Touro University California
Public Health Program

Student Guide to the MPH
Capstone Project
2017-2018
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Purpose of the Handbook

The purpose of this handbook is to provide information vital for the successful completion of the Master of Public Health (MPH) Capstone Project. The timelines and prerequisites for completion of the project as well as the roles, responsibilities, and expectations of students and faculty are outlined in this handbook.
Glossary

The following are some terms used throughout this document.

Primary Capstone Project Advisor, Capstone Project Advisor, Faculty Advisor, Capstone Advisor, and Advisor refer to the individual public health faculty members who are advising the student during their capstone research project.

Capstone Project Coordinators and Capstone Coordinators refer to the public health faculty members who are responsible for coordinating the capstone project program. The Capstone Project Coordinator is Sahai Burrowes.

Public Health Program and Program refer to the Public Health Program in the College of Education and Health Sciences at Touro University California.

Capstone project report, Capstone manuscript, Capstone document, and (where context does not indicate otherwise) report refer to the final version of the student's written report of their Capstone project submitted to the program as a required part of the Capstone Course.
What is a Capstone Project?

OVERVIEW

Students conducting a Capstone project produce a substantial, original, independently written manuscript concerning a significant public health problem and share and defend their work during an oral presentation.

The Capstone project is a significant undertaking that gives students the opportunity to develop their analytical skills and to gain expertise in a subject area. The Capstone project is part of the MPH culminating experience, which is an essential aspect of the Touro University California Public Health curriculum. The culminating experience requires a student to synthesize and integrate knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates professional practice.

The Capstone process usually takes four semesters and consists of three phases:

- Planning and project development (usually occurring in the first and second semesters of the program),
- Conducting the project (usually occurring in the second or third semester of the program),
- Analyzing and summarizing project results (the fourth, or last, semester of the program)

Students often add an extra fifth semester to their coursework in order to give themselves time to focus exclusively on the Capstone project without the distraction of coursework or field study responsibilities.
OBJECTIVES

The specific learning objectives of the Capstone project are to:

- Apply appropriate public health theory, skills, and knowledge to a public health issue.
- Complete a major written paper on a significant public health issue or topic.
- Demonstrate proficiency in the required public health competencies.
- Demonstrate professional writing and presentation skills.

STANDARDS FOR A CAPSTONE PROJECT

Capstone projects must represent high standards of scholarly inquiry, technical mastery, and literary skill, must meet at least nine MPH competencies and should be consistent with the student’s specialty track.

For their projects, students must select an area of interest and then either:

- Conduct scholarly research on a common public health problem or interventions,
- Analyze a public health policy, or
- Evaluate a public health program that addresses a specific public health concern.

Specific guidance on developing these projects and drafting different types of manuscripts can be found below in this document.

The goal of the Capstone project should be to create a body of knowledge on which others can build, however, the overarching principle for determining suitability of a Capstone project is whether it provides students the opportunity to apply the skills and competencies acquired in the MPH program to a problem likely to be encountered in public health practice.
ALTERNATIVES TO THE CAPSTONE PROJECT

All MPH students at Touro University California are required to complete a culminating experience that includes the public health Field Study and either

- The Certified in Public Health (CPH) Examination, PH 646
- A Capstone Project, PBHC 645, or
- Both the CPH Exam and a Capstone Project.

Once a student chooses a culminating experience course, by completing a Culminating Experience Declaration Form (Appendix A) it is expected that he or she will complete that course in order to graduate and will not switch or substitute courses. If students declare that they are conducting a Capstone Project in order to graduate they must wait one academic year from the time of Capstone proposal submission in order to substitute the CPH Exam (PH 646) for their culminating experience requirement. Similarly, students who register for the CPH Exam and do not pass it must wait one academic year before submitting a proposal to conduct a Capstone Project for their culminating experience.

TYPES OF CAPSTONE PROJECTS

The Capstone Project can take one of the following forms:

RESEARCH PROJECT: The Capstone Project may involve the collection, analysis, and/or interpretation of qualitative and/or quantitative data to address a public health problem/issue of concern. Capstone Projects can involve either the analysis of existing data sets (secondary data) or the collection and analysis of new data (primary data).

Data collection for the Capstone Project is usually in the context of an ongoing faculty study, but it is also possible (although not recommended) for MPH students to initiate an original study under the guidance of a TUC Public Health Program faculty member. In the latter case, the student should allow substantial lead-time for research planning, mandatory faculty approval, and IRB approval. We strongly encourage students who are
conducting research projects to use existing (secondary) datasets. A listing of public health datasets can be found on the Touro University Library Website at http://libguides.tu.edu/c.php?g=425056&p=2903190

SYSTEMATIC REVIEW OF THE LITERATURE: A systematic review collates and summarizes all of the empirical evidence on a public health intervention that meets pre-specified eligibility criteria in order to answer a research question.

PROGRAM EVALUATION: These projects involve a detailed evaluation of an existing public health program using original data. This can involve either a process evaluation of the program, monitoring of program outputs and outcomes, conducting an impact assessment, or conducting a cost analysis of a problem. The goal of evaluation projects are to produce information that is relevant to program stakeholders for the purpose of decision-making. Unlike research projects, evaluations are not concerned primarily with producing publishable work or generating new knowledge for the research community.

POLICY ANALYSIS: These projects involve the structured analysis of the public health and political implications of a current or proposed policy compared to several other policy alternatives. Criteria used for analyzing the policy could include, among others, potential economic and financing outcomes, differing need, political feasibility, ethical concerns, and effectiveness.
WHAT IS "RESEARCH"?
Research may be very broadly defined as systematic gathering of data and information and its analysis for advancement of knowledge in any subject.

Research attempts to answer intellectual and practical questions through the application of systematic methods.

The types of research methodologies vary and are often classified into five categories:

**Qualitative:** Involves describing in detail specific situations using research tools like interviews, surveys, document analysis, and observation. Qualitative researchers are more concerned with understanding what is happening as viewed by the participants.

**Quantitative:** Requires quantifiable data involving numerical and statistical explanations. Quantitative researchers seek to explain the causes of change primarily through objective measurement and quantitative analysis (statistics).

**Correlation/Regression Analysis:** Involves determining the strength of the relationship between two or more variables. Correlation / regression researchers determine whether correlations exist between two quantitative variables.

**Experimental:** Relies on controlled experiments that compare the outcome for an experimental and a control group that differ in a defined way. Experiments have a control group, subjects are randomly assigned between the groups, and researchers tests the effects of one or more variables on the outcome.

**Meta-Analysis:** Designed to analyze multiple studies to determine if there is a consensus regarding the correctness of an hypothesis. Meta analysis researchers combine the findings from independent studies.

Source: UC San Diego, Research Experience & Applied Learning Portal: [http://real.ucsd.edu/students/what-is-research.html](http://real.ucsd.edu/students/what-is-research.html)
Students conducting Capstone projects start developing their project in their first and second semesters and work on it steadily from their second to final semester of public health study. Project development and approval steps usually take place in the first and second semester of study.

Students should expect to collect and/or analyze primary or secondary data during their third semester. During the fourth and final semester students with approved projects will enroll in PBHC 645, write several drafts of the Capstone project, submit the final draft and prepare for the MPH Capstone oral presentation. Please see Figure 1 and Table 1 for an illustration of the Capstone Project timeline.

**Capstone Schedule for Dual (COM & COP) Degree Students:**

Throughout this handbook we attempt to give students suggested deadlines for completing Capstone project steps. These deadlines are based on the schedules of independent and joint MPH students and may not be applicable to dual degree student schedules. While the overall three-to four-semester timeframe for completing Capstone Project work remains the same for all students, dual degree students should work alternative semester schedules for meeting Capstone milestones with their Faculty Advisors. The Capstone Coordinator will assist in this process if needed.

**Figure 1: Sample Capstone Project Timeline**
## Table 1: 2017-2018 Timeline For Capstone Projects

<table>
<thead>
<tr>
<th>Term of Completion</th>
<th>Fall 2017</th>
<th>Spring 2018</th>
<th>Summer 2018</th>
<th>Fall 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Select and meet with Primary and Secondary Capstone Faculty Advisor</strong></td>
<td>Students must meet with their Capstone Faculty Advisor at least 1 semester before the planned submission of their Capstone project. (e.g., for a fall 2017 submission you must meet by the beginning of the Spring 2017 term)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Submit Culminating Experience Declaration Form</strong></td>
<td>Student should submit this to the Capstone Coordinator after attending the Capstone Orientation Workshop (one is held every semester).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attend Capstone Orientation Workshop</strong></td>
<td>Students should attend this orientation workshop at least 1 semester before they plan on graduating (usually in the 2nd semester in the MPH program). The workshop will guide students through the proposal development process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Submit Capstone Proposal &amp; IRB Screening Form to Advisor</strong></td>
<td>April 14, 2017</td>
<td>June 30, 2017</td>
<td>Sept. 29, 2017</td>
<td>March 30, 2018</td>
</tr>
<tr>
<td><strong>Enroll in the Capstone Project Course</strong></td>
<td>The semester you plan to complete your project.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIH Human subjects training</td>
<td>Complete the online “Human Participant Protection Education for Research Teams.”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Submit first draft of completed manuscript to Primary &amp; Secondary Faculty Advisors</strong></td>
<td>Sept. 8, 2017</td>
<td>Feb. 9, 2018</td>
<td>June 15, 2018</td>
<td>Sept. 7, 2018</td>
</tr>
<tr>
<td><strong>Submit second draft to Primary &amp; Secondary Faculty Advisors</strong></td>
<td>Oct. 10, 2017</td>
<td>Mar. 9, 2018</td>
<td>July 6, 2018</td>
<td>Oct. 5, 2018</td>
</tr>
<tr>
<td><strong>Submit final draft Capstone Paper to Primary &amp; Secondary Faculty Advisors</strong></td>
<td>Nov. 3, 2017</td>
<td>April 13, 2018</td>
<td>July 20, 2018</td>
<td>Nov. 2, 2018</td>
</tr>
<tr>
<td><strong>Capstone presentations</strong></td>
<td>Nov. 21, 2017</td>
<td>May 3, 2018</td>
<td>July 26, 2018</td>
<td>Nov. 20, 2018</td>
</tr>
</tbody>
</table>

Notes: Students will submit all manuscript drafts to their Capstone Faculty Advisor. Students who do not complete their Capstone project in the semester in which they registered for the Capstone course should enroll in the Capstone continuation course the following semester. See the registrar’s page [http://studentservices.tu.edu/registrar/calendar.html](http://studentservices.tu.edu/registrar/calendar.html)

1 Date subject to change

2 Capstone proposals must be submitted to the Capstone Review Committee at least 1 semester before the intended Graduation/Completion date. Capstone project proposals will be reviewed by the Capstone Review Committee. Only approved projects can be used for the Capstone course.

3 Dates to submit drafts to Capstone Faculty Advisor may vary at the discretion of your advisor.

4 The final version of the Capstone paper must be submitted and approved by to the Primary and Secondary faculty adviser at least 3 weeks before the scheduled presentation date. Presentation slots will not be scheduled for students who do not have an approved final draft.
Stage 1: Applying to Conduct a Capstone Project

Students must apply for, and be approved to conduct a Capstone Project. The application process involves:

1. Finding a Primary Capstone Project Faculty Advisor who agrees to lead the supervision of the project
2. In collaboration with the Primary Capstone Project Faculty Advisor, identifying a Secondary Capstone Project Faculty Advisor
3. Declaring your choice of the Capstone Project or the Comprehensive Exam as your culminating MPH experience
4. Attending a Capstone Orientation Workshop
5. Writing a proposal under the guidance of both the Primary and Secondary Capstone Project Faculty Advisors and selecting the competencies the project will meet.
6. Submitting the proposal to the Capstone Project Review Committee for review.

Only projects approved by the Capstone Project Review Committee may be used for a Capstone Project.

Step 1: Find Primary and Secondary Capstone Project Faculty Advisors (Semester 1)

Who can be my Capstone Project Faculty Advisors?
The student’s assigned public health Faculty Advisor is, by default, his or her Primary Capstone Project Faculty Advisor. However, students may (and are encouraged to) request a Primary Capstone Advisor from any of the Public Health Program faculty based upon the faculty member’s expertise and interest in the project area. The Primary Capstone Advisor should be someone with whom you feel comfortable working. Please view the list of faculty advisors for more information on their research interests.

Faculty members may decline to take on Capstone projects if they feel that the project is a poor match for their research expertise or if their schedules are too full to adequately
mentor students through the Capstone process. In these cases the student may contact the Capstone Coordinator if they require advice on finding a substitute advisor.

Once the Primary Capstone Project Faculty Advisor has been identified, and areas of interest for the focus of the Capstone Project have been identified, a **Secondary Capstone Project Faculty Advisor** must also be identified.

**Who can be my Capstone Project Secondary Advisor?**
The student should consult with their Primary Capstone Project Faculty Advisor to determine who among the Public Health Program faculty can serve as a Secondary Advisor on the project. The role of the Secondary Capstone Project Faculty Advisor is to provide another source of feedback and perspective on the development and execution of the Capstone Project. Typically, the Secondary Capstone Advisor will have expertise and/or interest in the subject area that will be the focus of the Capstone. While the Primary Capstone Advisor will provide the more intensive oversight and direction on the Capstone Project, the Secondary Advisor must also approve:

1) the Capstone proposal submitted to the Capstone Project Review Committee;
2) the submitted Institutional Review Board (IRB) screening form;
3) the student’s progression to the presentation stage; and
4) the final Capstone manuscript.

**Can I have outside advisors?**
Students may also add non-public health faculty or community members as additional advisors on their project, but their Primary and Secondary advisors must be a current Touro University California Public Health Program faculty member.

Outside advisors may only contribute to the development of project activities and content. They can play no role in the grading and approval of Capstone projects.

We suggest that students who are interested in conducting Capstone projects start meeting with different faculty members in their first semester of MPH study to determine their interests and discuss potential projects. Having a one-page memo that sketches out your thoughts for project ideas (what you think you want to study and how you might study it) will facilitate these meetings.
Step 2: Developing a Capstone Project Topic (Semester 1)

Students need to identify a project that is feasible, that meets their interests, that it incorporates core, track, and cross-cutting public health competencies, and that meets the standards of the MPH program. This process can take several weeks or months and is an iterative process. Students should start this process early, ideally in their first semester of the program.

One way to begin this process is to brainstorm the kinds of projects, populations, or problems that are of interest. Think about population groups (e.g., adolescents, intravenous drug users) that you would like to work with, problem areas that are of interest (e.g., HIV/AIDS, reproductive health, lead poisoning), particular countries or geographic areas that you would like to work in, and skills/analytic methods that you would like to develop.

Using an Advisor’s Research Project for a Capstone Project
Although Capstone projects may be part of a faculty member’s or community partner’s ongoing research or evaluation activities, the Capstone project must be a separate, independent, sub-project conducted by one student under the guidance of his or her Capstone Advisor. Please review the section below on Project Ownership and Authorship for more information on these types of projects.

Using Current or Past Employment, Field Study Experience, or Course Work for a Capstone Project

Students may not use previous course work for Capstone Projects.

Previously collected data from a Field Study experience or from a student’s current or past employment (secondary data analysis) can be used for a Capstone project. The use of Field Study data for Capstone projects is, however, discouraged as the short duration and high intensity of Field Study assignments rarely provides sufficient time for Capstone project development.

For projects using either past employment or Field Study data, IRB approval is required before either primary data collection or the analysis of secondary data can occur and all
projects still require a proposal, Advisor and Capstone Review Committee approval and approval from the originating organization.

**Step 3: Declaring Intention to Conduct a Capstone Project (Semester 2)**

Each semester, students can complete a Culminating Experience Declaration form (see Appendix A), indicating their preference for either taking the Comprehensive Exam or the conducting a Capstone project.

**Step 4: Attend Orientation Workshop (Semester 2)**

Each semester the program will conduct a Capstone Orientation Workshop that outlines the Capstone process and provides general guidance on proposal development. Students are required to attend this workshop in the semester in which they plan on submitting their proposal for approval (this will usually be in the second semester of the MPH program). The workshop is free and has no units. It will be scheduled by the Capstone Coordinator.

**Step 5: Develop Proposal and Submit for Approval (Semester 2)**

A project proposal is developed in regular meetings between Capstone advisors and students. A Capstone Project proposal outline can be found in Appendix B.

- The proposal should be submitted to both the Primary and Secondary Capstone Advisors prior to the Capstone proposal submission deadline (see Table 1) and to the Capstone Coordinator at least one semester before the student plans on finishing the program.
- Students may **not** enroll in the Capstone Course (PBHC 645), until their proposal has been approved by the Capstone Advisor and Capstone Review Committee.

The Capstone Review Committee reviews proposals once per semester (submission deadlines are listed below in the “Timeline” section of this document). The proposals are reviewed for clarity, feasibility and readiness for implementation (see the evaluation rubric in Appendix C). The Committee then recommends that the proposed student project:

- **Proceed** (no further revision needed);
• Be revised and resubmitted to the Primary and Secondary Faculty Advisors for approval; or
• Be rejected, in which case the student must develop a different or significantly revised project proposal and resubmit it to the Capstone Review Committee.

**Step 5: IRB Screening Form and/or Submit IRB Proposal (Semester 2)**

The purpose of the Touro University California Institutional Review Board (IRB) is to review all projects involving human participants to ensure that participants’ rights and welfare are protected, that the benefits of participating in projects outweigh risks, that participants give informed consent for participation, and that projects comply with institutional policies and federal laws (45 CFR Part 46).

All Capstone projects must be screened by the Touro University California IRB before project activities begin regardless of project type. An IRB Screening Form (see Appendix D) is required for all Capstone Projects. Once the IRB Screening Form has been submitted, ethical clearance can be obtained in one of two ways:

1) *IRB exemption status granted after review of the IRB Screening Form.* The Screening Form is usually sufficient for non-research-related Capstone Projects (policy analysis) and “exempt” research projects where documentation of exemption is required (e.g., systematic reviews, studies using de-identified secondary data).

2) *By writing and submitting a formal IRB proposal application and gaining IRB approval.* After reviewing the Screening Form, the IRB may decide that a full proposal is required to assess the project. A formal proposal is required for all research projects involving primary data collection from human subjects and for research projects that use secondary data that retains identifying markers.

**Determining if Your Project Requires an IRB Proposal Application and Review**

If the student is unclear as to whether a project requires a formal review, he or she should submit a Screening Form alone initially and the IRB will let him or her know whether a proposal application is required. Capstone Projects that are not research projects usually require only a Screening Form and do not require a separate IRB proposal application. The
same is true for research projects that use secondary, de-identified data and research projects that do not involve human subjects. These projects are usually granted exempt status after a Screening Form has been submitted.

An IRB proposal is required for all research projects that:

- Involve primary data collection from human subjects, or
- Use secondary data from human subjects that has identification information.

The TUC IRB must review and approve these projects.
Table 2: IRB Requirements

<table>
<thead>
<tr>
<th>Capstone Project Type</th>
<th>Submissions Required</th>
<th>Timeframe for Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Project</td>
<td>Screening Form required. An IRB proposal will be required for all projects involving primary data collection from human subjects or the use of secondary data from human subjects that has identification markers.</td>
<td>Secondary, de-identified data: 2 weeks for return of Screening Form. Primary data or secondary data with identification markers: 2-3 weeks for initial feedback on IRB proposal. Several rounds of feedback common each with 2-3 week turnaround periods.</td>
</tr>
<tr>
<td>Systematic Review</td>
<td>Screening Form required</td>
<td>2 weeks for return of Screening Form</td>
</tr>
<tr>
<td>Policy Analysis</td>
<td>Screening Form required</td>
<td>2 weeks for return of Screening Form</td>
</tr>
<tr>
<td>Program Evaluation</td>
<td>Screening Form required (most evaluation projects involving human subjects will require a proposal and IRB review)</td>
<td>Expect 2 weeks for return of Screening Form. If IRB approval is required, expect the same timeframe as with primary data collection for a research project.</td>
</tr>
</tbody>
</table>

Tips on Submitting an IRB Proposal

The Primary Capstone Project Advisor submits Screening Forms and, if needed, IRB proposals, to the IRB on the student’s behalf. [IRB proposal guidelines](http://research.tu.edu/_resources/pdfdocuments/tu_ca_irb_standard_format.pdf) can be found in on the TUC IRB Website. **NO DATA COLLECTION OR SECONDARY DATA ANALYSIS CAN OCCUR PRIOR TO IRB APPROVAL.** There are **no retroactive IRB approvals** for data collected and/or analyzed prior to IRB approval.

Please note that for projects involving primary data collection, all **data collection instruments** (e.g., surveys, interview guides, training curricula), **data storage plans**, and participant **recruitment material** (e.g., scripts, flyers) **must** be submitted as part of the IRB application. In addition, after approval, if there are any significant changes to the research protocol (including changes to data collection instruments) a **modification request** must be submitted to the IRB.
**Ethics Training Requirement**
Students conducting research projects are required to complete the [National Institutes of Health course in Human Subject Protections](https://www.cit.nih.gov/training/). Upon completion, a copy of the certificate should be submitted with the IRB application.

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**Stage 2: Conducting the Capstone Project**

This is the phase during which students actually carry out Capstone activities (e.g., data analysis). Conducting the Capstone project usually involves one or two semesters of work. As a rule students should expect to spend **at least 10-12 hours per week** working on their projects during this period. During this time students should meet with faculty regularly to discuss the project and troubleshoot problems. Students should be sure to carefully document their work and keep organized records and files in this period in order to facilitate the writing phase of the project.

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**Stage 3: Writing the Capstone Paper**

**STEP 1: ENROLL IN THE CAPSTONE COURSE**

When students and their advisors deem that they are ready to start analyzing and writing up their project results, the student should enroll in the [Capstone Course, PBHC 645](https://www.tufts.edu/). This is a one-unit, one-semester course that students usually register in their fourth and/or final semester, after having finished their core and track courses. Students should only enroll in this class when they feel that they can reasonably finish analyzing data, write up project findings, and prepare for an oral presentation in a single semester.
STEP 2: WORK WITH YOUR ADVISOR

During the final Capstone semester, students will develop several drafts of the project manuscript that they will submit to their Capstone Advisor for review and feedback. The student is required to submit sections of the manuscript to the Primary Capstone Project Faculty Advisor as outlined below in the timeline section, unless an alternate schedule has been otherwise specified and agreed upon.

The Secondary Capstone Project Faculty Advisor will also review drafts and give feedback to the student. Students should expect to go through several revisions of their manuscript with their two Faculty Advisors. Students should take care to incorporate the feedback of their advisors into subsequent drafts.

Advising Meeting Schedule During Final Capstone Semester
The outline below represents the minimum number of advising meeting necessary to develop a Capstone project after the proposal phase. Other, shorter meetings may be necessary to develop and finalize the project. Meetings may occur remotely or in person.

First Advising Meeting: Finalize Background, Plan Analysis
At this meeting the student should hand in a final version of their literature review/background and methodology section. Data analysis plans/progress should be discussed and public health competencies that the project meets reviewed and finalized.

Second Advising Meeting: Data Analysis
At this meeting initial analysis notes, tables and graphs should be presented and reviewed

Third Advising Meeting: First Draft Due
A completed full first draft of the Capstone manuscript should be handed in at this meeting (at least ten weeks before the end of the semester). This draft will also be reviewed by the Secondary Capstone Project Faculty Advisor. It is typical that a student will go through several drafts before getting to the final version that they hand in.

Fourth Advising Meeting: Final Draft
At this meeting the final draft of the Capstone manuscript should be submitted for approval by the two Faculty Advisors. The focus of this meeting will be preparing for the
Capstone oral presentation. This meeting should occur at least **three weeks** prior to scheduling the student for oral presentation. Projects that are not deemed to be satisfactorily complete at this meeting will not be approved for presentation.

**Manuscript Guidelines**

Capstone papers should be approximately 3,000 to 15,000 words, not including supporting tables and figures, preliminary pages, appendices, and references. All manuscripts must be carefully written. They must be thoughtful, well researched, supported, and organized.

Guidelines for the required formatting and layout of the preliminary pages and end-matter for the Capstone manuscript can be found in the Capstone project style guide, which is reproduced in **Appendix E.** The guidance on front-matter and appendices holds for all Capstone manuscripts regardless of project type. However, the exact format and content of the main Capstone manuscript text and references will depend on the type of Capstone being conducted. When in doubt, students should follow APA guidelines.

The main text of **research projects** and **systematic reviews** are required to be written as a **journal article** following the author guidelines of one of the following journals.

- American Journal of Public Health research article and systematic review guidelines ([http://ajph.aphapublications.org/userimages/ContentEditor/1432646399120/authorinstructions.pdf](http://ajph.aphapublications.org/userimages/ContentEditor/1432646399120/authorinstructions.pdf))

In addition to the style and content rules laid out in the journal guidelines, students will be required to submit detailed appendices and datasets outlined in Table 2 below.

Students have the option of writing program evaluations as journal articles or as normal manuscripts (they should consult their Capstone Faculty Advisor about this option). The content guidelines for all non-research projects (policy analysis, program evaluation) can be found in **Appendix F** along with more detailed guidance on the type of content to include.
in systematic reviews. Additional manuscript sections may be required by Capstone Faculty Advisors.

**Table 3**, below summarizes the generic components of Capstone manuscripts and indicates how they map to the sections of different types of Capstone Projects. While the titles of sections vary by project type, most Capstone projects require similar kinds of information to be provided in a similar order. Students should use the specific outlines provided in Appendix F and journal author guidelines as their main guide for determining the content in their manuscripts.
<p>| Table 3: Guide to Content Requirements for Different Capstone Project Types |
|-------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <strong>Main Content Areas</strong>                          | <strong>Capstone Proposal</strong> | <strong>Research Project</strong> | <strong>Systematic Review</strong> | <strong>Program Evaluation</strong> | <strong>Policy Analysis</strong> |
| <strong>PRELIMINARY PAGES</strong>                           |                  |                  |                  |                  |                  |
| Title Page                                      | No               | Yes             | Yes             | Yes             | Yes             |
| Dedication (optional)                           |                  |                  |                  |                  |                  |
| Acknowledgments (may be optional)               |                  |                  |                  |                  |                  |
| <strong>Abstract</strong>                                    | Yes (omit findings) | Yes. Follow journal rules | Yes. Follow journal rules | Yes. &quot;Executive Summary&quot; | Yes. &quot;Executive Summary&quot; |
| <em>This is a summary of all the central elements of the project, e.g., the rationale, objectives, methods, populations, time frame, and outcomes/findings.</em> |                  |                  |                  |                  |                  |
| <strong>MAIN TEXT &amp; REFERENCES</strong>                     |                  |                  |                  |                  |                  |
| Introduction /Background/Literature Review      | Yes              | Yes. Follow journal rules | Yes. Follow journal rules about what to include | Yes. &quot;Problem Statement&quot; | Yes. &quot;Problem Statement&quot; |
| <em>This section describes the reasons for conducting the project in light of current knowledge. It should answer the question of why and what: why the project needs to be done and what is its relevance to public health. It should include a well-documented statement of the need/problem that is the basis of the project. The magnitude, frequency, affected geographical areas, ethnic &amp; gender considerations, etc. of the problem should be followed by a brief description of the most relevant studies published on the subject that summarizes what we know about the problem.</em> |                  |                  |                  |                  |                  |
| Purpose of the Project (Goals &amp; Objectives)     | Yes              | Yes             | Yes             | Yes             | No              |
| <em>Broad statements of what the project hopes to accomplish. Specific objectives are statements of the research or evaluation question(s). Objectives should be simple (not complex), specific (not vague), and stated in advance (not after the research is done).</em> |                  |                  |                  |                  |                  |
| Study Design                                    | Yes              | Yes             | Yes             | Yes             | Yes. Policy Options, Evaluation criteria |
| <em>The discussion of design of the study should include information on the type of study, the research population or the sampling frame, inclusion &amp; exclusion criteria, &amp; the expected duration of study.</em> |                  |                  |                  |                  |                  |
| Methodology                                     | Yes              | Yes. Follow journal | Yes             | Yes             | Yes. &quot;Methods for measuring* |
| <em>The methodology might include detailed information on data collection, indicators/measurements, observations made, statistical or qualitative</em> |                  |                  |                  |                  |                  |</p>
<table>
<thead>
<tr>
<th>Main Content Areas</th>
<th>REQUIRED?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>analyses to be conducted. Project interventions (e.g., conducting a training) and procedures should be described in detail. Well known, validated instruments and standardized and/or documented procedures/techniques should be used and should be described and cited in the bibliographic references.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Results</strong> Present the results of the project for example results of analytical models run on data, or themes from interview data. Explain the product of the effort put forth.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Ethical Concerns</strong> This section should document the issues that are likely to raise ethical concerns. It should also describe how the investigator(s) plan to obtain informed consent from the research participants (the informed consent process). Provide information on how the safety of research participants will be ensured. This can include procedures for recording and reporting adverse events and their follow-up, for example.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Discussion</strong> Discuss, in detail, the project results. Place the results in the context of the existing base of knowledge on the topic, and discuss limitations. Interpret findings and explain interesting or surprising findings</td>
<td>No</td>
</tr>
<tr>
<td><strong>Conclusion &amp; Significance</strong> Provide discrete conclusions supported by evidence. Describe any further study or effort implied by the conclusions, and give equal attention to positive and negative conclusions.</td>
<td>Yes, Significance</td>
</tr>
<tr>
<td><strong>References</strong> A list of consistently cited references in either APA format or the format required by the relevant publication should be included</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Back Matter

<table>
<thead>
<tr>
<th>Appendices</th>
<th>Some of this is included in IRB</th>
<th>Yes (regardless of journal rules)</th>
<th>Yes (regardless of journal rules)</th>
<th>Yes</th>
<th>If applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support materials</strong> include IRB approval letters, curricula used, letters of support, data analysis coding sheets, cleaned versions of data analysis programming files (e.g., Stata .do files) among others. <strong>Instruments used to collect data</strong> (questionnaires, observation recording form, case report forms etc.) <strong>must</strong> also be provided as appendices.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Datasets</strong> Electronic copies of all original (primary) datasets that are not owned by another organization must be submitted along with the Capstone manuscript. Web links to secondary public datasets should be provided</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>If applicable</td>
<td>If applicable</td>
</tr>
</tbody>
</table>
Stage 4: Oral Presentation

SCHEDULING THE PRESENTATION

After the Primary and Secondary Capstone Project Faculty Advisors have approved the final draft of the Capstone project manuscript, the Primary Faculty Advisor will let the Capstone Coordinator know that the student is planning on presenting work that semester. The deadline for this is three weeks prior to the scheduled presentation date. The presentations are generally scheduled for the last week of the respective public health term. It is expected that students who are presenting their Capstone Projects will attend the entire day of Capstone Presentations, to support and celebrate the work of their colleagues as well as their own.

FORMAT OF THE PRESENTATION

During the presentation, each student is allocated 20 minutes to discuss their project and an additional 10 minutes for a question and answer session. Presentations can be conducted remotely if the student is no longer in the Touro University California area. A suggested outline of the presentation and tips for the presentation are provided in Appendix J.

SUBMITTING THE POWERPOINT

Your PowerPoint (.ppt) presentation file should be of a size that is transmittable by email. At least 48 hours before your presentation, email an electronic copy of your presentation to your Primary Capstone Project Faculty Advisor, copying the Capstone Coordinator. You should bring the file on a memory stick as a back up. If you continue to make changes to your presentation after the deadline (which is discouraged) be sure to send the most recent version to your Advisor and the Coordinator.
ORAL PRESENTATION FEEDBACK

A quorum of at least three Touro University California Public Health Program faculty members must attend oral presentations. They will grade the quality of the presentation and provide feedback for future work and for potential manuscript development for publication or further dissemination.

In addition to being evaluated on their ability to address the topics listed in the presentation outline, students will also be evaluated on their professionalism, including, but not limited to, professional appearance/dress, written and verbal communication, and punctuality. Again, students are expected to attend the entire set of presentations, demonstrating professionalism and collegiality. A structured evaluation form will be used during this presentation. Please see Appendix G for the Capstone Presentation Evaluation Form.

The Capstone Coordinator will summarize the faculty feedback and give it to the relevant Primary Capstone Project Faculty Advisor.

Stage 5: Manuscript Submission & Grading

SUBMISSION CHECKLIST

The following documents are required for filing a Capstone project and receiving a grade (see Table 4 for a summary).

1. A final, clean (no mark ups, highlighting or track changes) electronic version of the Capstone manuscript including all appendices and supporting document.
   a. This is submitted by the student via email to the Capstone Coordinator and the Primary Capstone Project Faculty Advisor, and uploaded to the Blackboard site for the Capstone Course.

2. An electronic copy of a signed Publication Statement (see Appendix H).
   a. This documents states that the ownership of the products of faculty or community projects remain with faculty and/or community members and
cannot be published or publically presented without their consent. It also reiterates that students will consult Faculty Advisors and/or community partners regarding co-authorship of all publications and public presentations related to Capstone projects. The document should be uploaded to Blackboard when

3. A completed and signed Evaluation Rubric (see Appendix I).
   a. This is signed by both the Primary and Secondary Capstone Project Faculty Advisors and submitted to the Capstone Coordinator.

**GRADING THE CAPSTONE**

The Faculty Advisors identified as the student’s initial Capstone Project Faculty Advisors in the Capstone proposal will evaluate the student project and assign a final grade of Pass or Fail. The Primary and Secondary Capstone Project Faculty Advisors will provide the Capstone Coordinator with the Evaluation form prior to the end of the semester. After confirming grades with the Advisors, the Capstone Coordinator submits the student grade for the PBHC 645-Capstone Course to the Registrar’s Office.

**INCOMPLETE GRADES AND CONTINUING COURSES**

Occasionally, students do not complete their Capstone project during the semester that they are enrolled in PBHC 645. If this occurs, they are given a grade of incomplete (INC) and are given one (1) full year to satisfy the course requirements in order to remove the "INC". In order to retain “active MPH student status” while completing their Capstone project, students are allowed to register for a non-credit PBHC 645-A Capstone Continuation Course each subsequent academic session until the Capstone is completed (up to a maximum of two (2) academic semesters). The student will receive a grade of pass or fail or INC for each of the semesters in which he or she is registered. A $75 registration fee will be charged for each academic semester of enrollment in the continuation course.
OWNERSHIP, DATA SHARING, AND AUTHORSHIP

General Guidelines
All Capstone projects are considered **collaborative endeavors** between Public Health Program faculty, students, and involved community organizations as faculty and community members often play a central role in designing projects. In keeping with academic norms of courtesy, Faculty Advisors and involved community members should be consulted regarding their wishes for co-authorship of Capstone manuscripts and, if work is co-authored, be alerted when project findings are submitted for public presentation or publication.

DETERMINING AUTHORSHIP
Students and faculty should use the APA’s tools for determining authorship in manuscripts developed from Capstone projects. General information on determining authorship can be found on the APA’s website: [http://www.apa.org/science/leadership/students/authorship-paper.aspx](http://www.apa.org/science/leadership/students/authorship-paper.aspx)

Links to the APA’s tools are provided below:

- Authorship agreement (PDF, 16.1KB)
- Authorship determination scorecard (PDF, 175KB)
- Authorship tie-breaker scorecard (PDF, 60KB)
- Publication contract (PDF, 38.4KB)

Shared Projects
When students work on **existing community or faculty projects**, ownership of all project material (e.g., data collected, forms created) and rights to determine authorship of future publications, remain with the Public Health Program Faculty Principal Investigator (PI) and/or the community organizations involved in the project. Students may **not** present or publish findings related to these kinds of Capstone Projects without the permission of the PI and the director of concerned community organizations.
**Abandoned Projects**
When Capstone projects are abandoned (e.g., the student leaves the program without graduating), students must submit all Capstone data and project material in progress to their Capstone Faculty Advisor. Ownership of all data from abandoned projects revert to the TUC Public Health Program and these data and materials can be used by Touro Public Health students or faculty for future projects.

**Data Sharing**
Electronic copies of all original (primary) datasets that are not owned by another organization **must** be submitted along with the final draft of the Capstone manuscript.
<table>
<thead>
<tr>
<th>What</th>
<th>When</th>
<th>Submitted To</th>
<th>Where to Find Guidance/Forms?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culminating Experience</td>
<td>(Based on desired graduation date) Usually beginning or end of 2\textsuperscript{nd} semester in the program</td>
<td>Capstone Coordinator</td>
<td>Appendix A</td>
</tr>
<tr>
<td>Declaration Form</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capstone Project Proposal</td>
<td>(Based on desired graduation date) Usually 2nd/3rd semester in the program</td>
<td>Capstone Review Committee via Capstone Advisor</td>
<td>Appendix B</td>
</tr>
<tr>
<td>IRB Application or</td>
<td>As above. For research projects involving primary data collection from human subjects, the IRB application should be submitted 2 months before collection</td>
<td>IRB via Capstone Advisor</td>
<td>Screening Form Appendix D.</td>
</tr>
<tr>
<td>Screening Form</td>
<td></td>
<td></td>
<td>IRB Application at TUC IRB site</td>
</tr>
<tr>
<td>Final Draft of Manuscript</td>
<td>3 weeks before presentation (roughly 1 month before end of semester)</td>
<td>Capstone Advisor, Blackboard</td>
<td>Table 2. Blackboard</td>
</tr>
<tr>
<td>with Appendices</td>
<td></td>
<td></td>
<td>Appendix F</td>
</tr>
<tr>
<td>Publication Statement</td>
<td>With final draft of manuscript</td>
<td>Blackboard</td>
<td>Appendix H</td>
</tr>
<tr>
<td>Signed Project Evaluation</td>
<td>With final draft of manuscript</td>
<td>Capstone Coordinator</td>
<td>Appendix I</td>
</tr>
<tr>
<td>Rubric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation file</td>
<td>48 hours before presentation which is usually the second to last Thursday of the semester</td>
<td>Capstone Advisor, Capstone Coordinator</td>
<td>Appendix J</td>
</tr>
</tbody>
</table>
Roles and Responsibilities

The Capstone Project is a collaborative effort between the student and the student’s Faculty Advisor, who acts as the primary reader of the Capstone manuscript. A Second Advisor from the TUC Public Health Faculty will also review and assess the quality of the Capstone Project.

Students participating in the Capstone Project will be responsible for the following:

- Initiate the Capstone process by researching topics and sites
- Develop and submit a project proposal to the Advisor/Capstone Review Committee.
- Complete and hand in an IRB proposal and/or Screening Form for submission to the IRB committee.
- Meet with Advisor a minimum of 4 times during the Capstone semester.
- Submit drafts of the Capstone Manuscript to the Faculty Advisor for review and comment within the course guidelines and timeframes.
- Carefully incorporate the feedback of the Faculty Advisor and Second Reader into subsequent drafts of the manuscript.
- Turn in a final Capstone manuscript and all supporting documents to the Blackboard site for the Capstone Course, as described in the manual, at least three weeks prior to the presentation date.
- Develop and submit a presentation on project findings, outputs, outcomes, and recommendations of the written manuscript.

The Primary Faculty Capstone Advisor will be responsible for the following:

- Provide guidance to the student, as needed, in the development of the Capstone Project.
- Review and approve the Capstone Project proposal before submission to the Capstone Review Committee.
- Act as the Principle Investigator for the student’s application to the TUC IRB if necessary.
- Meet with the student at least four times during “Capstone semester” to discuss progress.
- Review drafts of the Capstone manuscript and provide guidance, resources, and constructive feedback.
- Submit Capstone manuscript drafts to be reviewed by the Secondary Advisor and communicate their recommendations to the student.
- Evaluate the final Capstone manuscript and faculty feedback from the oral presentation, assess competency achievement, and assign the final grade for the Capstone Project course.
The **Secondary Capstone Advisor** will be responsible for the following:

- Review and approve the Capstone Project proposal before submission to the Capstone Review Committee.
- Review and approve the application to the TUC IRB if needed.
- Review manuscript drafts and provide guidance, resources, and constructive feedback.

The **Capstone Coordinator** will be responsible for the following:

- Present an overview or orientation workshop at least once per semester to students.
- Organize Capstone related-materials and forms for students.
- Schedules the capstone presentation.
- Request presence of at least 3 faculty members for the presentation: the advisor, an MPH faculty member and the coordinator.
- Revise syllabus when necessary.
- Confirm that a second advisor has reviewed the student capstone and provided input/recommendations to the primary advisor (and signed the required form).
- Confirm approval and assignment of passing grade from the primary advisor.
- Submits final student grades.
- Recommend Capstone related policies and best practices to Public Health faculty and administration.
Appendices
Appendix A: Culminating Experience Declaration Form
TUC Public Health Program
Culminating Experience Declaration Form

STUDENT INFORMATION:

First Name: ____________________________

Last Name: ____________________________

Program Start Date (e.g., Fall 2015): ____________________________

Anticipated Graduation Date: (e.g., Fall 2016): ____________________________

DEGREE PROGRAM (CHECK ONE):

☐ MPH

☐ DO/MPH

☐ Joint MSPAS/MPH

☐ PharmD/MPH

CULMINATING EXPERIENCE DECLARATION (CHECK ONE):

☐ Comprehensive Examination

☐ Capstone Project

SIGNATURE (REQUIRED):

By signing this declaration, I acknowledge that I am committing to the selected method of completing the culminating experience requirement for the Touro University California MPH program and that, regardless of my academic performance or progress, I will not be able to change this method until one academic year after taking the CPH Exam or submitting my Capstone proposal.

Student Signature: ____________________________

Date: ____________________________

SPRING 2017
Appendix B: Capstone Proposal Guidelines
This is a generic template for Capstone Proposals that must be submitted to the Capstone Review Committee and approved before projects can proceed.

**Please write the proposal as a single coherent narrative. Please do not use outline form. You do not have to specifically answer each individual question separately (particularly if they are not relevant to your project); instead focus on ensuring that the themes and content covered by the questions are addressed in a general manner.**

Please see the content outlines for specific project types listed in Table 2 of this handbook and Appendix F for a list of other sections that might be relevant to include in the proposal.

1. **Project Title**

2. **Advisor Information**
   a. Name and contact information for the Faculty Advisor
   b. Name and contact information for site or agency mentor, if applicable

3. **Project Summary (300 words)**
   a. Summarize all the central elements of the project.

4. **Project Description (1000 words)**
   a. **Goals and Objectives**
      1. What are the objectives of the project? What do you hope to accomplish?
      2. What will be the product(s) of this project (e.g., an evaluation report, a policy analysis, research findings)?
      3. How will this benefit community members, or the research community or target audience?
   b. **Problem Statement**
      1. Why does the project need to be done and what will be its relevance?
         1. What is the problem you are addressing?
         2. What is the magnitude, frequency, affected geographical areas, ethnic and gender considerations, etc. of the problem?
         3. What are the findings of the most relevant studies published on the subject? Summarize the state of the knowledge on the subject area and motivate the need for this particular study by clearly stating gaps in knowledge.
      2. **For policy analysis and evaluation projects:** Who are the stakeholders interested in this project, and what are their interests?
      3. **For evaluation projects:** How does this project fit with the needs and mission of the community or agency where you will be working?
   c. **Study Design & Methods**
      1. What study design and methods (generally) will you use?
      2. Include information on the type of study, the source of data and the target population or the sampling frame, inclusion and exclusion criteria, and the expected duration of the study.
3. For policy analysis projects, describe your evaluation criteria here. For systematic reviews describe your criteria for inclusion, search strategy, and plan for assessing methodological quality.

4. Describe any interventions and procedures such as providing training, carrying out interviews that will be conducted as a part of the project.

5. Describe any statistical or qualitative methods that you will be using to analyze data. Justify any complex or alternative estimation approaches that you use. If applicable, justify sample size selected, power of the study, level of significance to be used.

6. If applicable, discuss how data will be stored and managed.

7. If applicable, discuss any software that you will use to analyze your data.

8. Provide drafts of any tools used for data collection e.g., surveys, focus group guides.

d. **Timeline**
   1. Provide a timeline for the project work, including the following tasks:
      1. Human Subjects (IRB) approval if required
      2. Conduct of project (this should involve many steps)
      3. Analysis/reflection of project findings
      4. Write-up of project results (include time-frame for several drafts)

5. **Ethical/Safety Considerations (500 words)**
   a. Document the issues around project risks and benefits to participants that are likely to raise ethical concerns.
   b. Describe how study participants are protected from potential risks or harm that could be caused by the project.
   c. Discuss any particularly vulnerable populations implicated in the study.
   d. Discuss the use of data management, recruitment and project staff training procedures mitigate the risks of any potential confidentiality breeches.
   e. Describe how the investigator(s) plan to obtain informed consent from the research participants (the informed consent process).

6. **Significance of the Study (300 words)**
   a. Indicate how the study will contribute to advancement of knowledge in the topic area.

7. **References (of literature cited in preceding sections)**
   a. Provide references for literature cited in the previous sections.
Appendix C: Evaluation Rubric for Capstone Proposal
This form is intended to serve as a common Capstone proposal evaluation rubric to be used for the Public Health Program.

<table>
<thead>
<tr>
<th>Student Name</th>
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<table>
<thead>
<tr>
<th>Project Title</th>
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<table>
<thead>
<tr>
<th>Primary Capstone Advisor:</th>
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<table>
<thead>
<tr>
<th>Secondary Capstone Advisor:</th>
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MPH Track (Circle One):       Community Health  Global Health

<table>
<thead>
<tr>
<th>Faculty Reviewer Name:</th>
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<tr>
<th>Signature:</th>
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<tr>
<th>Date</th>
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<table>
<thead>
<tr>
<th>Criteria</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Clear rationale and public health importance</td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>b. Clear identification of research question(s) or public health problem(s) to be addressed</td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>c. Clear plan of methods and analytic strategies to be used</td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>d. Appropriate data set selected or method of data collection to address the research question</td>
<td>□ Yes □ No</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Suggestions/Comments</th>
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</thead>
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</table>

Assessment:
Proceed □

Revise & Resubmit □
Appendix D: IRB Screening Form
This form assists TUC Public Health IRB members to assess whether projects or studies require formal IRB review. It also provides documentation that the IRB has reviewed the project or study. **If you believe that your project requires IRB review, please attach a full IRB proposal to this form** ([http://research.tu.edu/irb/](http://research.tu.edu/irb/))

Please allow up to ten (10) business days for review and response. Please email completed forms to sahai.burrowes@tu.edu & annette.aalborg@tu.edu

<table>
<thead>
<tr>
<th>IRB Use Only</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Exempt from formal IRB Review</td>
<td></td>
</tr>
<tr>
<td>☐ Review status unclear; more information needed.</td>
<td></td>
</tr>
<tr>
<td>Requires TUC IRB Review</td>
<td></td>
</tr>
<tr>
<td>☐ Expedited Review</td>
<td></td>
</tr>
<tr>
<td>☐ Full Board Review Recommended</td>
<td></td>
</tr>
</tbody>
</table>

### Project Title

Anticipated Project Start Date:

Anticipated Project End Date:

### Section 1: Study Investigators & Contact Information

TUC Project PI: (Last name, First name, MI)

TUC PI email address:

TUC PI phone number:

Co-PIs: (Last name, First name, MI)

**Study/Project Type**

- ☐ Student Capstone project
- ☐ Student Independent research
- ☐ Touro Faculty project

**For student led projects, please fill out Section 2**

### Section 2: Student Information

2.1 Academic Program

- ☐ MPH
- ☐ PAS/MPH
- ☐ DO/MPH
- ☐ COP/MPH

2.2 Student Name (Last name, First name, MI)

2.3 Anticipated Graduation Date:
Section 3: Is this Project Human Subjects Research as Defined by Federal Regulations?

Research is defined in the Code of Federal Regulations, 45CFR46.102(d), as a systematic investigation designed to develop or contribute to generalizable knowledge.

The Belmont report states “...the term ‘research’ designates an activity designed to test a hypothesis or answer a research question(s) [and] permit conclusions to be drawn... Research is usually described in a formal protocol that sets forth an objective and a set of procedures to reach that objective.”

Research generally does not include operational activities such as routine outbreak investigations and disease monitoring and studies for internal management purposes such as program evaluation, quality assurance, quality improvement, fiscal or program audits, marketing studies or contracted-for services.

Generalizable knowledge is information where the intended use of the research findings can be applied to populations or situations beyond that studied. Note that publishing the results of a project does not automatically meet the definition of generalizable knowledge.

3.1 Do you have a specific research question or hypothesis?
   - [ ] Yes
   - [ ] No

   If you have research questions please include them here.

3.2 Is your primary intent to generate knowledge that can be applied broadly to the group/condition under study?
   - [ ] Yes
   - [ ] No

Section 4: Project Abstract

4.1 Provide a brief description of your project.
   - Include specific **study aims or project goals**. Describe the major **study method and/or design**.
   - Include a description of the data accessed and/or collected and a **description of any activities, interactions, or interventions that involve human subjects**: this includes observation and qualitative data collection.
   - **For student Capstone projects**, approved project proposals may be attached to this document lieu of providing a written summary. (1,000 character limit).
## 4.2 Study Type

<table>
<thead>
<tr>
<th>☐ Policy Analysis</th>
<th>☐ Systematic Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Program Evaluation (internal management purposes only)</td>
<td>☐ Research Study</td>
</tr>
<tr>
<td>☐ Program Evaluation (general)</td>
<td>☐ Other</td>
</tr>
</tbody>
</table>

### 4.3 Are all of the data used in this project publicly available, e.g. blog, aggregate data, etc.?

|☐ Yes |☐ No |

---

Human subject is defined in the Code of Federal Regulations, 45CFR46.102(f)(1or2), as a living individual about whom an investigator obtains data through intervention or interaction or identifiable private information. The specimen(s)/data/information must be collected from or be about live subjects. Research on cadavers, autopsy specimens or specimens/information from subjects now deceased is not human subjects research.

### 4.4 Does this project involve the participation with living individuals? (e.g. conducting surveys, interviews, interventions, observations, medical or educational testing)

|☐ Yes |☐ No |

### 4.5 Does this project involve access to identifiable private or personal data or specimens from living individuals (e.g. names, birth date, addresses, etc.)?

|☐ Yes |☐ No |

### 4.6 If yes to questions 4.4 and/or 4.5: Please indicate if the study or project includes participants any of the populations below (check all that apply)

- ☐ Children or youth under 21 years outside an educational setting
- ☐ Neonates/Fetuses
- ☐ Prisoners
- ☐ Pregnant women
- ☐ Decisionally impaired
- ☐ HIV/AIDS patients
- ☐ Non-English speaking
- ☐ Terminally ill
- ☐ Student or employee under the supervisory or evaluative authority of the researcher
- ☐ Institutionalized individuals
- ☐ Individuals engaged in illegal or quasi-legal activity
- ☐ Crime victims
- ☐ Substance abusers

### 4.7 Does this project consist exclusively of interviewing or surveying subjects about their area of expertise, with a focus on policies, practices, and/or procedures (e.g., the collected data does not focus on personal opinion, reported behavior, or private information)?

|☐ Yes |☐ No |
Flowchart Outlining the Questions Addressed in this Screening Form:
Abstracted from the HHS Human Subjects Regulations Decision Flowchart
(http://www.hhs.gov/ohrp/policy/checklists/decisioncharts.html)
Appendix E: Capstone Style Guide
Manuscript Construction

OVERVIEW

The Capstone manuscript consists of 3 parts:

1) Preliminary pages,
2) Main text and references and
3) Appendices

All Capstone projects must follow the American Psychological Association (APA) style and the guidance in this handbook for the preliminary pages and appendices.

Students writing journal articles for their Capstone manuscripts must follow their journal’s author guidelines for the main text and references. All other projects must follow APA style (see Table 5 below).

Table 5: Style & Formatting Guide

<table>
<thead>
<tr>
<th>Type of Capstone</th>
<th>Front Matter</th>
<th>Main Text &amp; References</th>
<th>Appendices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Project</td>
<td>APA</td>
<td>Follow journal's author guidelines</td>
<td>APA or original format of replicated content</td>
</tr>
<tr>
<td>Systematic Reviews</td>
<td>APA</td>
<td>APA or follow journal's author guidelines</td>
<td></td>
</tr>
<tr>
<td>Program Evaluations</td>
<td>APA</td>
<td>APA</td>
<td></td>
</tr>
<tr>
<td>Policy Analyses</td>
<td>APA</td>
<td>APA</td>
<td></td>
</tr>
</tbody>
</table>

FORMATTING

The student should consult with their Capstone Faculty Advisor regarding an acceptable manuscript style before preparing the final copy of the Capstone manuscript. Students submitting journal articles for their Capstone Projects must follow their journal’s author guidelines. Students submitting other types of manuscripts must follow APA style guidelines with regard to formatting, appearance, citations, references, page numbering, etc. Guidelines on APA style can be found on the Purdue Writing Lab's website (https://owl.english.purdue.edu/owl/resource/560/01/).

Color in Maps and Illustrations

Both black and white and color illustrations are acceptable. However, the student should not use color as the key to a graph or map, etc. If the student chooses to use color reproductions, standard color copying paper is acceptable. The student must also remember that glossy prints, whether black and white or color, are not acceptable.
Reproduced Published Material
Photocopies of previously published material must be legible and conform to margin and page numbering requirements. When published material, including material authored or co-authored by the student, is included in the report, it is essential that the student follow instructions for permission to reproduce copyrighted material.

ARRANGEMENT

The order for the preliminary pages is listed below. A student must follow this order; no exceptions are allowed. Each page must be counted and numbered. The student must use lower case Roman numerals on preliminary pages and Arabic numerals on text pages. The text starts with the first piece of paper after the abstract and uses Arabic numeral 1.

Examples of the title and abstract pages for reports follow at the end of this document. The manuscript is arranged in the following sequence:

1. THE PRELIMINARY PAGES
   a) Title Page (counted but not numbered)
   b) Dedication (optional)
   c) Acknowledgements (may be optional; see Copyright Permissions)
   d) Abstract (the final item in the preliminary pages and the final item with Roman numerals)

2. THE TEXT [for non-journal articles only]
   1) Preface or Introduction (if any)
   2) Text, divided into chapters or sections if necessary
   3) References

3. APPENDICES
   4) Appendices if any

PRELIMINARY PAGES

The information on the preliminary pages and the format for these pages are standardized and the student must follow the samples and instructions presented in this manual.

The general format for capitalization and spacing is to be followed for all preliminary pages for which a sample is provided (e.g., where groups of lines are double-spaced on the sample pages, the student
must be sure to double-space. The student must balance the spaces between groups of lines to present a balanced appearance). There must be consistency among all pages with respect to the student’s name, advisor’s name, title of report, and year the degree is granted.

**Title Page (See sample page)**

1. TOURO UNIVERSITY CALIFORNIA appears at the top of the page in small capital letters. PLEASE NOTE THE EXAMPLE TITLE PAGE! The effect of larger and smaller capital letters is produced in most word processing programs in a fashion similar to the following: Begin by typing the name with initial capital letters. Select the name, click “format” from the tool bar and select “font” from the drop-down menu. Under the heading of “effects”, click the box for “small caps”.

2. The **TITLE** for the report must be placed horizontally centered between the page margins and vertically centered on a line two and one half inches from the top margin of the page. It should be in a large size and may be a bold type face. Italicized letters should only be used where required by standard conventions, for example, if the title includes the phrase “Reducing the Distribution of *Escherichia coli* in Agricultural Settings” it is acceptable to italicize the words *Escherichia coli*.

The title for the report should include meaningful key words descriptive of the subject and content. This is particularly important for potentially publishable work, because titles are the basis for computer searches from which subject lists are prepared by reference services. Formulae, symbols, superscripts, Greek letters, acronyms, and abbreviated forms in general are to be spelled out (e.g., K3 Mn(CN)6 is written Potassium Manganicyanide; MMPI is written Minnesota Multiphasic Personality Inventory; TESL is written Teaching English as a Second Language, *E. coli* is written *Escherichia coli*).

3. The **CLASSIFICATION** of the report and the **DEGREE** for which the student is a candidate must be properly listed. The degree must be listed exactly as approved by the Registrar, and no deviation is acceptable. Horizontally and vertically centered between the margins the following exact phase must appear, double spaced, and in the font, size, and type face used in the text:

   A report of the results of a capstone project submitted as part of the requirements for the degree

   Master of Public Health
4. The **NAME** used on the title page must be the name under which the student is registered at Touro University California. If the student is unsure about what form of his or her name is on record, this information may be obtained through the Registrar’s Office. There should be three blank lines following the statement of report classification and degree followed by the word "by" on a single line, horizontally centered and still in the font, size, and type face used in the text. Following this there should be another three blanks lines followed by the student’s name, horizontally centered on a single line and in a larger type face. The student’s name should be in a large and prominent type face, but not as large and prominent as that used for the title of the report.

The last line of text, immediately above the bottom margin, should be the year in which the degree is granted. This should be horizontally centered and in the font, size, and type face used in the text.

5. The **DATE** at the bottom of the title page is the year in which the degree is awarded. This is the last line of text and appears immediately above the bottom margin. It should be horizontally centered and in the font, size, and type face used in the text. There is no page number on the title page (it is counted as the first preliminary page, but is not numbered).

**Dedication Page (No sample pages)**

Dedications pages are OPTIONAL. If included, this will always be numbered page ii, and should be typed double-spaced.

**Acknowledgments (No sample pages)**

Acknowledgments may be **optional EXCEPT in either of the following circumstances**:  

1. The student reproduces/reprints copyrighted material requiring permission to be reprinted/reproduced in which case the student is responsible for acquiring and acknowledging each permission to reprint/ reproduce in accordance with the instructions of the individuals/institutions/publishers granting the permission (see Copyright Permissions).

2. The student uses as text either material based on co-authored published or about to be published articles or material based on co-authored papers in progress. If a chapter or section is based on a coauthored published or about to be published article a sentence such as, “Chapter Five is a version of __________” where the student fills in the formal reference article citation is sufficient. In this way the student has identified all co-authors, the journal where the article can be found, and the journal publisher. If a chapter or section is based on a co-authored paper in progress, the student must identify and acknowledge the individuals contributing to the paper. Finally, if the student is using as a chapter or section a version of an article that has its own acknowledgments, those acknowledgments should appear in the manuscript as
Acknowledgments, identified by chapter or section. In each case the student should always identify and acknowledge the director of the research that forms the basis of a chapter or section.

Abstract

The word ABSTRACT appears in small capital letters immediately beneath the top margin. The student should follow the sample-page spacing. The version of the title, student’s name, degree being awarded (Master of Public Health), year of degree, and name of the advisor must match the versions used on other pages and by the registrar. The title “Professor” precedes the advisor’s name (no matter what the individual’s normal title). The title “Faculty Advisor” or “Faculty Co-Advisor” follows the name. If there are co-advisors, a separate line is used for each name.

The abstract consists of a:

- brief statement of the problem;
- brief exposition of the method or procedures used;
- condensed summary of the findings of the study.

Please note that the abstract may be published without further editing or revisions, so special care must be taken in its preparation.

The abstract must not exceed 350 words or 35 lines (or 2,450 characters counting spaces and punctuation). If the abstract is more than two pages long, the student must be prepared to demonstrate that it is not more than 350 words long. A shorter abstract is strongly encouraged.

The last page of the abstract is the last page of the preliminary pages; it is the last page numbered with Roman numerals. Any other item in a manuscript that has not been specifically listed and discussed above must not be included in the preliminary pages. With the next sheet of paper following the last abstract page, page numbering is done with Arabic numerals, beginning with “1” and so on to the last sheet of paper.

TEXT

The student should consult with their advisor to determine the preferred textual arrangement and style, including footnote style and the manner of citation. Regulations regarding the use of
published and other special material that may require special permission or acknowledgment are presented in the following section.

Copyright Permissions

Using Reprints, Modified Published/About-to-be Published or Unpublished Material, or Reproduced Copyrighted Material in the Manuscript

Permission to reprint/reproduce copyrighted material in a manuscript will often be required, depending on what material is used and how it is reproduced. If a student does not have the appropriate copyright permissions at the time the manuscript is filed, the student may still be allowed to file, but the necessary copyright permissions must still be obtained. All appropriate copyright permissions must be obtained before credit can be granted for the capstone project for which the report has been submitted can be awarded.

Use of Reprints

If approved by the student’s advisor, the report may include reprints of previously published articles where the student is a co-author. A reprint is a direct copy of a published article. To be acceptable in a capstone report the reprint must be reduced to fit manuscript margin requirements and paginated appropriately, with the original page numbers removed.

A reprint is copyrighted material. If a reprint is used, the student must obtain the publisher’s permission to reprint and acknowledge the permission in the manuscript Acknowledgments. The student must also identify the author who directed the research that forms the basis of the article/chapter.

Chapters or Sections based on Published or About to be Published Articles and Chapters or Sections Based on Papers in Progress

If a student uses a modified version of a published/about to be published article or a paper in progress as a chapter or section in the manuscript, the student is not using a reprint, so copyright permission to reprint will not be required. However, please note that if the student reprints actual copies of published figures or tables as part of the chapter or section, permission to reprint those figures or tables is required. All non-reprinted text must be formatted according to program requirements, all cover pages containing co-authors, grants, addresses, etc., and individual acknowledgments removed, and tables, figures, etc., numbered consecutively.
Reproducing Copyrighted Material in a Manuscript

If the student reproduces or reprints a complete, single, copyrighted image or work such as, e.g., a table, figure, poem, picture, map, or song, permission to reproduce or reprint the image or work should be obtained from the individual or concern which was the source of the image used in the manuscript: a publisher, institution, or individual. If the student reproduces in the manuscript an excerpt or excerpts of copyrighted material not longer than one single-spaced manuscript page and from a single source, the student will not need to ask copyright permission from a publisher, institution, or individual. If the student reproduces more copyrighted material from a single source than fits on one single-spaced manuscript page, the student should obtain permission to reproduce the copyrighted material from the individual or concern that was the source of the material.

Permissions Letters

If the student believes that permissions letters may be necessary, the request should be mailed as early as possible. If the student is in any doubt about whether a permission letter is required, they should speak with one of the capstone coordinators. If the required letters are not received by the date of filing, the student may still be allowed to file, but the necessary permission letters must still be obtained. All appropriate permission letters must be obtained before credit can be granted for the Capstone Project for which the report has been submitted can be awarded.

When contacting publishers, the time limits should be included in the permission request. Also, the permission request should not be left open-ended. The publishers should be asked for a response, whether the answer is yes or no. When contacting publishers for permissions letters, the student should use his or her home or their full name and the program office as a return address if he or she is writing early enough to receive replies before filing the manuscript. If the student waits until the last minute before sending out permission-request letters, he or she should use their full name with the program office as an address. At the time of publication of this document, this should read as follows:

Student Name  
Public Health Program  
Touro University California  
1310 Club Drive  
Vallejo, CA 94592

Determining if Material is Copyrighted

The student should check the front of the material, looking for the publishing history and the international copyright sign: "©" Normally, whatever appears after "© by" identifies who holds the
copyright. Some general rules of thumb: professional journals hold the copyrights on all articles they publish; magazines and newspapers hold the copyrights on everything they publish; publishing houses hold the copyright on all books, whether collections, editions, translations, etc. that the house produces. Foreign copyrights are as valid as U.S. copyrights: foreign publishers must provide permission letters for any copyrighted material taken from books, journals, music collections, newspapers, etc.

Material published in the U.S. before 1978 and that is more than 75 years old is in the public domain. Material published outside the U.S. does not have clear-cut rules. Some authorities advise that it is not safe to assume that a foreign work copyrighted in the last 200 years is in the public domain. Especially for non-U.S. copyrighted material, a student should always err on the side of supposing that copyright permission is necessary.

When using an old text — Tacitus, Diderot, Lord Acton, John Snow, etc. — the student should always check the edition date found on the publishing page. Just because the text is old does not mean that the edition being used is old or out of copyright.

If it is certain that a permission letter is not required, a student must provide a letter when filing the manuscript that indicates why the permission is not needed and proving that the material in question is in the public domain.

Permission to Reproduce from Private or Museum Collections

Permission is required for the use of materials from certain private collections and museums without respect to copyright. The student is responsible for determining if permission is needed and, if it is, must submit letters of permission when the manuscript is filed with the program.

References

The reference section is always the last section of the manuscript. The style used for the reference section is defined by The American Psychological Association (APA) style. Details not clearly established in the APA style manual or in this document may be determined by the student in consultation with their Capstone Faculty Advisor and the Capstone Coordinator.

Reference citations are single-spaced and single-spaced between citations. If references are needed at the end of each chapter or section, as is sometimes the case, this format may be acceptable but will require the approval of one of the Capstone Faculty Advisor.
APPENDICES

Appendices contain information that might useful to the reader that cannot be easily be included in the main text. For Capstone manuscripts written as journal articles, this includes required tables and figures and discussions (e.g., ethical discussion) that do not fit into the journal guidelines. The formatting and style of these materials should follow APA guidelines.

Appendices also include support materials such as IRB approval letters, curricula used, letters of support, copyright permissions, data analysis coding sheets, cleaned versions of data analysis programming files (e.g., Stata .do files), instruments used to collect data (questionnaires, observation recording form, case report forms etc.), etc. These should be replicated in their original formats.

- Data analysis programming files should be concise and contain only the final, clean version of the code used to clean/code data, conduct tests, and create tables and graphs. These are submitted as separate electronic files.
- Electronic copies of all original (primary) datasets that are not owned by another organization must be submitted along with the Capstone manuscript.
  - All data must be de-identified (no names, addresses, or organizations recorded)
  - To facilitate the replication and ease of use, quantitative datasets should be saved as .csv Microsoft Excel in addition to the format used for data analysis (e.g., .dta for Stata files).
  - Qualitative data should be stored as either text (.txt) or Microsoft Word (.doc) files
SAMPLE PAGES

The next two pages contain samples of the layout and format of the title page and the abstract page respectively. These samples should be followed carefully, as deviations from the standard format will not be accepted.

**PLEASE NOTE** that the title page of your report must **not** have a page number, and that your abstract page must have a page number in lower case Roman numerals.
Reducing the Distribution of Escherichia coli in Agricultural Settings

A report of the results of a capstone project submitted as part of the requirements for the degree Master of Public Health

by

John Snow

2008
ABSTRACT OF THE REPORT

Reducing the Distribution of Escherichia coli in Agricultural Settings

by

John Snow

Master of Public Health

Touro University California, 2008

Professor Mohandas K. Gandhi, Faculty Advisor

Professor Albert Schweitzer, Faculty Co-Advisor

The student begins typing the abstract here, double-spaced. The body of the abstract is limited to 350 words, with a maximum of 2,450 characters allowed. Spaces and punctuation are counted as characters for this purpose. To get an estimate of the count, the student should count the characters (including spaces and punctuation) of a line of average length, and multiply by the number of lines.
SYSTEMATIC REVIEW PROJECTS

Systematic reviews should be written as journal articles and students should follow journal author guidelines for the content of their main manuscript text. The following information is provided to explain in more detail than journals usually provide, the information that is usually contained in a systematic review.

BACKGROUND*
- What are the specific public health issues to be addressed?
- What is the magnitude and scope of the public health problem?
- Why is it necessary to review and pool studies on this topic? Why is this work important?
- What has already been published?
- How will this project build on published literature, inform practice, and/or formulate policy?

STUDY OBJECTIVES*
The review objectives are grounded in the problem area and provide the basis for development of the inclusion criteria. The rationale for the objectives should be found in the background. Review objectives are written in measurable terms and need to address the target population, intervention or phenomenon and outcomes. An overall objective for the review is provided first, followed by sub-objectives, as appropriate.

Some questions to ask as the proposal objectives are written:
- Does the overall objective clearly describe the review’s purpose and direction?
- Are the objectives realistic and feasible in relation to the completion date selected?
- Do the objectives match what is described in the background?
- Are the objectives stated in measurable terms?

CRITERIA FOR INCLUSION OF STUDIES IN THE REVIEW*
Systematic reviews are distinguished by the transparency with which they are conducted. One of the features that allow this transparency is the pre-specification of the review’s inclusion and exclusion criteria, that is, those criteria that make a study eligible for inclusion in the review. Eligibility criteria include parts of the review question and the types of
- studies that will be sought;
- participants that were studied;
- interventions or phenomenon of interest; and
- outcomes expected are addressed.

---

SEARCH STRATEGY*
Provide information on how articles were searched for.
- What keywords and phrases are used in the search?
- In what languages are searches conducted?
- What databases will be searched?
  - A list of all databases and grey literature and the full list of key words used in the search should be provided.
  - The timeframe for searching each database must be included. If a decision is made not to search the entire database (i.e., from inception) and a narrower timeframe is used, such as 2000-2011, a justification needs to be provided.
- Discuss the stages/ phases of the search
  - Stage 1 is the first attempt at the search in which the researchers use a limited set of key words to find potentially relevant studies.
  - Stage 2 expands the databases used and searches these using the full list of key words developed in Stage 1.
  - Stage 3 involves searching the reference lists of identified articles for any relevant references and hand searching appropriate journals. As well, an author search should be conducted on the names of authors known to have conducted research on the review objective.

ASSESSMENT OF METHODOLOGICAL QUALITY*
Provide a description of how the quality of each paper is determined. Use a standard critical appraisal tool for this process. We recommend using the Joanna Briggs Institute (JBI) tools and processes which can be found here: http://joannabriggs.org/

- Data extraction: A description of how data is extracted and managed must also be included. The data extraction tool to be used should be included in the appendices. The appropriate JBI data extraction sheet should be used.
- Data synthesis: The appropriate JBI data synthesis method should be described here.

FINDINGS
Synthesize what was learned in the study. Summarize findings in matrices.

CONCLUSION

* Include these sections in the Capstone proposal
# Evaluation Projects

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary (~800 words)</td>
<td>Provide a brief overview of the evaluation purpose, project background, evaluation questions, methods, findings, and conclusions.</td>
</tr>
<tr>
<td>Problem Statement (~1500 words)*</td>
<td>Provide a description of the need that is being met by the service/program. Provide background information on the public health issue(s) being targeted and a description of the community affected by the program. Conduct a thorough literature review of the type of intervention/program that is being evaluated, paying special attention to findings from past evaluations.</td>
</tr>
<tr>
<td>Description of Organization &amp; Program (~1200 words)*</td>
<td>Provide information about the organization’s history, mission, funding sources, &amp; current programming. Describe the program under evaluation. List the overall goal(s) and objectives of the program under evaluation.</td>
</tr>
<tr>
<td>Purpose of Evaluation (~400 words)*</td>
<td>State what type of evaluation(s) was conducted (Process, Outcome, Participatory, or Combination). Discuss who the audience is and how the findings be used (grant writing, program improvement, etc.).</td>
</tr>
<tr>
<td>Goal(s) &amp; Objective(s) (~400 words)*</td>
<td>State what questions are being asked by the evaluation and the specific objectives you will be aiming to meet.</td>
</tr>
<tr>
<td>Methods (~1200 words)*</td>
<td>Discuss data collection methods: What types of data/information that were collected (qualitative, quantitative, and/or combination)? How was data/information be collected? How were performance, attitudes, skills, aptitude, etc. measured? How were threats to validity and reliability addressed? What was your sampling plan and rationale? Discuss data collection instruments: What instruments were be used? (Surveys, Scales, Focus Group Guides, Observation Checklists, etc. provide copies in Appendix). Describe data analysis plan. Disclose evaluation limitations, especially those associated with the evaluation methodology (e.g., selection bias, recall bias, unobservable differences between those who were in the program and those who were not).</td>
</tr>
<tr>
<td>Findings (~1500 words)</td>
<td>Synthesize what was learned during the evaluation. Present findings as analyzed facts, evidence and data supported by strong quantitative or qualitative evidence and not anecdotes, hearsay or people’s opinions.</td>
</tr>
<tr>
<td>Recommendations (~800 words)</td>
<td>Provide recommendations that are action-oriented, practical, specific, and define who is responsible for the action. Support recommendations with specific findings.</td>
</tr>
<tr>
<td>Appendices</td>
<td>Include the following as annexes, at minimum: All evaluation tools (questionnaires, checklists, discussion guides, surveys, etc.). A list of sources of information (key informants, documents reviewed, other data sources).</td>
</tr>
</tbody>
</table>

* Include these sections in the Capstone proposal

---

POLICY ANALYSIS PROJECTS

In a 5000-8000-word paper you are to provide an analysis of a policy solution to a public health problem. Your paper should include the following sections:

1. **EXECUTIVE SUMMARY (500 words maximum)**
   - Briefly state the policy problem or issue
   - Give a very brief background on the issue
   - List the major policy alternatives considered
   - State your recommended policy and justify it briefly

2. **INTRODUCTION & PROBLEM STATEMENT* (1600 words maximum)**
   Answer the following questions:
   - What exactly is the policy problem?
   - What are your policy goals (what do you want to accomplish)?
   - Who is affected by the problem?
   - How large is the problem (how many people affected)?
   - What are the causes of this problem? Which of these causes are things that we can actually do something about?
   - What other any other programs/systems currently exist to address the problem?

3. **AN EVALUATION OF POLICY ALTERNATIVES* (1500 words maximum)**
   Answer the following questions:
   - What policy prescriptions are you considering to address problem?
   - Describe the main mechanisms through which the policies address the problem (e.g., a tax might create financial incentives to change behavior, a media campaign might increase access to information to change behavior).
   - What are the projected potential outcomes of these policies?
     - Under what conditions are these policies successful?
       1. Support these assertions of impact with evidence (e.g., findings from other countries or cities that have adopted the policy prescription, scientific studies of the policy) and discuss the quality of this evidence.
   - How are you evaluating the potential outcomes of the different policy options (what criteria will you use)?
   - How will you use the evaluation criteria to evaluate the different options (e.g., on a scale of 1-5, with 5 being best, and 1 being worst).
     - You must use the following evaluation criteria as part of your evaluation:
       - Number of people who will be assisted through the proposed policy
       - Political feasibility (this will be largely dependent on your stakeholder analysis)
       - Costs (you do not need to come up with exact cost estimates, just high, medium or low will be sufficient).
     - You must also select 1-2 other evaluation criteria to use in your policy analysis. Think about equity, ratio of cost to effectiveness, administrative feasibility
(simplicity, timeframe, amount of resources that have to be mobilized), and conformity to ethical standards/principles.

4. **FINDINGS** (1,200 words maximum)
   - How well do the different policies meet the criteria? (Present this as a matrix and also describe in writing)
   - What are the tradeoffs between policy option outcomes?

5. **A RECOMMENDATION FOR A SPECIFIC POLICY** (800 words maximum)
   - State your proposed policy prescription to address the problem based on your analysis. Justify your policy choice
   - Discuss possible unintended consequences of the policy.

6. **STAKEHOLDER AND POLITICAL ANALYSIS** (1,600 words maximum)
   - Discuss the organizations and institutions that are affected by your recommended policy.
   - Think about the following questions in writing up your analysis:
     - To which groups and organizations do the benefits of the policy accrue?
     - In which groups and organizations are the costs of the policy concentrated?
     - Are these winning or losing groups concentrated in a particular industry or population or are they widely spread?
     - Are the winners more politically or financially powerful than the losers?
     - What parts of the health system are required to act or to change?
     - Given the answers above, which groups are more or less likely to mobilize in support of the policy?
       - Which groups are likely to mobilize in opposition?
       - How do you think that the different will frame (“spin”) the policy?
     - What government bodies would need to approve the policy in order for it to be implemented?
     - What government agencies would be responsible for oversight and implementation?
     - How would the policy be financed (who pays)?

7. **POLITICAL STRATEGY RECOMMENDATION** (800 words maximum)
   - Based upon your stakeholder analysis, provide recommendations for political or advocacy strategies that would maximize the chances of the policy being adopted.

* Include these sections in the Capstone proposal
Appendix G: Capstone Presentation Evaluation Form
# TUC Public Health Program

**Capstone Project Presentation Evaluation Form**

Student Name: (Please Print) ________________________________

Faculty Evaluator: (Please Print) ________________________________

Capstone Topic: ______________________________________________

<table>
<thead>
<tr>
<th>Scale Interpretation</th>
<th>Please rate the student’s presentation using the following scale:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Excellent</td>
<td>Good</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Average</td>
<td>Below Average</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Poor</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

## Presentation
1. Captured attention of audience  
   - Rating: 5 4 3 2 1 N/A
2. Articulated presentation of content  
   - Rating: 5 4 3 2 1 N/A

## Content
3. Presented the theme of study clearly  
   - Rating: 5 4 3 2 1 N/A
4. Used sufficient supporting information  
   - Rating: 5 4 3 2 1 N/A
5. Concluded by summarizing main ideas  
   - Rating: 5 4 3 2 1 N/A
6. Connected report content to public health practice  
   - Rating: 5 4 3 2 1 N/A

## PowerPoint Use
7. Content and organization  
   - Rating: 5 4 3 2 1 N/A

## Interaction with Audience
8. Gives appropriate feedback to questions asked  
   - Rating: 5 4 3 2 1 N/A

## Overall Rating
   - Rating: 5 4 3 2 1 N/A

## Comments
Student’s overall performance and additional remarks – use reverse side of page if necessary.
Appendix H: Capstone Publication Statement
Student Name: ______________________________________________________

Capstone Faculty Advisor: ____________________________________________

Project Ownership
My project is: □ Faculty- or community-led (Faculty PI: Capstone project forms part of a larger research project or community initiative. Project was developed and designed by a faculty or community member)

□ Student-led (Student PI: Capstone project was developed and designed by the student. The project is not related to an existing project or community organization initiative)

Agreement to Ethical Review Prior to Publication
By signing this statement I agree not to submit for publication or to publically present my Capstone project manuscript, written as the culminating project for the PBHC 645 Capstone course unless the TUC IRB Committee has, in writing, either reviewed and approved the project or exempted it from review.

Student Signature: __________________________________________________
Date: __________________________

Acknowledgement of Collaboration and Ownership
Please sign the appropriate statement

Student-Led Projects:
By signing this statement I agree
▪ Not to submit for publication or to publically present my Capstone project manuscript, written as the culminating project for the PBHC 645 Capstone course unless the TUC Capstone Faculty Advisor and all study co-investigators have been notified in writing, and authorship has been discussed.
▪ That all agreed upon authors on my Capstone project will be given the opportunity to read and edit the Capstone project related projects etc. prior to submission.

Student Signature: __________________________________________________
Date: __________________________

Faculty/Community-Led Projects:
By signing this statement
▪ I agree not to submit for publication or to publically present my Capstone project manuscript, written as the culminating project for the PBHC 645 Capstone course unless prior consent has been given, in writing, by the TUC Capstone Faculty Advisor and all other study co-investigators
▪ I affirm that I understand that ownership of all Capstone project data and related material and rights to determine authorship of future publications, remain with the Public Health Program Faculty Principal Investigator (PI) and/or the community organizations involved in the project and that publication or presentations developed after I have graduated from TUC may not involve me.

Student Signature: __________________________________________________
Date: __________________________
This form is intended to serve as a common Capstone evaluation rubric to be used for the Public Health Program.

**Student Name:**

**MPH Track:**

- Community Health
- Global Health

**Project Title:**

**Primary Capstone Advisor**

**Signature & Date:**

**Secondary Capstone Advisor**

**Signature & Date:**

Scoring guide for each item below, A-E:

<table>
<thead>
<tr>
<th>Score</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-20</td>
<td>Excellent</td>
</tr>
<tr>
<td>16-18</td>
<td>Good</td>
</tr>
<tr>
<td>14-15</td>
<td>Fair</td>
</tr>
<tr>
<td>13 or below</td>
<td>Fail/No pass</td>
</tr>
</tbody>
</table>

**Criteria**

<table>
<thead>
<tr>
<th>Score</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Thorough and relevant review of the literature, including appropriate use of theoretical/conceptual models</td>
</tr>
<tr>
<td></td>
<td>b. Clear identification of research question(s) or public health problem(s) to be addressed</td>
</tr>
<tr>
<td></td>
<td>c. Appropriate use of methods and analytical strategies</td>
</tr>
<tr>
<td></td>
<td>d. Clear articulation of conclusions, implications and recommendations from both capstone data and the literature</td>
</tr>
<tr>
<td></td>
<td>e. Quality of written communication</td>
</tr>
</tbody>
</table>

**Total Score (100 maximum points)**

0

**Competencies incorporated into the project**

Please see [http://cehs.tu.edu/publichealth/curriculum/competencies.html](http://cehs.tu.edu/publichealth/curriculum/competencies.html) for a list of competencies

**Core (3):**

**Track (3):**

**Cross-cutting (3):**

Final Grade:  

- Pass
- No Pass

Revised Spring 2016
Appendix J: Capstone Presentation Outline
This is a suggested outline only. Students should work closely with their Faculty Advisors to adapt this format the presentation to the needs of the project. Numbers of slides are suggestions, not requirements.

Each student is allocated 25-30 minutes: 15-20 minutes for the presentation and an additional 10 minutes for a question and answer session.

Students should use PowerPoint or some other presentation software and alert the Capstone Coordinator in advance if they will be using a non-standard presentation software or if they have any special audio-visual requests.

The presentation must include the following sections. Use Table 2 as a guide for the relevant sections to include for non-research projects:

1. Title of paper (1 slide)
   a. Include IRB approval number on this slide along with names of collaborators
2. Background and significance of the project (1 slide)
3. Research/policy/evaluation question (1 slide)
4. Motivation and Problem Statement (1 slide) (Why should anyone care?)
5. Outline of the Talk (1 slide)
   o Some speakers prefer to put this at the bottom of their title slide.
6. Methods & Study Design (2 slides)
   o Study design (1 slide)
     ▪ Describe sample/study population
     ▪ Discuss sample methodology (random, convenience, etc.)
     ▪ Give an overview of study procedures and/or data collection techniques
   o Discuss measures, variables, and instruments
   o Types of analysis conducted
7. Results or Outcomes (3 slides)
   - Present key results and key insights. This is main body of the talk.
   - Do not try to cover all results superficially; cover only **key results** well. Highlight interesting, counterintuitive findings
   - Do not just present numbers; **interpret** them to give insight.
   - Do not present dense, large tables of numbers. Use graphics, pictures, and figures to help the audience visualize results.

8. Summary /Discussion (2 slides)
   - Summarize major findings
   - Discuss implications of findings
   - List study limitations and how they were mitigated
   - Present next steps for research on this topic and policy or programmatic recommendations

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**PRESENTATION AND POWERPOINT TIPS**

- You may use a nice design template in PowerPoint -- but make sure that it is not too busy and does not distract the audience from the words/data on the slide.
- Use a font that is 28 point or larger for readability on a large screen
- Expand margin lines of text boxes in order to increase font size for readability, but not to gain more space to add more information on the slide.
- Try not to use more than 4 or 5 bullets per slide.
- Avoid using full sentences; use phrases and key points as a primer for you to say more in your talking points.
- Allocate about 1 minute per slide. Therefore, a 20-minute presentation should contain 10 to 20 slides.
- Use notes portion of PowerPoint to remember facts and things that you would like to point out for each slide. Remember to print out the notes pages of your presentation. **DO NOT READ YOUR NOTES TO THE AUDIENCE.**
- **Practice, PRACTICE, PRACTICE.** Remember to practice your presentation at least once (really should be several times) in real time in order to judge length and transitions. Many times the presentation takes longer than you think it will.
- Breathe and relax. It is only 20 minutes and remember--you know more about your topic than anyone in the room.
- Minimize time on background information in order to present results and discussion.
- You should have data tables or graphs and you should explain the data tables. Not running over time is important; at a professional meeting you would likely be cut off by the moderator.
TIPS FOR THE QUESTION AND ANSWER SESSION

- **Listen** to the entire question no matter how long it takes the faculty member or student to ask it (take notes if necessary.) Do not interrupt the questioning.
- **Pause** and think about the question before answering.
- Rephrase the question succinctly to introduce your answer.
- Answer the question to the best of your ability. **If you do not know the answer, remain calm and say so in a professional way.**
- Remember no one will know the ins and outs of your project as well as you.
- You are an expert in the project topic and YOU really do know the work involved.
  
  **Be positive!**

Be prepared for questions about your study design and methodology, evaluation criteria. These often involve questions about why you chose a particular investigative/analysis strategy (e.g., “Why did you chose this location”? “Why did you use a t-test to measure effectiveness”?) and how variables or evaluation criteria were measured. Be prepared to talk about all aspects of your project methodology, analysis techniques, and any data collection tools used.

You may also be asked questions about the population and general context of your project so you should be grounded in the relevant risk factors and demographic, socio-political context of the population that you are studying.

Finally, many questions concern the student’s motivation for taking on the project and where/how the project information will be disseminated.

Often it is helpful to have some **back up, extra PowerPoint slides** that address these question areas, that define terms that might be new to listeners, and that outline the more detailed parts of your project work (e.g. a list of all the variables in your research study, all the organizations you talked to in your program evaluation). Having back up slides also helps you to avoid the temptation to pack too much information into your presentation.
This form can be used to guide the development of Capstone manuscripts and oral presentation for approved student projects.

Student Name:  
Faculty Advisor:  

Meeting 1  
Date of Meeting  

Literature review and background sections approved?  Yes  No  
Date Approved  
Advisor Signature  
Second Advisor Signature  
Ten (3) Core Competencies  
Three (3) Track Competencies  

Data analysis plans discussed?  Yes  No  
Comments:  

Meeting 2  
Date of Meeting  

Data analysis notes, tables and graphs approved?  Yes  No  
Advisor Signature  
Additional Faculty Signature  

Results and conclusions discussed?  Yes  No  
Comments:  

Spring 2016 Revision
**Meeting 3**

Date of Meeting

First draft approved? [ ] Yes [ ] No

Advisor Signature

Additional Faculty Signature

Oral presentation discussed? [ ] Yes [ ] No

Comments:

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**Meeting 4**

Date of Meeting

Oral Presentation approved? [ ] Yes [ ] No

Advisor Signature

Additional Faculty Signature

Manuscript submission discussed? [ ] Yes [ ] No

Comments:

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*See the Following Pages for Additional Meeting Notes*
Additional Meeting 1
Date of Meeting
Purpose:
Comments:

Additional Meeting 2
Date of Meeting
Purpose:
Comments:

Additional Meeting 3
Date of Meeting
Purpose:
Comments:

Additional Meeting 4
Date of Meeting
Purpose:
Comments:

Additional Meeting 5
Date of Meeting
Purpose:
Comments: