

Integrated Practicum and Culminating Project guide for the MPH in Clinical Translational Science



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THE OHIO STATE UNIVERSITY

COLLEGE OF PUBLIC HEALTH

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INTEGRATED PRACTICUM AND CULMINATING PROJECT FOR THE MASTER OF PUBLIC HEALTH IN CLINICAL TRANSLATIONAL SCIENCE

Overview

The objective of the integrated practicum and culminating project in the Master of Public Health with a specialization in Clinical Translational Science (MPH-CTS) is to provide the student with a continuum of experiences that constitute the foundation for a career in investigative biomedical science. These experiences range from the initial generation of a testable hypothesis to study design, data collection, data analysis, and ultimately oral and written presentation of results. Accordingly, the practicum and culminating project encompass different stages of the spectrum of experiences but are, in fact, a continuum in the process of new knowledge discovery.

The Practicum

Practicum content

For the MPH-CTS, the practicum represents an opportunity for the student to work closely with a research mentor who serves as the preceptor to guide the student through a series of experiences. The student's academic advisor collaborates in designing and approving the learning content.

Because of the special nature of the CTS program, many students begin their practicum earlier than would be typical in other specializations, engaging in a research apprenticeship experience. Ideally, this will allow the student to participate in all aspects of the topic selection, study design, planning, and implementation of an appropriate research project. In addition, the student should be exposed to the public health issues and ethical concerns that arise in the research. Students should be active participants in the arrangements for a practicum, working closely with their advisor, other college faculty and staff in OAPSS to learn of important college deadlines and required paperwork.

As its name implies, the practicum comprises the practical skills involved in any clinical research project. In addition, the student should have the opportunity to consider the research and its accompanying issues in a larger public health context. The typical MPH-CTS practicum should include the following elements:

1. Participation in the generation of a testable study hypothesis in collaboration with the research mentor;
2. Design of the study including recognition of the classification of the study design (e.g. observational, case control, cohort, prospective clinical trial, etc);
3. Appropriate consideration of the ethics of the study design including participation in the submission of the protocol to the IRB as appropriate;

4. Appropriate planning for study design implementation including performance of pilot studies;
5. Design of data archives including appropriate measures to protect personal health information;
6. Data acquisition and implementation of the final study design.

Students may elect additional components for the practicum. These include experiences related to the conduct of clinical research in its many aspects, such as participation as a student intern in the Institutional Review Board, participation as a biostatistical and study design consultant, or short term investigations related to health care delivery and disease outcomes. In unusual cases, the entire practicum might be composed of these alternative experiences. These departures from the standard practicum format should be discussed and approved by the Director of the MPH/CTS and the MPH/CTS Oversight Committee.

Practicum Procedures

The Master of Public Health requires a minimum of two credit hours of practicum for students in any MPH specialization. Students must spend at least 120 hours focused on the practicum to meet the minimum requirement (60 hours of work equals one credit hour). The hours may be distributed in whatever way makes sense for the student's schedule and the requirements of the work (e.g., 10 hours per week for 12 weeks, a varying schedule over multiple semesters, etc.).

CTS students are encouraged to begin discussions of possible practicum opportunities with their advisors and potential research mentors as soon as possible after beginning the program. Once a practicum has been identified, a Online Practicum Learning Agreement must be completed. The Online Learning Agreement can be found on the CPH Practicum Site <https://cph.osu.edu/mph/practicum/forms-documents>. This is the verification that the practicum has the approval of both the research mentor and the advisor, and notifies OAPSS that the student will be accumulating practicum hours.

Recognizing the unique requirements specific to the integrated practicum and culminating project in the MPH-CTS, students are permitted, with permission of their faculty advisors and research mentors, to begin the practicum after completing PUBHBIO 6210 and PUBHEPI 6430 or equivalent or concurrent with enrollment in those courses. Thus, a student taking the typical course schedule may begin the practicum as early as the first semester of regular course work, two or more semesters earlier than is typical for students in other MPH specializations; however, the practicum is not complete until the final report has been submitted and approved. The expectation for the MPH-CTS is that most students will complete the course work and begin their research during the first year, and then continue their research under the guidance of the research mentor after that year.

A maximum of two credit hours of practicum credit (PUBHLTH 7189) may count towards the degree. In some cases, CTS students may receive approval from the Director of the

MPH-CTS program to begin supervised research work with a mentor in the summer before required core course work is initiated. This is an excellent opportunity to gain awareness of the process and challenges characteristic of Clinical Translational Science and add relevance to subsequent didactic training, although these hours may not be counted as part of the practicum.

The practicum is graded S/U. The grade is assigned by the advisor based on evaluations of the student's experience and final practicum report by both the advisor and the research mentor.

Assessment Products of the CTS MPH Practicum

There are four products that are required to be completed and submitted at the conclusion of the practicum: 1) daily activities log, 2) self/preceptor/faculty evaluations, 3) demonstration product, 4) final report.

Practicum Activity Log.

A log of the activities pursued (e.g., dates, hours, setting, persons, and subjects) should accompany the final report that is posted to the students CARMEN drop-box once it is reviewed by the faculty advisor.

Evaluation forms.

Three evaluation forms are required: student, preceptor, and faculty evaluations. All evaluation links for the student, preceptor, and faculty advisor can be found on the CPH Practicum forms and documents page. All parties are required to complete the evaluation in order for the student to fulfill the requirements for the practicum. When the student and preceptor evaluations have been completed, they will be routed electronically to the faculty advisor.

Demonstration Product.

The purpose of the demonstration product is to have a written or visual illustration of the attainment of one or more competencies during the practicum experience(s). The selected demonstration product is expected to be original work led or contributed to in the practicum process. Students can select from the following types:

- 1) Presentation: Examples include a PowerPoint, Prezi, research poster, infographic;
- 2) Written: Examples include a manuscript (entire or relevant excerpt), policy brief, program plan, community assessment, fact sheet, brochures, data collection instrument;
- 3) Audio/Visual: Examples include recorded presentations, multi-media content, social media campaigns, webinar sessions, web/app development, podcasts.

Consult with your faculty advisor about concerns or questions about the choice of demonstration product or upload format.

Final Report Requirements

All students are required to complete a final written report that will focus on sharing information on the practicum experience.

The final report will summarize the student's practicum experience with details of specific experiences and how the practicum is important to the field of public health. Students are expected to follow the guidelines below in structuring their report. The student should discuss the expectations of their report carefully with their advisor. The report length must be sufficient to cover the expected content carefully. The best recent reports have usually been five to ten pages in length.

The report should contain the following sections.

TITLE PAGE

- Your title page should consist of your name, division, cohort year (year you entered the College), project title (as stated in your learning agreement), research mentor (preceptor) and organization, your faculty advisor, and date of submission.

INTRODUCTION

- Describe the nature of the practicum (e.g., whether it is a descriptive project, experimental project, research project, or survey).
- Very briefly, describe the organizational unit where the practicum took place, its primary mission, and its relationship to the overall organizational structure of the agency. Describe services provided, programs and public health objectives, and specific population groups targeted.
- Describe the duties specifically related to the practicum in the context of the entire organization.
- The practicum report must represent your own individual work. Permission is required from your research mentor and faculty advisor to participate in a project with other CTS students. If you are working on a collaborative project, explain your area of responsibility and describe your contribution to the project.

GENERAL PROJECT GOALS AND OBJECTIVES

- State the purpose of the practicum (e.g., proving a hypothesis, analyzing a problem, completing an evaluation, etc.). What was the significance of the issue worked on? Why did this need to be addressed?

- Describe how your planned learning objectives align with the program competencies you selected for the practicum. List the practicum activities that link to each competency.
- The final report must present a clear picture of your practicum with details of your research and how this practicum is important to the field of public health.

ADDITIONAL CTS MPH PROJECT GOALS AND OBJECTIVES TO BE ADDRESSED

- Hypothesis and its motivation. What is your study hypothesis and what findings or unmet needs in medical knowledge contributed to its generation?
- What is your overall study design? Classify the study design in terms of retrospective, prospective, case control, cohort, etc.
- What bioethical issues are relevant to this project? What was your participation in the IRB process (if one was in place simply state, but discuss the ethical and human subjects issues relevant to this project).
- Describe your plans for data collection and data archiving.
- What biostatistical methods do you anticipate for the eventual analysis of your data?
- Briefly discuss the public health relevance of your research project.
- Indicate the MPH competencies you addressed and how you addressed them.

RESULTS

- Describe the outcome(s) or product(s) of the practicum
- What were the most important or surprising findings?
- How does this work impact the future of this public health issue?
- Summarize recommendations

EVALUATION

- Provide a careful evaluation of the practicum.
- Was it a valuable learning experience? Why or why not?
- How did it compare with your expectations?
- What types of classroom skills were you able to employ in the field?
- What did the experience teach you about the world of public health practice?

DESCRIPTION OF DEMONSTRATION

- Describe the demonstration product
- Describe your role in the creation of the demonstration product
- List the competencies demonstrated by your chosen product.

OPTIONAL APPENDIX

- Other relevant materials may be included as an appendix

The student will post all assessment products that they create (daily log, demonstration, and final report) to Carmen. Students with questions about any assessment products should consult with their faculty advisor.

Both the faculty research mentor and the faculty academic advisor will be responsible for verifying the achievement of the practicum objectives and your performance.

One copy each of the final written report, log, and outcomes of the practicum (e.g., questionnaires, fact sheets, etc.) should be provided to your faculty advisor and your research mentor. Once your advisor approves your report, submit an electronic copy of the final document to the CARMEN Drop-Box.

Sample practicum reports are available for your review in OAPSS in 100 Cunz Hall, 1841 Neil Ave.

For advice on fulfilling the above requirements, please consult your faculty advisor.



Checklist of Requirements for the CTS Practicum

Prior to beginning the Practicum:

- Attend a Practicum Orientation or meet with Dawn Williams in the Office of Academic Programs and Student Services (OAPSS) to discuss paperwork and deadlines.
- Review the Integrated Practicum and Culminating Project Guidelines (*explains rules, contains forms*).
- Submit your protocol to IRB if appropriate.
- When Practicum is confirmed complete Online Practicum Learning Agreement found on the CPH Practicum website. Submission of the online practicum learning agreement will electronically route the agreement to the faculty and preceptor designated on the form by the student for approval. When signatures have been obtained by both the practicum course will be added to the student's schedule. Practicum forms can be found on the CPH website at <https://cph.osu.edu/mph/practicum/forms-documents>

During the Practicum:

- Document progress on Practicum Log (*you must spend at least 120 hours on the research project*).
- Keep your faculty advisor and research mentor informed of your progress.
- Schedule a mid-practicum progress review with your advisor and research mentor; have any changes in the project approved by both.
- Discuss your Demonstration Project with your research mentor and faculty advisor for their suggestions and approval.

Final Preparation:

- Submit one copy of your final Practicum Report to your advisor and each member of your committee and to CARMEN
- Submit an electronic copy of the final approved Practicum Report, Practicum Log, Demonstration Product, and Evaluations to the Carmen Practicum course site by the first day final examinations for the semester.

Contact the Assistant Director/Coordinator of Practice Education and Career Services, Dawn Williams, with any questions or concerns: Williams.3388@osu.edu (614) 247-4380

NOTE: All practicum forms and semester deadline can be found on the CPH website: <https://cph.osu.edu/mph/practicum/forms-documents>.

The Culminating Project

MPH-CTS students satisfy the Culminating Project (CP), by completing a combined practicum and CP. The CP will flow from the research process begun during the practicum, continuing onto complete the appropriate statistical analysis and prepare a manuscript in scientific journal format describing and interpreting the findings. Though students may collaborate with others on the project, the final report must represent the student's own work.

The culminating project continues the research process initiated in the practicum and consists of the appropriate statistical analysis of the data. This analysis is then reported in a final paper, which is to be prepared in scientific journal format. Completion of the culminating project is contingent upon review and approval of the final report by a committee of the faculty advisor and a second CPH faculty member. Both committee members must have category M or P Graduate Faculty status in the College of Public Health and at least one committee member must have a primary appointment in the College. An additional graduate faculty member may serve on the committee if the research mentor does not meet these criteria. Students may present their final work at the annual Graduate Student Research Day. In addition, they are encouraged to submit abstract summaries of their work at national meetings and to publish their findings in an appropriate peer-reviewed scientific journal.

Culminating Project Report

The final report for the culminating project must represent your own individual work. If you are working on a collaborative project, your final report must be some aspect of the project that you completed yourself and must be in the format of a peer-reviewed journal article.

The MPH-CTS culminating project final report should include the following elements:

1. Title Page
2. Abstract – brief summary of the project
3. Introduction and Background – rationale for the project; what is the basic research and why is it of interest
4. Literature Review – synthesize information written by other researchers and evaluation it according to the guiding concept that you have identified for your project
5. Methods – what were the methods and procedures used to collect and analyze data, what were the key variables of interest, and how were those variables measured
6. Results – describe the results of the data analyses and refer to any tables and figures within the text; reference any tables used from other sources

7. Discussion – interpret the data as they relate to project questions, goals, and objectives; discuss the implications of the findings and how they may impact public health

For more details on the culminating project report, consult your faculty advisor.

Timeline and Checklist of Requirements for the CTS Culminating Project

Two semesters prior to the term/semester of completion:

- ___ Discuss your culminating project with your faculty advisor.
- ___ Provide your advisor with an outline of your culminating project that includes the draft title, the public health question that will be addressed, and the methods for addressing the question.

The term/semester prior to completion:

- ___ Submit the [registration form](#) to register for PUBHLTH 7998 for 3 credit hours during your second to last term/semester.
- ___ Work with your advisor to identify a second reader with appropriate Graduate Faculty status to serve on your master's exam committee **at least one term/semester prior to the semester of graduation.**
- ___ Submit the electronic application to graduate by the 10th Friday prior to the semester you intend to graduate. The application is online: <https://gradforms.osu.edu>.

The final semester:

- ___ Meet with your faculty advisor and agree upon a timeline to complete the requirements for your project.
- ___ The Master Exam Report will be submitted and signed electronically by your advisor and second reader to the Graduate School by Graduate School deadlines. Therefore, your project should be completed by the 4th week of the semester. **A first draft of the culminating project must be submitted to your advisor and second reader no later than 1 month prior to Graduate School deadline.**
- ___ Keep your advisor updated on your progress.
- ___ Submit the final copy of your project to your committee by the deadline specified.
- ___ Submit an electronic copy of your approved project to OAPSS by Graduate School deadlines.

Responsible Research Practice Requirements (Appendix H of the CPH Handbook)

Many students in the College of Public Health are involved in research, either for their own degree requirements or in work assignments with faculty members or others. It is essential that students learn and abide by the applicable rules concerning research involving human or animal subjects. This topic will be covered in some courses as appropriate. This summary is intended to provide an overview. You are strongly advised to contact your faculty advisor or employer about the procedures described below.

What research is covered by this policy?

All research that collects data from human subjects needs to be approved by the OSU Institutional Review Board (IRB). All research involving animals needs approval from OSU Institutional Animal Care and Use Committee (IACUC). This includes culminating projects, these and doctoral dissertations. In a few rare cases, practicum placements might also need approval if it involves collecting research-type data. When IRB or IACUC approval are necessary, such approval must be obtained before any data collection begins. Allow 6 weeks or more from submission to approval.

Research with human subjects

When do projects need IRB approval?

The linked document from Ohio State's Human Research Protection Program defines clearly what constitutes "research" and what types of research require IRB oversight. The document can be found here:

<http://orrrp.osu.edu/irb/osupolicies/documents/ResearchInvolvingHumanSubjects.pdf>

Table 1, on pages 6-8, is a very useful guide to when IRB oversight is required. If your research seems to fall into a "gray area" not clearly covered by this document, contact Ohio State's Office of Responsible Research Practices for help.

Procedures for human subjects research approval

Students should work closely with their faculty advisors to complete the necessary materials to secure approval for research with human subjects. Guidance, forms and directions are available through the Office of Responsible Research Practices:

<http://orrrp.osu.edu/irb>.

All faculty, staff and students participating in human subjects research at Ohio State are required to complete the Collaborative Institutional Training Initiative (CITI) web-based course on human subjects available at <http://orrrp.osu.edu/irb/training/citi>. The Office of Responsible Research Practices also offers regular training for researchers. Additional information is available on the Web at <http://orrrp.osu.edu/irb/training/>. In addition to

completing CITI training, everyone (faculty, staff, and students) involved in sponsored research or other research which is reviewed by the IRB must also complete a Conflict of Interest disclosure, which can be found at <http://orc.osu.edu/regulations-policies/coi/eco/>.

Some low-risk research may qualify for “exemption” from full IRB review; however, the determination that the research is exempt must be made by the university’s Office of Responsible Research practices (ORRP), and cannot be assumed by the student or investigator. Students who will be using data previously collected by faculty members for a theses, dissertation, or culminating project will also need to obtain IRB approval, frequently via the exempt status form. Requests for exempt determinations are made using the Buck-IRB [online system](#).

One aspect of student research which should be noted is that for purposes of the IRB application, the student’s advisor must be listed on the form as the “Principal Investigator,” i.e., the person responsible for the research. The student is a “co-investigator.” Both the student and the advisor must have completed the on-line human subjects training (CITI). The IRB will not review an application unless everyone listed as principal or co-investigator has completed the on-line training.

Research with animals

All animal protocols should be submitted in via the university’s e-Protocol system. Directions to secure approval for research with animals are available through the Office of Responsible Research Practices. Approval requires completion of the Animal Usage Orientation Course (either classroom or online) and the Occupational Health and Safety Training Course (online only). Information regarding these courses is available online at <http://orrrp.osu.edu/iacuc/>.

Need assistance?

You are encouraged to contact your faculty advisor or employer about research, including the requirements for responsible research practices. You may also speak with [William Miller](#) PhD, Senior Associate Dean for Research in the College of Public Health, if you have questions or concerns.

If you have additional questions or need to discuss specific issues concerning research you are undertaking, contact:

Office of Responsible Research Practices
The Ohio State University
300 Research Administration Building
1960 Kenny Road Columbus, Ohio 43210-1063
Phone: (614) 688-8457
Fax: (614) 688-0366
<http://orrrp.osu.edu/index.cfm>

[Template for Practicum Report Title Page]

Practicum Final Report

Student Name
MPH in Clinical Translational Science
Entering Class of 20xx

Title

Research Mentor: Name
Department, Organization

Advisor: Name

Date Submitted

[Template for Culminating Project Title Page]

Title

Student Name
Entering Class of 20xx

Culminating Project for
Master of Public Health in Clinical Translational Science

Committee Members:

Faculty Advisor's Name

Research Mentor's Name

Additional Graduate Faculty Member's Name

The Ohio State University College of Public Health

Submitted on Date