 for a complete Final report outline.)
CHOOSING A CAPSTONE PROJECT

Students should start thinking about their Capstone project when they enter the MURP program. Some ways to start exploring possible projects include:

- Ask second-year students about the Capstone
- Discuss possible projects with faculty members
- Attend the Capstone poster event at the end of the spring semester
- Review the previous year’s Capstone projects on the MURP Community website at: http://murp.cudenvercap.org/featured-murp-capstone-projects-2015-2016/
- Use the summer between the first and second years of the MURP program to meet with potential clients
- Explore the possibility of expanding a summer internship project into a Capstone

There are two options for choosing a Capstone project:

**Option 1: Choose a Client-Initiated Project from a Pre-Approved List**

Potential Capstone clients have been invited to submit proposals for Capstone projects they are interested in having students complete. Once reviewed and approved by faculty, these proposals are posted for your review on the Capstone webpage. You will fill out a ballot on which you rank your preferred client-proposed projects. Faculty will review the ballots and will match each student to the project that best suits their interests and skills. (Ideally, every student will be matched with their first-choice project.)

**Option 2: Initiate Your Own Project**

Find a client you want to work with and develop a Capstone project by working with them to identify a planning issue they would like you to address. Alternatively, figure out a project you would like to do and find a client who would benefit from it and be willing to work with you to complete it. Planning professionals and faculty members can be good sources of insight into meaningful and relevant problems that can serve as Capstone project topics. If the project is of sufficient scope, a small team of two or three students may work together as a Capstone team; however, each student must contribute a unique piece of the larger project. Complete either a Student-Initiated Project Proposal (Individual) form or a Student-Initiated Project Proposal (Team) form and submit it by the deadline. See pages 9 and 10 for more details, and visit the MURP Capstone webpage to view/download the forms.

No matter which option you choose, you are encouraged to find a Capstone topic that suits your interests and will allow you to produce a project that demonstrates your skills and professional competencies. These options are explored in more detail in the following sections.
OPTION 1: CLIENT-INITIATED PROJECTS

Approximately four months before the start of the Capstone course semester, the Capstone instructors send a Request for Proposals (RFP) to hundreds of planning-related organizations and agencies throughout Colorado. The RFP includes the goals of the Capstone course, the responsibilities for being a Capstone client, what the client should expect from Capstone students, the Capstone course schedule, and other details that a prospective client would need to submit a proposal.

After receiving proposals from prospective clients, the Capstone instructors review them and pre-approve those that are suitable as Capstone projects based on their subject matter, the skills required, the timeframe, level of effort, and other factors.

The pre-approved client-initiated projects are then posted to the Capstone website as both a master list of projects as well as individual PDF documents that provide the details for each project. Capstone students will then have about a week to review the client-initiated proposals and decide which ones they are interested in.

Capstone students will use ballots to vote on their 1st, 2nd, and 3rd choices. The Capstone instructors will tally the ballots and match each student with a project from the client-initiated list, doing their best to give each student their highest-ranked choice. In most cases, students receive their top pick.

Students may choose to not fill out a ballot if they have decided to go the route of Option 2 and initiate their own project. Students who are considering initiating their own project can still fill out a ballot and decide later whether to accept the matched project or pursue initiating their own.

The Capstone instructors will then inform each student of their assigned project and send a confirmation letter via email to each client that informs them that their project has been selected, introduces them to the student, and provides additional instructions for moving the process forward.

At that point, Capstone students assigned to a client-initiated project are responsible for working with their client to prepare the Project Prospectus (see page 12).
OPTION 2A: STUDENT-INITIATED PROJECTS (INDIVIDUAL)

For students who intend to initiate their own project as an individual, complete and submit the Student-Initiated Project Proposal (Individual) form available on the MURP Capstone webpage by the deadline. The information you will need to provide on the form includes:

**Student and Client Information**
- Name and email for the student
- Client contact name and title
- Client organization name, address and website
- Client contact email and phone
- Briefly describe your client’s organization (and/or department) including mission, scope of work, key program activities and target population

**Capstone Project Description**
- Proposed project title
- Subject areas that are relevant to your proposed project
- A brief overview of the issue or problem to be addressed by your Capstone project
- Describe why this issue is of particular relevance to your client’s organization at this time, and the practical implications of the issue or problem
- Describe the activities/tasks you plan to undertake to complete this project
- Describe the deliverables you will provide to your client at the completion of the project

**Challenges**
Describe the challenges you expect to face while completing this project. For example:
- Do you anticipate obstacles (incomplete/inaccessible data, community resistance, etc.)?
- Will you need to visit multiple or remote locations?
- Will you need to gain or improve technical skills to complete the project?
- Are you concerned about time management or maintaining the project’s scope?

After the Student-Initiated Project Proposal (Individual) form has been completed and approved by the Capstone instructor, students are responsible for then working with their client to prepare the project Prospectus (see page 12).
OPTION 2B: STUDENT-INITIATED PROJECTS (TEAM)

In some circumstances, a project may be of sufficient scope to be completed by a small team of two or three students. Each student must contribute a discrete, unique piece of the larger project and the division of labor must be clearly identified. Complete and submit a Student-Initiated Project Proposal (Team) form by the deadline. The information required includes:

Student and Client Information

- Name and email for each student team member
- Client contact name and title
- Client organization name, address and website
- Client contact email and phone
- Briefly describe your client’s organization (and/or department) including mission, scope of work, key program activities and target population

Capstone Project Description

- Proposed project title
- Subject areas that are relevant to your proposed project
- A brief overview of the issue to be addressed by your Capstone project
- Describe why this issue is of particular relevance to your client’s organization at this time, and the practical implications of this issue or problem
- Clearly describe why this project warrants being undertaken by a team of students, rather than an individual student
- Describe the activities/tasks that each team member plans to undertake on the project
- Describe the deliverables that each team member will provide to your client at the completion of the project

Challenges

Describe the challenges you expect to face while completing this project. For example:

- Do you anticipate obstacles (incomplete/inaccessible data, community resistance, etc.)?
- Will you need to visit multiple or remote locations?
- Will you need to gain or improve technical skills to complete the project?
- Are you concerned about time management or maintaining the project’s scope?
- Are you concerned about coordinating the team’s activities?

After the Student-Initiated Project Proposal (Team) form has been completed and approved by the Capstone instructor, students are responsible for then working with their client to prepare the project Prospectus (see page 12).
ASSIGNMENT
MILESTONES

ONE MILE ABOVE SEA LEVEL
PROJECT PROSPECTUS

Once you have worked with your client to generally define your Capstone project—whether the project was client-initiated or student-initiated—you are ready to write a formal Prospectus for the project. The Prospectus restates some of the information provided in the project Proposal, but adds important details that demonstrate your clear understanding of the issue you will be addressing, the way you will carry out the project, and the timeline you will follow for completing it. The Prospectus is, in essence, a contract between you, your client, and your Capstone instructor that describes the who, what, when, where, why, and how of your project.

Preparing the Prospectus in consultation with your client ensures that you have a shared understanding of the key elements of the project, the expected deliverables, and any expected challenges. Establishing good communication with your client at the outset is essential for project success. Finally, the Prospectus provides your Capstone instructor the information they need to advise you on completing your project, so the time you invest in writing a detailed, comprehensive, and thoughtful Prospectus will lead to a productive and successful project.

Finalizing the Prospectus will be an iterative process between you and your client in the weeks prior to the start of the Capstone semester. By the time the deadline arrives for submitting your Prospectus at the beginning of the Capstone semester, your Prospectus should be very close to a final version agreed upon between you and your client. You will submit the Prospectus via Canvas. It is due on the first day of the Capstone course. Your instructor will review your Prospectus and you will meet with your instructor in person to discuss the project. Changes to your Prospectus may be required by the instructor before they will approve it, in which case, you will need to inform your client of those changes and share with them the updated version of your Prospectus document.

Prospectus Outline

Clear, professional writing and complete, properly formatted citations and references are expected in the Prospectus. Your Prospectus should be 6 to 8 pages in length (double-spaced, plus references and cover sheet) and should provide the following information:

Cover Sheet
Your cover sheet should include:

- Project Title
- Student Name(s)
- Client Organization
- Date
Introduction/Background/Problem Statement
Your introduction section should include:

- Briefly describe the client and context
- Clearly state of the problem/issue the capstone will address

Goals/Objectives
Your goals and objectives section should include:

- State the purpose of the Capstone project
- Describe the anticipated results/desired outcomes of the project
- Describe how the project will be useful to your client
- Describe the significance of your project for planning practice and/or policy

Proposed Approach
Your proposed approach should include:

- Describe the specific methods you will use to complete your project.
- Include your process for collecting and analyzing information, and which techniques or tools you will use and why (e.g., review of research on the problem; case studies of other similar projects or policies; survey of residents; GIS techniques, etc.).
- If this is a team project, describe the unique contribution of each team member.

Detailed Work Plan and Project Schedule
Your detailed work plan and project schedule should include:

- A detailed work plan with a timeline of activities necessary to complete the project.
- Be specific: Identify the project tasks, activities and milestones per week that constitute the work you will do to complete your Capstone project, and remember to include regular client communications.
- If this is a team project, identify the specific tasks to be performed by each team member and the schedule and deadlines for each team member’s activities.
- Be sure to include adequate time for compiling the work as needed.

In addition to the various tasks and activities needed to complete your project, don’t forget to also include these Capstone course requirements in your proposed timeline:

- COMIRB (human subjects research) approval, if needed
- Prospectus meeting with course instructor
- Client check-in and Prospectus finalization
- First Half Draft upload to Canvas
- First Half Draft meeting with course instructor
- Client check-in
- Meeting with Subject Matter Expert
- Complete Draft upload to Canvas
- Complete Draft meeting with course instructor
- Complete Draft sent to client and client check-in
- Final Report deliverables upload to Canvas
- Capstone Poster printing and upload to Canvas
- Final Report deliverables sent to client
- Presentation to client
- Capstone Poster Open House
- Self-Assessment form completed

Data Sources
Include a preliminary list of sources you intend to draw from to complete the report, including scholarly research, technical reports, online data sources, etc. Be as detailed as possible. If you plan to collect your own data, explain how (interviews, field surveys, etc.).

Preliminary Background Research
Provide a brief summary of three to five sources related to your topic. These might include cutting-edge research, best practices, theory, or other types of information that help inform your approach to your project.

Final Deliverables
List and describe the deliverables you intend to produce. Note that the Capstone project is intended to be a product (e.g., a report or plan) rather than a process (e.g., community organizing, running a planning process, holding an event). Processes such as these may play a role in your project, but may not constitute the final product. If this is a team project, describe what each team member will produce.

Subject Matter Expert
Identify at least one Subject Matter Expert you intend to consult during your project. (This should be a faculty member or professional who has expertise in the content area and/or methodology of your project.)

Professional Goals
Describe how the project relates to your professional and personal development goals. If you are a dual-degree student, describe how the project integrates both disciplines. If this is a team project, provide this information for each team member.
CAPSTONE PROJECT REPORT - FIRST HALF DRAFT

The First Half Draft of your Capstone project report should include the following three chapters of what will become the Final Report:

- Introduction
- Background Research
- Methodology

The guidelines for what to include in each of these chapters are provided below.

**Introduction**

The Introduction of your Capstone project report should briefly describe the problem or question your Capstone project is addressing, provide the background and context of your project, detail the objectives of the project, and provide a brief summary of the content and structure of the remainder of the report. Your introduction, as a whole, should summarize for the reader what you are doing, why you are doing it, what you hope to accomplish, and how the report proceeds. *Your Introduction chapter should be 2 to 3 pages, double-spaced.*

Specifically, your Introduction should include the following information:

**Problem Statement**

What is the purpose of the project? What issue is it addressing and why is this issue a problem? What is the significance of your project, and for whom is it significant? Briefly introduce the problem and/or the purpose of the project from your perspective, as well as that of the client and/or the research literature.

**Background/Context**

Provide a detailed description of the context of the planning issue being addressed by your project. Additionally, provide the reader with some background about the client organization.

**Objectives**

What is your Capstone project about? What are your objectives?

**Outline of Remainder of Report**

The introduction should close with a brief summary of the structure and content of the report. This should provide a roadmap to the reader and let them know “where you are going” in the remainder of the Capstone report.
Background Research

Your Capstone project is intended to demonstrate your competence in a sub-field of planning. This competency includes familiarity with the literature in the field, both seminal and leading edge, and your ability to bring the theories, concepts and best practices from the larger planning literature to bear on your project. **Your Background Research chapter should be 8 to 10 pages, double-spaced.**

The Background Research chapter will look a little different for each student, depending on the type and topic of the project, but here are some general guidelines to follow.

**Purpose**

The background research of your Capstone project serves two main purposes. First, it positions your project within the larger context of your sub-field of planning. By compiling information about the subject’s major concerns, theories, methods of analysis, best practices, and historical evolution, you demonstrate your proficiency in your topic area(s), and provide your client with valuable information about the field’s state of the art.

Second, synthesizing what you have learned from conducting background research will help you address the problem posed by your Capstone project. The findings you describe in your background research should inform the steps you take to complete your project, which you will articulate in the Methodology chapter.

Through critical analysis and evaluation of the sources you include, your Background Research chapter should provide support and justification for your approach to the project. The reader should finish this chapter with a good basis of knowledge of the topic and an understanding of how the concepts identified in the literature and in practice will be applied to your Capstone project.

**What to Include**

While each project is different, everyone needs to undertake their work with awareness of what has been done previously to address similar issues elsewhere (i.e., case studies that provide “best practices” or “cautionary lessons”), knowledge of the academic research that has been conducted on the topic, and a full understanding of relevant existing plans. Together, these comprise the “state-of-the-research” on the topics most relevant to your project. The Background Research chapter needs to cover each of these three areas (academic literature, case studies, and relevant existing plans). Depending on the nature of your project, some of these pieces will be more significant than others. You should discuss the specific items you will cover in your Background Research chapter with your Capstone instructor and possibly your subject-matter expert as well.
The Background Research chapter must include at least five different sources. It is expected that you will reference both practitioner and academic literature in this review. Unless your instructor approves a different approach, you must include at least one academic journal article, a summary of at least one relevant plan, and a summary of at least one relevant case study. Your background research may include sources like books and book chapters, plans and project documents, government reports, think-tank publications, research studies, and articles from refereed (peer-reviewed) journals prevalent in the field and relevant to your project.

**Academic Literature**

Each sub-area of planning has its own specialized journals, but some well-regarded generalist journals include: *The Journal of the American Planning Association, The Journal of Planning Education and Research, Urban Studies, Planning Theory and Practice*, and *Environment and Planning (A-D)*. For journals specific to your subarea of planning, you should consult with a subject librarian, your Capstone instructor, and your subject-matter expert.

An academic literature review should provide a comprehensive—although not an exhaustive—summary of the evidence relating to the topic(s). A literature review should start broad and gradually narrow to provide more detail on what researchers or experts have found about the particular problem you are addressing.

A review of academic literature should be presented thematically, providing a synthesis of each topic’s relevant theory and research. A literature review is not a summary of articles presented one-by-one. Instead, it identifies common themes, concepts, theories, methodologies, or findings across multiple publications. It should summarize the various points of view on theory and practice, considering how the issue is framed in the literature. For example:

“Most research studies on merit pay in the public sector have not found that it improves performance (Smith, 1998; Torey, 2003; Vanderwal, 2000). For example, Jane Smith studied performance pay for executive employees in the federal government. She found that difficulties in rating employees’ performance and relatively low monetary rewards for outstanding performance were problems that may have contributed to the absence of performance gains. Torey (2003), however, did find an effect in his study of postal workers. In this study, postal workers were given rewards for very concrete performance, such as the time taken to complete routes, etc.”
**Case Studies**

Your background research should identify and address previous planning approaches (both policies and implementation) that have been taken to address issues similar to those found in your project. In some cases, these past approaches might be considered “best practices”—efforts to emulate in your own project. Other past approaches might be “cautionary lessons” that offer negative lessons for your project. Either way, when describing previous cases, discuss the context, the methods/approaches used, and the outcomes, in addition to commenting on the relevance and applicability of the case study for your purpose.

**Relevant Plans and Planning Documents**

Your background research should identify and discuss relevant existing plans that apply in some manner to your Capstone project.

For Capstone projects with a clearly defined geographic study area or locational focus, the existing plans would be those adopted by government agencies or jurisdictions at the local, regional, state or federal levels that apply to an area that overlaps with or relates geographically to your Capstone study area. These could include, for example, neighborhood plans, district or small-area plans, corridor studies, station-area plans, park/open space plans, etc.

For Capstone projects without a clearly defined geographic study area (and even for those that do), there may be other existing plans that are still applicable to your Capstone project that focus on policies, programs, or planning topics at larger geographic scales like cities, counties, regions, or states. For example, these could include city or county comprehensive plans, design standards and guidelines, regional transportation plans, state natural resource plans, etc.

The Background Research chapter of your Capstone report should include a concise summary of each of the identified plans’ key recommendations that apply to your Capstone project and should specifically identify how those recommendations may impact your project. For example, if the city’s Parks Master Plan includes a recommendation that all new city parks must provide a location for storm water detention and water quality and your Capstone project is to design a new community park, you would 1.) note this recommendation from the Parks Master Plan and 2.) state that, as you approach the design of your community park, you must address the storm water requirement in your design.
Bibliography and In-Text Citations

Your background research should include in-text citations and a bibliography of works cited. Your Capstone should be formatted using APA style. A helpful guide is available on Purdue Online Writing Lab’s website: https://owl.english.purdue.edu/owl/resource/560/01/

Methodology

Your Methodology chapter should lay out in a clear, logical way how you are approaching the problem that is central to your Capstone project: what methods you are using, what data you are collecting, and how you are analyzing that data to produce your final Capstone deliverables. This chapter will look a little different for each student, depending on the type of project you are working on, but below are some guidelines to follow and questions to answer.

Note that the Methodology chapter for the First Half Draft and the Methodology chapter in your Final Report will likely be slightly different, because you will (probably) still be gathering and/or analyzing data by the first deadline. In the First Half Draft, use the tense that accurately describes where you are in your research. If you have already done it, use the past tense. If you are still planning to conduct the research, describe it in the future tense. Your Methodology chapter should be 2 to 4 pages, double-spaced.

What data/information do you need to collect?
Describe what data you need to gather in order to address the problem or research question you described in your introduction.

Example: “To understand how the trail is currently being used, I will do a visual analysis and administer a survey to current trail users.”

How are you getting the data/information you need?
How are you gathering this data? What tools or data collection methods are you using? (e.g., conducting a survey or interviews, using secondary data, conducting a content analysis, etc.). In some cases, you may have multiple methods to describe.

Indicate how you are implementing your methodology. For example, for interviews, discuss the individual people you are interviewing, how you are interviewing them (by phone, in person, by e-mail), and whether you are following a strict set of questions (structured interviews) or not (unstructured interviews).

Provide specifics as appropriate. For example, if you are conducting a survey, indicate the group you are surveying, how you are accessing them (e-mail, distributing the survey in person, conducting a phone survey), and the specific questions you are asking. (In this case
it may be most appropriate to include the survey in an appendix.) If you are using items from an existing survey, describe that source.

Example: do not say “I will collect Census data.” Instead, you might say “I will download 2010 Census data for the census tracts in my study area, using American FactFinder.”

How are you analyzing the data?

What criteria are you using to sift through the data and draw conclusions? As appropriate, discuss how you are processing the data (e.g., with descriptive statistics or inferential statistics, spatial analysis, content analysis or coding, regression, etc.). Clearly connect how the data you are collecting give you the means to answer your research question(s) and complete your project deliverables.
CAPSTONE PROJECT REPORT - COMPLETE DRAFT

The Complete Draft milestone for your Capstone is just like it sounds: you are turning in a full draft of your project report in order to get feedback from your instructor and client in time to respond before the final deliverables are due.

Below, the required elements of the Complete Draft of the final project report are described. While some parts of your Complete Draft may still be in rough-draft or bulleted format, the draft should be near enough completion that your instructor and client can give you feedback on the totality of the project and make recommendations.

Submit your Complete Draft by the deadline via Canvas. Soon thereafter, you will meet with your Capstone instructor to review your Complete Draft and discuss any changes or incomplete elements.

After making any changes to your Complete Draft resulting from your meeting with your Capstone instructor, submit your Complete Draft to your client by the deadline. This will give your client a chance to give you feedback on your report before the Final Report deadline. Make sure you and your client agree to a deadline for receiving their feedback that gives you sufficient time to respond to those comments prior to the Final Report deadline.

It is not necessary for you to put the Complete Draft in the final format requested for the Final Report. However, it makes sense to assemble your Complete Draft in the requested format to save time later. There are three report elements (the Front Matter, Executive Summary and any Appendices) that are not required in the Complete Draft, but are required in the Final Report. These three items are discussed in the Final Report section below; however, you may include these elements in the Complete Draft if you are able to do so.

Required Elements

While the specific content and organization of each Capstone project will vary, the Final Report elements that you should present in your Complete Draft are:

- Front Matter (optional for Complete Draft)
  - Cover
  - Title Page
  - Table of Contents
  - Table of Exhibits
- Executive Summary (optional for Complete Draft)
- Introduction
- Background Research
- Methodology
- Project Content (data, analysis, findings, maps/designs, recommendations, etc.)
- Conclusion
- Bibliography
- Appendices (as needed) *(optional for Complete Draft)*

For descriptions of the Front Matter, Executive Summary, and Appendices sections, as well as an overview of the required document formatting, see the Final Report section below.
CAPSTONE PROJECT FINAL REPORT

Your Final Report outline is identical to your Complete Draft outline except for the addition of the Front Matter, the Executive Summary, and any Appendices. The document formatting for your Final Report, as well as the report’s major elements, are discussed below.

- Front Matter
  - Cover
  - Title Page
  - Table of Contents
  - Table of Exhibits
- Executive Summary
- Introduction
- Background Research
- Methodology
- Project Content (data, analysis, findings, maps/designs, recommendations, etc.)
- Conclusion
- Bibliography
- Appendices (as needed)

Document Formatting

You should develop your own graphic style and page layout that is consistent and professional, and best represents your Capstone project. Your Complete Draft and Final Report document format should include:

Page Numbering

Do not put page numbers on the Front Matter (Title Page, Table of Contents, Table of Exhibits) or the Executive Summary. The text of the report, beginning with the Introduction chapter, should be numbered with Arabic numerals starting with “1.”

Headings

Include a clear, thoughtful hierarchy of headings and subheadings throughout the report document.

Graphics

Ensure that all graphics are high-quality, informative, well-organized, and legible. If a graphic is worthy of being included in your document, then it should be presented at a size that makes it easy for the reader to understand the message or purpose to the graphic.
Don’t hesitate to make any maps, diagrams, or other important exhibits fill the entire page if that will maximize communication.

**Exhibit Titles**
Use a consistent numbering, naming and capitalization scheme for all exhibit titles. Include captions and source information as appropriate.

**Citations**
Citations must be included in the text as appropriate. They must provide accurate information and be properly formatted.

**Front Matter**
The Front Matter is comprised of the Cover, Title Page, Table of Contents, and Table of Exhibits. Each is briefly described below:

**Cover**
This is the front cover to the report. This is an opportunity to get creative, so make it look good! The cover should include the project title, client organization, and author name(s).

**Title Page**
The Final Report’s title page should include:
- Project Title
- Author(s)
- Client’s Name, Title, Name of Organization, City
- The following text: “Capstone Project submitted in partial satisfaction of the requirements for the degree of Master of Urban and Regional Planning, College of Architecture and Planning, University of Colorado Denver.”
- Date of Submission

**Table of Contents**
The Table of Contents should provide a list of the major components of the project document and the page numbers for the start of each report chapter. You may also include page numbers for the major sections within each chapter if you choose.

**Table of Exhibits**
The Table of Exhibits should provide page numbers for the important exhibits within your report. An exhibit would be any table, chart, map, diagram, or other informational graphic to which you have given an exhibit title.
A photograph that represents direct evidence of something that is discussed within the report and is, consequently, specifically referred to within the report text should be considered an exhibit, given an exhibit title, and included in the Table of Exhibits.

A photograph that is included merely as visual filler or to provide general visual context to an issue being discussed in that part of the report should not be considered a formal exhibit; however, all photographs should include a brief explanatory caption.

**Executive Summary**

Your Executive Summary should be a concise synopsis of the Final Report document, with a paragraph or two summarizing each of the chapters of your report (Introduction, Background Research, Methodology, etc.). A general rule is that an Executive Summary should be approximately 5% the length of the document it is summarizing, i.e. a 60-page report’s Executive Summary should be approximately three pages long.

The Executive Summary should also include a full-page graphic that visually summarizes the main recommendations made in the report. For many Capstone students, that graphic may be a “plan map” that represents their recommended physical plan or design. However, for other Capstone students with more policy-focused or research-oriented projects, their Executive Summary graphic may be more diagrammatic or conceptual than geographic. Either way, don’t rely on text alone to communicate the summary of your Final Report.

**Introduction, Background Research, Methodology**

See the First Half Draft section on page 15 for a thorough discussion of these report chapters.

**Project Content**

This is the “heart” of your project that comprehensively covers your data collection, analysis, findings, alternatives, recommendations, plan maps/designs, etc. The organization of this chapter (or chapters) is up to you, given the nature or topic of your Capstone project.

**Conclusion**

The Conclusion chapter should provide closure to the report by concisely discussing how your project findings and recommendations directly relate to (and hopefully satisfy) the problem statement and objectives described in the Introduction.

**Bibliography**

As noted previously in this handbook, your Capstone report should include in-text citations and a bibliography of works cited that is formatted using APA style.
Appendices (as needed)

Appendices are used to include materials that support your text, but are not central to it, and are an “as needed” deliverable component. Examples of appendices include: copies of surveys or interview questions, lists of people interviewed, data that are too detailed to include in the paper, supplemental maps or other graphics, or any other documents that support your paper or provide further insight. Typically, each type of material is included in a separate appendix, labeled with a letter (A, B, C, etc.).
EXECUTIVE SUMMARY (SEPARATE DOCUMENT)

As noted above, your Final Report will include an Executive Summary located after the Front Matter and before the Introduction. However, students are also required to submit via Canvas a stand-alone version of their Executive Summary as a separate PDF file.

Having a separate Executive Summary PDF file gives you, your client, and the MURP program a way of easily sharing a summary of your Capstone report separately from your lengthier (and larger file size) Final Report document.
CAPSTONE POSTER

The Capstone semester concludes with an open house event at which every student presents a poster that summarizes the major components of their Capstone project.

Posters should be 24” x 36” (or similar dimensions—landscape or portrait) and in color. The poster should be a graphical summary of your Capstone project that combines visual elements such as tables, charts, infographics, maps, photos, and *very limited text* in a colorful and appealing style to communicate to a broad audience a substantial amount of information in one concise exhibit. All posters should include the project title, your name, the client organization name, and the CU Denver/MURP logo (available on Canvas). Posters must be hung in the open house exhibit area no later than 3:00 PM on the day of the open house.

Attending the Capstone Poster Open House will be a broad audience of people including clients, CAP students/faculty/staff, MURP alumni, friends and relatives, etc. Each student should be prepared to informally explain your Capstone project and poster to the open house guests.
ADDITIONAL GUIDANCE
WORKING WITH YOUR CLIENT

Here are some suggestions for meeting and working with a Capstone client.

Client-Initiated Projects

1. **Contact your client** promptly and set up an initial meeting to get to know each other and begin working on the project prospectus.

2. When you meet with them, **ask them to tell you more about the problem they would like you to address.** Ask them questions about the problem. Why did they think this project would be useful? What do they and others in the organization hope to accomplish with the project? What is the history of the issue? Which personnel are involved in the issue? Ask if they have some written materials (proposals, annual reports, research reports, etc.) that tell more about this issue. Ask if there are others in the organization that you should meet with to learn more about the issue.

3. **Clarify the deliverables** they are asking for. Ensure they understand **your due dates** for the work and the approximate dates you’ll be asking for feedback on your drafts.

4. You will probably want to **meet with the client again.** Often, the first meeting does not provide sufficient information for you to fully understand the client’s needs and proceed with writing the project prospectus. After the initial meeting you need to learn all you can about the project, reading the client’s materials and those from online sources, looking through your MURP course materials for information and ideas, finding and reading scholarly articles, talking to MURP faculty, etc. You may meet with the client in person to finalize details with them, or you may do this through a phone call or an e-mail. But, leave the door open to contact them again if you have questions **before finalizing the prospectus.** **Understanding the magnitude and scope of the project can be an iterative process.**

5. You will **meet with them again (in person or electronically) after you’ve written a draft of the Prospectus** to get their feedback on the tasks, methods, timelines, etc. you have proposed.

6. You will **meet/communicate with them periodically** throughout the Capstone semester to keep them posted on your progress. Further, your client should be able to help you gain access to others in the organization as needed, as well as other human and data resources.
7. As you begin to get results, you will want to share these with your client, perhaps even before you have things written in a formal manner. **Let them know what you’re finding so that the drafts are not a total surprise.** Then, get their feedback on the drafts.

8. **Always behave like a professional.** Dress appropriately. Be on time. Be polite. Listen carefully. Attempt to be neutral, yet help the client reach their goals.

Note: Your Capstone project must first and foremost serve the client’s goals. But, it must also serve the MURP program’s goals of assessing the knowledge and skills you have obtained in the program. Your Capstone course instructor may ask you to “tweak” the project in ways that allow us to evaluate your academic performance as well as meet your client’s needs. We must make sure the project is sufficiently scholarly for a MURP graduate and make sure it is feasible to conduct in the time frame allotted.

Talk to your instructor promptly if you experience challenges working with your client! We are here to help you be successful.

**Student-Initiated Projects**

1. **Get ideas for potential clients** by reviewing your existing professional network, and talking to professors and fellow students. This project development phase can be a good opportunity for expanding your network by reaching out to professionals in your area of interest.

2. **Call potential clients** and ask if they have a project that you can conduct for them for completion of your master’s degree. Alternatively, let them know you have a general idea for a project, and would like to know if they’d find it useful and be willing to work with you to complete it. **Give them some examples:** collecting and analyzing data through surveys or interviews, reviewing existing land-use regulations, developing a strategic plan for addressing a particular issue, developing a local hazard mitigation plan, analyzing accessibility, using GIS to analyze certain conditions, evaluate affordable housing resources, etc. You can point them to **examples of last year’s projects** on the MURP Community webpage: [http://murp.cudenvercap.org/featured-murp-capstone-projects-2015-2016/](http://murp.cudenvercap.org/featured-murp-capstone-projects-2015-2016/). Ask if you can come in to talk to them or if they would like to think about it and offer to call them back in a couple of days.

3. When you meet with them, **ask them to tell you more about the problem they would like you to address.** Ask them questions about the problem. Why did they think this project would be useful? What do they and others in the organization hope to accomplish with the project? What is the history of the issue? Which personnel are
involved in the issue? Ask if they have some written materials (proposals, annual reports, research reports, etc.) that tell more about this issue. Ask if there are others in the organization that you should meet with to learn more about the issue.

4. If you think this is the project for you, **make sure the client understands the project timeline and due dates** to ensure these work for their organization. Close the meeting by **letting them know you will be doing some library research on the issue and developing a plan** (in addition to reading the materials they gave you and possibly contact and interviewing others for their thoughts).

5. **If you are unsure** about this project and want to talk to other clients, **let them know you’re exploring several projects** and will get back to them. If you decide not to choose them, do get back to them with a phone call thanking them for the meeting and letting them know you have decided to take another project. (Remember, this may be an organization where you’d like to interview for a job in the future. **Do get back to them.**)

6. If you decide to pursue their project, you will probably need to **meet with the client again**. Often, the first meeting does not provide sufficient information for you to understand the client’s needs and proceed with writing the project proposal and prospectus. After the initial meeting, you will learn all you can about the project, reading the client’s materials and those from online sources, looking through your MURP course materials for information and ideas, finding and reading scholarly articles, talking to MURP faculty, etc. You may meet with the client in person to finalize details with them, or you may do this through a phone call or an e-mail. But, leave the door open to contact them again if you have questions **before** finalizing the prospectus. **Understanding the magnitude and scope of the project can be an iterative process.**

7. You will **meet with them again (in person or electronically) after you’ve written a draft of the Prospectus** to get their feedback on the tasks, methods, timelines, etc. you have proposed.

8. You will **meet/communicate with them periodically** throughout the Capstone semester to keep them posted on your progress. Further, your client should be able to help you gain access to others in the organization as needed, as well as other human and data resources.

9. As you begin to get results, you will want to share these with your client, perhaps even before you have things written in a formal manner. **Let them know what you’re finding so that the drafts are not a total surprise.** Then, get their feedback on the drafts.
10. **Always behave like a professional.** Dress appropriately. Be on time. Be polite. Listen carefully. Attempt to be neutral, yet help the client reach their goals.

Note: Your Capstone project must first and foremost serve the client’s goals. But, it must also serve the MURP program’s goals of assessing the knowledge and skills you have obtained in the program. Your Capstone course instructor may ask you to “tweak” the project in ways that allow us to evaluate your academic performance as well as meet your client’s needs. We must make sure the project is sufficiently scholarly for a MURP graduate and make sure it is feasible to conduct in the time frame allotted.

**Communication is Critical to a Successful Capstone!**

Remember, **communication** is at the foundation of any positive relationship, and having a **positive relationship** with your client is critical to a successful Capstone project. Therefore, do your best to maintain regular, two-way communication with your client. Learning how to professionally engage with (and manage) your client is an important part of the Capstone process.

Talk to your Capstone instructor promptly if you experience challenges working with your client! We are here to help you be successful.
ROLES AND EXPECTATIONS

Your Capstone project is essentially completed under a committee consisting of two persons: your Capstone instructor and your client. These two individuals will help you plan and carry out your project, and they will evaluate the quality of your work. They both must approve your project prospectus.

Students should also seek out a subject-matter expert (or experts) to consult during the completion of the project. This individual(s) can help you answer technical questions associated with your project, and can ultimately help you expand your professional network. Additionally, the MURP Alumni Association has expressed their interest in helping current MURP students achieve success in their Capstone efforts. The MURP faculty will work to help connect Capstone students with interested alumni.

The Student

It is the student's responsibility to select a Capstone topic and to secure a client for the project. The student is also responsible for ensuring completion of the report in a timely fashion and a satisfactory manner, and to communicate regularly with the Capstone course instructor and the client.

The Course Instructor

The Capstone course instructor will receive and comment on written drafts of the project, and meet with each student individually at both prescribed meetings and on an as-needed basis. The instructor is there to help you be successful and help you achieve a professional quality final product. The course instructor determines your final grade in the course.

The instructor’s role is to guide the student in selecting a project and specifying its scope, to assist the student as needed in conducting the project, and to provide extensive feedback to the student on various drafts of the project. In order to provide students with the individual attention needed, Capstone course sections are restricted to a maximum of 20 students per section. Students may be moved to different sections to accommodate this class size requirement.

The Client

The client is the beneficiary of your project. The client establishes the parameters of the project and works with you to clarify the project. The client should be able to provide the background information and access to resources, etc., as well as help you identify appropriate research materials or contacts necessary to successfully complete your project. The client should provide
feedback on drafts of your project. They will complete an evaluation of your final project, and
their input will be taken into account in determining your capstone course grade. Additionally,
the client will be invited to the capstone poster presentation event at the end of the semester.

Students conduct the projects "pro bono"; there is no cost to clients for having students
conduct a project for their firm or agency. Moreover, per university rules, students cannot be
paid to do a Capstone project, nor complete it as part of their regular employment.

In exceptional circumstances, where it is unreasonable to find an actual client, the Capstone
project may be prepared for a hypothetical client under the supervision of at least two faculty
members.

The Subject-Matter Expert
Students are encouraged to identify and meet with individuals who have expertise in the
content area of the project. You should consult with them early in the process to get
recommendations for literature to review, data sources, project examples, etc.

You may ask your subject-matter expert questions about specific aspects of your project,
and/or to comment on drafts of the project.

The subject matter expert will not officially evaluate your project and will not determine your
course grade. All subject matter experts will be invited to attend the Capstone Poster
Presentation Event at the end of the semester.

MURP Alumni Mentors
The Capstone instructors, in cooperation with the MURP Alumni Association, will provide
opportunities for Capstone students to meet or communicate with MURP alumni who have
expressed an interest in helping mentor Capstone students with their projects. Students should
consider engaging with a MURP alum as an optional resource available to them. Details on how
and when Capstone students can connect with MURP alumni volunteers will be provided at the
beginning of the Capstone semester.
FREQUENTLY ASKED QUESTIONS

What are the prerequisites for the Capstone course?

Officially, the only prerequisite for the Capstone course is Planning Workshop (URPL 5060). However, it is strongly recommended that, at a minimum, students complete all core courses before taking the Capstone course. It is intended that the Capstone course be taken in the student’s last semester of classes before completing the MURP degree. Students are required to identify their client and topic prior to the beginning of the semester in which they officially enroll in the Capstone course. Although students may take other courses at the same time as Capstone, such as Planning Project Studio (URPL 6000), they are strongly encouraged to limit additional coursework because of the work required for the Capstone.

Does the Capstone course meet every week?

No. All Capstone course sections will meet as a single class at the start of the semester and at a few other times during the semester. Canvas will be used as a resource for students to share information with each other as needed between class meetings.

Can students do a group Capstone project?

A small group of two or three students may pursue a larger-scale Capstone project in concert. In such instances, the project must be of sufficient scope to warrant multiple-student involvement, and each student must make a clearly identifiable, independent contribution. The team should complete and submit the Student-Initiated Project Proposal – Team form by the deadline.

What if I cannot complete my Capstone project by the end of the semester?

The Capstone is intended to simulate a professional planning experience. Meeting deadlines and producing deliverables on time is a key aspect of professional practice. Students are expected to manage their time to meet these commitments. A grade of “Incomplete” will only be issued under very exceptional circumstances.

Can I use my employer as a client?

If a student is involved in an internship or other part- or full-time planning employment, that work context might provide ideas for Capstone topics. However, Capstone projects may NOT be conducted as part of ongoing work responsibilities. That is, a student may conduct a Capstone project for an organization that employs them, but only if that project is outside of the student’s official job responsibilities.
Keep in mind that doing a Capstone project can give you the opportunity to address new problems and to work with additional professionals outside of your current employment situation—providing a significant opportunity to expand your professional network.

**Do I have to get Human Subjects Research approval for my Capstone project?**

If your project includes collecting primary data about individuals, you may need to seek approval for your project from the Colorado Multiple Institutional Review Board (COMIRB). This process can be lengthy; consult with your course instructor early in the process. See the COMIRB website: [http://www.ucdenver.edu/academics/research/AboutUs/comirb/Pages/comirb-home.aspx](http://www.ucdenver.edu/academics/research/AboutUs/comirb/Pages/comirb-home.aspx)

**Can I write a master’s thesis instead of doing a Capstone project?**

Yes. Completion of either a Capstone project or a master’s thesis is required for graduation from the MURP Program. A thesis is recommended for students who are interested in pursuing a doctoral degree or research career, and should only be pursued by those with a proven ability to do graduate-level academic research and writing. Note that writing a thesis involves asking a MURP faculty member to agree to be your committee chair, registering for a two-semester course sequence, assembling a review committee, and following the thesis guidelines of the University of Colorado Denver Graduate School, available here: [http://www.ucdenver.edu/academics/colleges/Graduate-School/current/Pages/electronic-thesis.aspx](http://www.ucdenver.edu/academics/colleges/Graduate-School/current/Pages/electronic-thesis.aspx)

**Who do I contact for more information about the Capstone project and course?**

Students are encouraged to use all available personal, professional, and academic resources while they prepare for and complete their Capstone project.

If you have questions about the requirements for the project or the course, please contact the Capstone course instructors:

Jennifer Steffel Johnson  
[jennifer.steffeljohnson@ucdenver.edu](mailto:jennifer.steffeljohnson@ucdenver.edu)  
Phone: 303-315-0061; Office: CAP 320P

Ken Schroeppe

[ken.schroeppe@ucdenver.edu](mailto:ken.schroeppe@ucdenver.edu)  
Phone: 303-803-6948; Office: CAP 507

Jeremy Németh  
[jeremy.nemeth@ucdenver.edu](mailto:jeremy.nemeth@ucdenver.edu)  
Phone: 303-315-0069; Office: CAP 504