The purpose of completing a Master’s Thesis or Master’s Professional Project is for the MCRP candidate to demonstrate command (mastery) of the field. This is accomplished through a focused application of the analytic and synthetic skills taught in the curriculum to an aspect of the field of special interest to the candidate. The Master’s Thesis and Professional Project meets Cal Poly’s requirement for the “Culminating Experience;” it must be completed by an individual student and cannot be devised as a group project.

The California State University system defines a thesis—and a project by our interpretation—as: “...the written product of a systematic study of a significant problem. It identifies the problem, states the major assumptions, explains the significance of the undertaking, sets forth sources for and methods of gathering information, analyzes the data, and offers a conclusion or recommendation. The finished product evidences originality, critical and independent thinking, appropriate organization and format, and thorough documentation” (Title V definition for California State University system).

The quality of the Thesis and Professional Project work represents the competence of the candidate. Therefore, it must be conceptually clear, carefully designed, and thoroughly executed. Further, the product must be presented (written and illustrated) in a style that reflects the ability of the student to complete and polish the work. The effort involved must be impeccably documented both in oral defense and in the finished product submitted to the department and library.

**Definition of Master’s Thesis and Master’s Professional Project**

*Master’s Thesis (CRP 599 Sequence)*

The Master’s Thesis is a scholarly research paper which thoroughly investigates the selected subject, based upon the published theoretical and empirical literature, and which is extended further by the researcher to answer a specific research question(s). The Master’s Thesis is driven by a research method that describes how the student will test/answer the research question. The Master’s Thesis should conclude by relating the research contributions back to the relevant theory and to planning practice. The Master’s Thesis requires detailed knowledge of a chosen sub-field (not exhaustive knowledge of the broader field), it may be based on primary or secondary sources of data, and may (but is not required to) result in a publishable contribution to the development of knowledge in the field.

The Master’s Thesis learning outcomes include:

a. The ability to formulate a researchable question
b. The ability to assemble and organize data
c. The ability to determine the relevant literature related to the research question and to write a practical review of the literature
d. The ability to apply an analytical method to the assembled data
e. The ability to construct logical inferences from the analysis that extends knowledge or understanding of the field.
**Master’s Professional Project (CRP 596 Sequence)**

The Master’s Professional Project is an applied research effort that incorporates practice-based methods or approaches to address a contemporary planning issue of concern to typical planning clients (e.g., cities, developers, housing authorities, transportation agencies). The student must diagnose a problem situation, select appropriate analytic methods, evaluate alternative approaches, and recommend an approach or solution. It is carried out in a manner that demonstrates professional judgment and competence.

The primary product of the Master’s Professional Project is a professional plan/report. The Master’s Professional Project must be directed to a specific client such as a city, county, or private company, although it is not required that the client cooperate in development of the project. In addition, the Professional Project must include a separate “process section” explaining the decisions and solutions implicit in the final product including an analysis of how well the chosen framework and methodology fit the chosen project and the extent to which it might be applicable to other cases. The student may request permission to develop a Professional Project based on work from a paid, professional position. In this case, the student must be the principal author and any data, analysis, writing or other components of the project that are prepared by someone else must be clearly declared and ascribed appropriately in the prospectus and the final product.

The Master’s Professional Project exceeds the scope of a typical professional plan/report by requiring a (1) literature review, (2) theoretical framework that guides the analysis, and (3) logical discussion of methodology. The Master’s Professional Project must show the underlying assumptions, analytical reasoning, and synthetic process followed to reach a set of recommendations.

The Master’s Professional Project learning outcomes include:

- a. The ability to construct a planning question that can be answered within the project scope of work
- b. The ability to assemble relevant data related to the project scope
- c. The ability to determine the relevant literature related to the scope of work and to write a practical review of the literature.
- d. The ability to utilize an analytical framework that supports the scope of work
- e. The ability to organize and write a professional-quality plan or project report
- f. The ability to engage in a reflection of project outcomes that inform planning practice.

**Guidance on the Substance of the Master’s Thesis and Professional Project**

The Master’s Thesis and Professional Project may focus on any of a wide range of topics within the field of city and regional planning. In addition to the topic, your most important choice will be whether to pursue a Thesis or Professional Project. If you are primarily interested in answering a question about how planning, planners, or society works then you may be interested in a Thesis. For example:

1. Do prescriptive design codes out-perform discretionary design codes?
2. Do people walk more in new urbanist communities?
3. What differences can be observed in how people use public space?
4. What planning department factors are related to the quality of general plans?
5. What creek setback standards are most effective at protecting water quality?
6. What are the socio-economic characteristics of people that best predict increased light-rail transit use?
If you are primarily interested in proposing a solution to a specific problem then you may be interested in a Professional Project. For example (and paralleling the above to highlight the difference between a Thesis and Professional Project):
1. Develop a prescriptive design code for downtown Arroyo Grande.
2. Design a suburban community for Pulte Homes in Orange County that promotes walking and bicycling.
3. Redesign the Morro Bay waterfront boardwalk to better accommodate people with disabilities.
4. Prepare an innovative general plan element for Sonoma County.
5. Create a model creek setback ordinance for the State Water Resources Board.
6. Prepare an equitable and effective fee schedule for the proposed MTA “Purple Line” in Los Angeles.

Essential Components of the Master’s Thesis or Professional Project

The activities shown in Table 1 (below) must be accomplished during the preparation of a Master’s Thesis or Professional Project. Some of them are initiated early, some continue throughout, and some represent discrete decisions. Some are more extensive in the Thesis and some are more extensive in the Professional Project. The following comments highlight key conceptual aspects of the table. The procedural activities speak for themselves.

1. Framing the thesis or project question(s)
   This is the key think piece. What do you wish to pursue? The process begins in the emphasis class (CRP 545 or 548) where you begin to refine your interests and continues in CRP 513 where one or more ideas are pursued and explored. Generally you begin from a personal interest based on your own experience or observations of planning and the built and natural environment, or an idea established in class, or through reading academic or professional literature. What are people writing or talking about and why does this interest you? The first question to answer is what is known about this topic? Ask the faculty, go to professional conferences, go to the Internet, search for other theses, and read. In addition, examine the planning questions and needs that arise during your summer internship.

   Once you get a sense of what is known, you then ask: What can I do with this concept, issue, problem, or practice? In answering the question you need to reduce the bigger question into something you can manage to complete in two or three quarters time. Think about what you want to learn from the experience. Is it more about the issue or more about how you can improve your capacity as a professional planner? Try at least to understand your motivations, even if they are not to clear at the beginning.

   Start to realize that you have only so much time to complete the effort. What is possible over three quarters spending eight hours a week at a minimum? At first you will not have a clear answer. This is why talking to the faculty helps.
2. Literature Review

Initiate the literature review early during the exploration of possible topics. You need to determine what is already known (and what is not known) about the topic and how it has been studied or applied by others. You should attempt to locate the most recent material and should be sensitive to the quality of the literature reviewed, especially where there may be inconsistent or contradictory findings, and judge what is applicable to the Thesis or Professional Project. This should lead to a preliminary annotated bibliography for the Thesis or Professional Project. Unless specifically agreed on with the committee chairperson the literature citation will follow the American Psychological Association (APA) style manual as adopted by the CRP Department.

For the Thesis, the literature review usually draws from monographs, peer-reviewed journals, published reports, and scholarly books. It involves several categories of literature – information regarding the topic of investigation per se, information regarding the pertinence of the subject to city and regional planning, information regarding the research methodology or analytical approach to be used, and case studies of applications to planning practice. Therefore, a major task during the literature review is the classification of the appropriate material.

For the Professional Project, the literature review usually involves identifying state-of-the-art practice from planning documents, practitioners, planning awards, professional associations, and professional publications. In addition, it must draw from studies that examine practice from a policy analytic and program evaluation methodological perspective in order to identify strengths and weaknesses of contemporary practice.

Many theses and projects have a chapter literally labeled “literature review.” This is one acceptable organization of the final product. However, the literature may be incorporated other ways as well, so long as the documentation of the review ultimately appears in the final product.

3. Course Review

Because one purpose of the Thesis and Professional Project is to synthesize your understanding of the field, exploration of possible topics involves a review of coursework. You should screen both required courses and electives for ideas, approaches, and techniques which can be applied in the Thesis or Professional Project. In particular, you should look for relationships among the material taught in courses which can be productively combined or integrated into the Thesis or Professional Project.

The course review contributes directly to the literature review in that it identifies both categories and sources to include. Therefore, while it contributes directly to the development of the topic, it does not appear as a written chapter in the product.

4. Prospectus and Committee

A written prospectus is a roadmap for the Thesis or Professional Project regarding the topic, methodology, and schedule for completion. Therefore, it represents the transformation of a general topic into a specific proposal. This involves the following points.

a. Statement of the topic in terms of specific researchable questions or applied problem to be addressed.

b. Justification of the relevance and importance of the topic to planning.
c. Brief discussion of the theoretical context or logical framework for the investigation or project.

d. An operational statement of the research methodology or analytical approach to be followed.

e. Identification of information sources.

f. Specification of the final product.

g. Tentative chapter outline.

h. Schedule of work program.

i. Identification of any necessary support services (e.g., for data processing).

j. Preliminary literature review or annotated bibliography.

The prospectus should be very carefully conceived and written so that there is no question regarding how the work is to be pursued. It represents a plan and a commitment. Therefore, the committee must be satisfied that the topic is clear, that the research approach is manageable, and that the candidate has the capability, time, and resources to complete the work.

Graduate Education requires that the Committee Chair be a faculty member who is tenured or on a tenure track. The three-person committee normally consists of two CRP faculty members, one of whom is chair, plus one other faculty member who may come from a field outside of CRP appropriate to the topic. For a Professional Project, the third member may represent the client or otherwise come from off campus.

This is also an appropriate time to discuss format and style with your committee. At a minimum, you must abide by the Office of Graduate Education “Master’s Thesis and Project Formatting Guidelines” (online).

5. Research Method or Analytic Approach

The required Planning Research Methods course (CRP 513) is designed to guide you in developing the research method or analytic approach.

The research method for the Thesis should generally follow the scientific method or the historical analysis method. The investigation can proceed deductively (e.g., how does a general understanding of how city councils and planning commissions behave help explain a particular decision?); or inductively (e.g., what can we learn from the BART experience which we can apply more generally to future transportation planning?). The research may depend entirely on secondary sources (published literature, data, reports and other documents) or may involve primary data collection (through field work, observations, interviews, surveys).

The analytic approach for the Professional Project generally follows the rational or strategic planning model although this may be modified as has been suggested by proponents of alternative models such as communicative action and transformative planning. The input of the client in developing the appropriate analytic approach is paramount. It should, however, represent the state-of-the-art in planning as determined through the literature review.

6. Execution of Research and Writing

Sections or chapters need to be written in draft form as they are completed per the work program. The prospectus provides the preliminary literature review and methodology, so that you can focus on
writing the research findings and analysis as they are conducted. Emphasize getting sections and chapters drafted!

The chapters need not (in fact, should not) be written in the order that they will finally appear in the Thesis or Professional Project. The product should not be a play-by-play description of the research process. Rather, it should summarize the approach, discuss the findings, analyze the results (for a thesis) or make recommendations (for a project), and present the conclusions. The introduction should be written last, because it is a revision of the prospectus from a statement of what was planned to what was actually accomplished.

7. Revision, Editing and Polishing
Once all sections are drafted, the product can be assembled as a complete document. At this point, the chapter outline or order within chapters may need revision to reinforce the logic of the argument that emerges. Chapter titles, headings, introductions and conclusions need to be written or revised. Illustrations and format become important to show the coherence of the entire document. Careful editing for clarity and consistency is mandatory.

8. Oral Defense
The final conceptual step is the oral defense of the Thesis or Professional Project. The document should be generally satisfactory to the committee members before the formal defense is scheduled. Then the defense becomes a review of what you planned, how the investigation was executed and how the results were presented. Any reservations about procedures, omissions or questions of interpretation may be raised. Once the committee is satisfied with your oral response, they may accept the document as is, or require corrections before the Thesis or Professional Project is officially approved.

9. Presentation
Any time the University is in session, the candidate should present the work in a session of 15-30 minutes, followed by questions of Committee members (who should be in attendance) and any other students/faculty present. The session may be noticed in the Department and open to the public. At the discretion of the Committee, this session may function as the required oral defense, or may be held separately.

10. Approval and Filing
All committee members must approve and sign the final Thesis or Professional Project. Once it is approved you must submit it to the Office of Graduate Education per the “Master’s Thesis and Project Formatting Guidelines”.

Final approved copies of the Thesis or Professional Project are submitted electronically to the library with a copy to the Chair.

The final product is normally a written paper submitted in accordance with the Graduate Education Guidelines. Any alternate format—e.g., a videotape presentation—must be accompanied by a formal written report and must be approved in advance by Graduate Education.
Registration and Deadlines

The Thesis and Professional Project are normally taken during the second year of the MCRP program, although students will begin initial planning during CRP 513 Planning Research Methods in the first year. In addition, students are encouraged to complete some work during the summer. For each of the three quarters in the second year, the student should register for two (2) units of CRP 599 Thesis or CRP 596 Professional Project, for a total of six (6) units.
Table 1: Recommended Timeline for MCRP Master’s Thesis & Professional Project Activities

<table>
<thead>
<tr>
<th>1st-YEAR—WINTER QUARTER</th>
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<tbody>
<tr>
<td>Use the Emphasis classes (CRP 545 &amp; CRP 548) to explore topics of interest that may be relevant for a Thesis or Professional Project topic.</td>
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<tr>
<th>1st-YEAR—SPRING QUARTER</th>
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<tbody>
<tr>
<td>Enroll in CRP 513 Planning Research Methods. In CRP 513, prepare a draft prospectus and begin discussions with faculty members who may potentially serve as your committee chair. Review MCRP Thesis and Professional Project Guidelines and all Cal Poly requirements.</td>
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<tr>
<th>1st-YEAR—SUMMER QUARTER</th>
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<tr>
<td>Explore the topic thoroughly, talk with professionals, and prepare an annotated bibliography. Initiate discussions about your topic with professional planners, especially if you are considering the Professional Project. By the end of the summer you should have narrowed your topic and developed a high degree of knowledge on the topic.</td>
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<tr>
<th>2nd-YEAR—FALL QUARTER</th>
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<tr>
<td>Identify and consult with a committee chair. Prepare a synopsis for committee chair and members to include:</td>
</tr>
<tr>
<td>1. One paragraph outlining the general topic to be explored;</td>
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<tr>
<td>2. A proposed research question/project specification;</td>
</tr>
<tr>
<td>3. One paragraph outlining the research method; and</td>
</tr>
<tr>
<td>4. A list of potential committee members.</td>
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</table>

**Upon approval of synopsis, register for CRP 596/599 (2 units)—obtain registration number from your committee chair.**

**Prepare and submit a draft prospectus to the committee.** This draft must include the essential components of a thesis or project described in this resource document.

**Prospectus defense.** Provide the final prospectus to all committee members one week prior to the defense. The defense may conclude with disapproval, approval, or approval with revisions. Disapproval terminates the thesis/project option.

**Final prospectus filed with the CRP Department (initials required on MCRP Thesis/Project Approval form)** After review of any revisions, the committee will disapprove or approve the prospectus by this date. Disapproval terminates the thesis/project option.

<table>
<thead>
<tr>
<th>2nd-YEAR—WINTER QUARTER</th>
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<tbody>
<tr>
<td>Register for CRP 596/599 (2 units).</td>
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</table>

**Draft chapters due.** Dates for submission of chapter drafts may be set in the prospectus. At the end of the Winter Quarter, the committee chair will assess the student’s progress and advise continuation—or—termination of the thesis/project option.

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<tr>
<th>2nd-YEAR—SPRING QUARTER</th>
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<tbody>
<tr>
<td>Register for CRP 596/599 (2 units).</td>
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</tbody>
</table>

**Complete draft Thesis/Professional Project.**

**Oral defense and/or public presentation and revisions.** Dates for oral defense/public presentation and revisions are set in the prospectus.

**Committee approval of the final thesis/project (signatures required on the thesis Approval Page)**

Consult the Office of Research and Graduate Programs regarding deadlines for Cal Poly thesis/project approval and filing.

Bibliography
California Polytechnic State University. (2002). Guidelines for completing graduate theses and reports. San Luis Obispo: Graduate Studies Office.


