COLUMBIA | MAILMAN SCHOOL OF PUBLIC HEALTH

HEILBRUNN DEPARTMENT OF POPULATION & FAMILY HEALTH

Master's Student
Handbook 2019 - 2020

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www.mailman.columbia.edu/popfam

Heilbrunn Department of
Population and Family Health
Master's Students' Handbook: Table of Contents

Overview

The Heilbrunn Department of Population and Family Health shifts global health policy and practice to improve health systems and health outcomes for populations in low-income, unstable, or inequitable environments worldwide.

The Department uses varied interdisciplinary scientific and technological approaches and a justice framework to understand factors undermining health and wellbeing to shift policy and practice. Combining knowledge of the impact of law and global governance on public health at the local level, with complex health systems analysis and implementation science, PopFam seeks to prevent or address public health threats in underserved communities and environments globally. The Department emphasizes sexual and reproductive health, wellbeing of migrant populations, the health of children facing adversity, environmental justice, and human rights. The Department trains public health leaders using an action-based curriculum designed to foster global partnerships.

The Department was founded in 1975 by Dr. Allan Rosenfield as the Center for Population and Family Health (CPFH). Its early mission was to improve the planning, management, and effectiveness of population and family health programs in the context of broader development efforts. Dr. Rosenfield was an obstetrician/gynecologist who specialized in family planning, family health, and maternal/child health; he served as the first director of the CPFH from 1975-1986. During his tenure as director, projects operated by CPFH included multiple family planning research projects in Africa and Asia; the Law and Policy Program, which sought to inform government policies concerning access to family planning services, human rights, and women's rights; the creation of clinical service programs in upper Manhattan for families and teenagers, and, in partnership with Columbia's Department of Pediatrics, comprehensive primary health clinics in public schools in the Washington Heights neighborhood of Manhattan. In 2000, CPFH was renamed as the Harriet and Robert Heilbrunn Department of Population and Family Health, a department of the Mailman School of Public Health. The core values of Dr. Rosenfield are still evident in the Department's focus on improving health systems and outcomes among vulnerable populations worldwide.

Within PopFam, students can pursue three degrees: the Master of Public Health (MPH), the Master of Science (MS), and the Doctor of Public Health (DrPH). MPH graduates from PopFam go on to hold leadership positions in US- and internationally-based non-governmental organizations, government, community-based organizations, health care organizations, universities, research organizations, and foundations and philanthropies. Graduates of the Department's DrPH program have gone on to hold faculty positions at renowned colleges and universities, worked with governments and ministries of health, and overseen public health programs, such as the Department's own RAISE Initiative.

General Information and Resources

The Heilbrunn Department of Population and Family Health is located on floors B2, B3, & B4 of 60 Haven Avenue. Terry McGovern, JD, is the Chair of the Department and Dr. Linda Cushman is the Academic Director. Chelsea Kolff, MPH, is the Academic Coordinator. Chelsea is responsible for all academic affairs related to the MPH, MS, and DrPH programs including admissions, academic progress, practica, & graduation. Feel free to come by if you have questions or just to say hello! Chelsea's phone number is 212-304-5703, and her email is cak2190@cumc.columbia.edu.

Financial Aid

Students who need financial aid should contact the Financial Aid Office in the Mailman School of Public Health (212-305-4113, sphfinaid@columbia.edu). The types of student aid available, including loans, awards, and work-study employment, are outlined on the school web site. Fellowships and grants from government agencies and private foundations are available for graduate students. The amounts awarded, eligibility for the awards, and the basis for selecting recipients vary. Students interested in exploring these funding possibilities should consult with the Office of Financial Aid.

Email & Accessing Information

Columbia UNI & Email
An official Columbia University email address is required for all students. The University has the right to send official communications to the University email address, which is based upon the University Network ID (UNI) assigned to the student.

The University expects that every student will receive email at his or her Columbia University email address and will read email on a frequent and consistent basis. A student's failure to receive and read University communications in a timely manner does not absolve that student from knowing and complying with the content of such communications.

PopFam Listserv
The department regularly sends information for master's students such as program announcements, practicum opportunities, and job postings for students. All students are automatically subscribed to this email listserv. Sub-listservs also exist for each cohort, to which students are also automatically assigned. Students may opt in to the PopFamJobs listserv upon graduation.

Mailman Public Health and Columbia
The Mailman School of Public Health website, www.mailman.columbia.edu, provides information on academics, financial aid, career services, and other topics. Important announcements are shared with students in an email produced by the Office of Student Affairs called "Transmission."

On the Columbia University home page (http://www.columbia.edu), under "Students," are quick links to schedules of classes, schedules of finals, grades, registration holds and bulletins. Students can also access this information directly through Student Services Online (SSOL), https://ssol.columbia.edu.

Students can access scholarly information and reference materials through the Columbia Libraries website, www.columbia.edu/cu/lweb. In addition to the collections, Columbia University Libraries/Information Services provides many services to support graduate students m library.columbia.edu/services/grad-students.html.

Campus Shuttle Service
A free campus shuttle bus service is available between the Medical Center campus, the Morningside campus, and Harlem Hospital. A valid Columbia University identification card is required. The shuttle runs between 6AM and 11PM. For up to date information about this and other shuttle bus services operated by Columbia University please check the Transportation Web site at www.columbia.edu/cu/transportation/.

Campus Escort Service
Students may call the Security Office (212-305-8100) for escort service between all Health Sciences facilities, or to their cars.

Mailman Bias Response and Support System (BRSS)
The Mailman School of Public Health is committed to creating an inclusive working, learning, and living environment where all are respected. The occurrence of bias related incidents, involving conduct, speech, or expressions reflecting prejudice are an opportunity for learning and growing as a community. All students, faculty, staff, and alumni and anyone observing or experiencing a potential bias-related incident involving our Mailman community members can use BRSS. BRSS is one of many tools provided by Mailman that will support us as we co-create a community dedicated to learning and developing skills needed to bridge differences. More information and to access BRSS, https://www.mailman.columbia.edu/research/office-diversity-culture-and-inclusion/bias-response-and-support-system.

Gender-Based Misconduct Policies for Students
Students are encouraged to familiarize themselves with university resources and policies regarding sexual assault, sexual violence, sexual harassment, and gender based misconduct (https://sexualrespect.columbia.edu/university-policy). Students who believe they have been subjected to gender-based discrimination or harassment are encouraged to report these incidents. Upon receiving a report, the University will respond promptly, equitably, and thoroughly. In addition, the University will take steps to prevent the recurrence of the discrimination or harassment and correct its effects, if appropriate.

To report an incident of gender-based or sexual misconduct, please contact Student Services for Gender-Based and Sexual Misconduct at (212) 854-1717.

Registration Process

Incoming MPH students should note that the school registers students for their first semester Core courses. Incoming MS students will work with their advisor and the Academic Coordinator to select and register for classes. In subsequent semesters, students will use Student Services Online (SSOL) to register for department, certificate, and elective courses.

Registration for classes is held multiple times at the beginning of each semester and at the beginning of each summer session. You will receive information about these registration periods from the Office of Student Affairs. Student should check SSOL for any holds on their accounts and to view their next registration appointment times.

Each semester, course schedules for the entire university are published online in the Columbia Directory of Courses (www.columbia.edu/cu/bulletin/uwb/). The Mailman School of Public Health publishes a separate course schedule available online at https://www.mailman.columbia.edu/people/current-students/academics/course-directory.

Many courses require permission. In these cases, a note in the Mailman School online course listing will indicate who should be contacted for permission. Students who register without permission may be dropped from the class even after having registered for it.

Holds
The Office of Student Affairs may prevent a student from registering for classes by placing a hold a student's registration. Examples include academic holds for incomplete courses, library holds for outstanding materials and/or fees, Bursar's Office holds for any money owed, or Health Services holds for failure to comply with immunization requirements. Holds on registration must be cleared before a student will be allowed to register. To clear the hold, the student must settle the outstanding obligation(s) that caused the hold.

Change of Program Period and Add/Drop
Changes in your class schedule may be made during the add/drop period, usually the first two weeks of the semester. There are no extra charges for adding or dropping courses during this period. For specific dates each semester, please consult the Academic Calendar at https://www.mailman.columbia.edu/people/current-students/academics/academic-calendar

Courses: Required, Selectives and Electives
Students should review their respective academic plans to ensure they are taking classes necessary to complete their degrees as prescribed. This includes department required courses and certificate requirements. MPH students may find their academic plans in the Certificate Requirements database (https://www.mailman.columbia.edu/people/current-students/academics/certificates/certificate-requirements).

Selectives refer to department or certificate required courses in which a student selects from two or more courses. When counting as a selective, courses cannot be taken pass/fail.

A *department elective* is any course taught by the PopFam department, typically denoted by a course number beginning with P86.

Certificate electives are courses that are applied toward the student's certificate. Some certificates specify a selection of courses from which the student must choose electives and other certificates are open and flexible and have a wide range of options for electives.

A *general elective* is any graduate level course taken in or outside of PopFam. General electives may be taken at other schools of the university. Most graduate level courses are indicated by course numbers of 4000 or higher.

No course can count in multiple categories; students may choose in which category to count a course, but it may only count in one.

Tutorials
A tutorial is an individualized course of study in which a student works with a faculty member in a less structured setting than a classroom course. One-to-one student/faculty tutorials may include, for example, participation in major research or other projects, small individual projects, pilot projects, literature review, and field experience. A tutorial may be taken for one, two, or three credits depending on the amount of work it entails. Students may complete a total of 6 credits of tutorials.

Students interested in taking a tutorial should first obtain a faculty member's agreement to serve as the instructor. The student then must complete the Tutorial Form and submit it to the Academic Coordinator no fewer than 72 hours prior to the last registration day of the semester.

Cross-Registration
One of the advantages of attending Columbia University is the ability to integrate one's educational experience at the Mailman School with coursework from other schools at the University. In addition to the Columbia Directory of Courses, students may also find courses of interest at Teachers College.

Depending on degree requirements and in consultation with one's advisor and the Academic Coordinator, Mailman students are encouraged to take appropriate courses from across the University. Columbia MPH students may not cross-register during their first semester (the Core). Cross-registration must be done during the change of program period at the start of the term using whatever registration method the partner school has outlined. As each school has its own

cross-registration procedure(s), students are advised to locate the cross-registration page on the school's website and follow its instructions.

Pass/Fail

This option is designed to permit students to register for credit in courses relevant to but outside of their area of study. For students in the Columbia MPH, up to nine credits of elective course work may be taken for pass/fail with the approval of the instructor and the advisor; for dual degree and accelerated students, up to six credits are permitted. <u>No core courses or required courses may be taken pass/fail.</u>

Transfer of Credits

Up to six transfer credits may be granted to MPH degree candidates for appropriate graduate level courses. Courses must be appropriate to the student's degree program, meet Mailman School academic standards, and be approved by the department. The courses must have been completed within the preceding five years at an accredited institution and *not have been counted toward another degree or credential*. The grading should be ordinal (a letter grade) and the grade earned should be B+ and higher. Transfer credits may not be applied toward the Core curriculum. Please consult with the Academic Coordinator about applying for transfer credit.

Incomplete Grades

There is no automatic grade of *Incomplete*. Students are expected to complete all course assignments and exams on schedule by the end of a semester. An incomplete grade (IN) may be given only when a student has met the attendance requirement but certain course assignments have not been completed for reasons satisfactory to the instructor. The instructor may grant an extension for a specific period of time, typically not more than several weeks. Students must complete a "Request for Incomplete" form in the Office of Student Affairs and have the faculty sign the form.

Students must complete work necessary to resolve INs by the following deadlines noted below - approximately 18 weeks from the end of the term in which the class was taken. Faculty have the discretion to shorten the deadline. Requests for extensions must be submitted via email to the Office of Student Affairs prior to the deadline and are reviewed on a case-by-case basis. Extensions are not guaranteed.

INs unresolved by their deadlines will default to UWs unless otherwise indicated by faculty on the Incomplete Request Form.

Semester of Incomplete	Deadline for Completion
Fall	May 1
Spring	Last day of Fall change of program period
Summer	Before the first day of Spring registration

Students who carry incomplete grades into a new semester will have the balance of IN credits counted toward the maximum number of credits allowed in the new semester. Because students register for a new semester before the receipt of the prior semester's grades, students may have to drop courses not required in the new semester's academic plan. If the balance of IN credits prevent a student from taking the necessary required courses in the new semester, the student may be asked to take a Leave Of Absence until they resolve all INs. All INs carried into a new semester must be resolved before a student may add credits freed up by completed INs. Dual degree students whose residency moves to their partner school may not cross-register for Mailman courses while carrying IN credits from Mailman.

Students who carry INs beyond their final semester must maintain continuous enrollment with the Mailman School until they resolve their INs. Continuous enrollment allows access to School and University services (e.g., advising, libraries, etc.); it also accounts for the processing of the INs and the conferral of a student's degree. In general, students may not take Leaves Of Absence after their final semester to avoid this continued enrollment.

Leave of Absence/Inactive Status

Leave of absence or medical leave must be approved Chelsea Kolff, Academic Coordinator, and by Lillian Morales (212-305-8690, lm31@columbia.edu), Associate Director of Academic Standards and Academic Records, in the Office of Student Affairs. A student who takes a leave that extends beyond two years will be required to re-apply for admission through the Office of Admissions. Re-admission applications are available online at the Mailman School of Public Health's web site for prospective students. Contact the Office of Admissions at 212-342-5127 for more information about re-admission.

Applying for Graduation
The university grants degrees three times a year: February, May, and October. The precise dates vary from year to year. Check the academic calendar for dates.

Students may file an application for graduation when they anticipate fulfillment of all degree requirements by the graduation date. Applications for graduation must be filed with the Mailman Office of Student Affairs. The filing deadlines are absolute. They are published each year in the academic calendar.

Acceptance of a graduation application is conditional. Students who file for graduation but fail to complete required work will not graduate. The next time they file for graduation, they will have to complete all degree requirements before re-application for graduation will be accepted. In addition, students may be charged for extended registration. The extended residence registration course for master's programs allows students who have completed all coursework to remain active with a part-time status for one additional semester. In order to give students access to the resources they need to complete remaining coursework in this extended semester, students will be required to register for a zero credit course that will be charged at $500. It will activate (or reactivate) a student's UNI and provides virtual library and facility access. However, it will neither provide access to financial aid nor to housing.

Learning Objectives

The Heilbrunn Department of Population & Family Health focuses on the health needs and rights of diverse populations in communities across the globe. Concentrating on underserved populations, the department prepares students to work in public health, advocacy, and policy.

Learning Objectives: Mailman School of Public Health
Upon satisfactory completion of the MPH degree, all graduates will be able to demonstrate a broad knowledge and skills base in the core areas of public health, with particular emphasis in a selected field of public health, and will be able to:

- Apply epidemiologic methods to the measurement of disease rates, prevention of infectious diseases, and the development and evaluation of health programs and policies;

- Apply statistical methods of estimation and hypothesis testing and explain the basics of correlation and regression for the purpose of analyzing the health of populations;

- Analyze how environmental contaminants (chemical, physical and other exposures) interact with biological systems and their effect on human populations for the purpose of evaluating risk reduction strategies;

- Assess the impact on health policy options of social, political, technological, economic and cultural forces, and apply basic management techniques to address organizational challenges to providing health care;

- Examine public health issues and responses from a social and behavioral sciences perspective and explain social, cultural, political, economic, and behavioral determinants of disparities in health status among population sub-groups; and

- Demonstrate knowledge and skills for effective practice in their selected field of study.

MPH Learning Objectives: Heilbrunn Department of Population and Family Health

Upon satisfactory completion of the MPH program in PopFam, graduates will be able to:

- Discuss and defend the ethics, social justice and human rights principles surrounding long-term, action-oriented research; articulate how each factors into the practice of service delivery with sustainable, measurable, effective outcomes; and relate these professional ethics and practices to equity and accountability.
- Apply the concepts and skills of culturally appropriate community engagement and empowerment within diverse communities, with attention to privilege and power dynamics, and to human resource assets and constraints in diverse locations.
- Articulate how complex interrelated forces combine to affect people's health and well-being, especially in the areas of fertility, mortality and migration.
- Demonstrate substantive expertise in major public health topics in the student's selected track, as well as knowledge of the strengths and limitations of current directions in programmatic and policy responses.
- Design, conduct, synthesize, and apply methodologically-sound, evidenced-based research to improve both public health practice and policy in the main substantive areas of the Department.
- Develop and implement data collection instruments (e.g., survey questionnaires, rapid assessments, focus group guides, in-depth interviews); and create monitoring and evaluation strategies for use in the United States and in resource-constrained settings throughout the world.
- Differentiate between qualitative and quantitative evaluation methods in relation to their strengths, limitations, and appropriate uses with emphasis on reliability and validity.
- Design and implement viable and culturally appropriate programs using logic models in the primary substantive areas; differentiate among the goals, measureable objectives, related activities, and expected outcomes for effective public health programs; and articulate the location of the programs within public health systems.
- Differentiate the purposes of formative, process and outcome evaluation; and design, conduct, and analyze rigorous needs assessments, evaluations, and other service-based research.
- Engage in dialogue and learning from key stakeholders to advance public health goals.
- Promote high standards of personal and organizational integrity, compassion, honesty, and respect.
- Demonstrate skills in written and oral communication that is clear, concise and accessible to the audience being addressed.
- Demonstrate competence in the professional skills necessary to move quickly into leadership positions within organizations that deliver public health services.

MS Learning Objectives: Heilbrunn Department of Population and Family Health

Upon satisfactory completion of the MS program in PopFam, graduates will be able to:
- Critically analyze the interplay of policies, behaviors, norms and contexts that effect population and family health issues.
- Effectively use public health research methods, including research design, data collection, analysis and dissemination, to plan and conduct successful service-based research, program evaluations and needs assessments.
- Design, implement and evaluate an evidence-based and culturally appropriate public health program, in both US and developing country contexts.
- Demonstrate technical competence and specialized knowledge in at least one concentration area in population and family health such as: sexual and reproductive health; child, youth, and family health; maternal child health; and health and humanitarian action.

Academic Advising

Upon admission to PopFam, each student is assigned a faculty academic advisor that is based on student's application, research topics and interests, and/or certificate.

The advisor is responsible for guiding the student's planning and progress through the program, in view of intellectual and professional goals. Advisors help students choose classes, select a practicum, develop a capstone topic, and position themselves to achieve their goals. In addition to the faculty advisor, Chelsea Kolff, the Academic Coordinator, is assigned to all students as a secondary advisor. Chelsea is the most appropriate person to consult with about administrative and logistical aspects of the program, such as the rules and facilities of the University, program requirements, registration, and course schedules.

We try to match student and faculty advisor by interests, but sometimes there may be a need to change in a student-advisor match. Students who would like to make such a change, or who otherwise need help in managing their advisement, are encouraged to contact Chelsea.

Email your advisor during the first two weeks of your first fall semester and request a time to meet for 30 to 45 minutes. Before the meeting, read this handbook and the information sheet for your certificate. In your first meeting, you and your advisor should plan the academic program you will follow after you complete the first-semester Mailman core.

At the meeting, be prepared to discuss the following items:

- The certificate you are in and why you selected it.
- What certificates you are considering if you entered the program undecided.
- When you plan to graduate.
- Whether you plan to take any summer courses. Summer course offerings are limited at the Mailman School. Therefore, you should investigate appropriate elective course offerings at other schools within the University.

Begin the meeting by telling your advisor about your background, interests, and future career goals. You and your advisor should go over your planned course of study. Although there are many courses that are predetermined by the requirement for the school, department, and your certificate, you should discuss these in the context of your career plans and interest.

You may want to focus your discussion with the advisor on issues beyond course requirements to include the following:

- *Elective courses:* The number of elective courses available to you depends on your certificate. To choose appropriate elective courses, think about your current interests and future career plans, and ask your advisor for his/her recommendations.
- *Practicum:* Start to think about the skills you will need for your future career. Some of these skills cannot be developed through course work alone. The practicum should be an opportunity to develop such skills. Ideally, the practicum project should form the basis for the capstone.
- *Employment opportunities:* Whether you plan to work part-time during your matriculation at Mailman or thinking about employment after you graduate, your advisor is a good person to discuss employment opportunities. They may know of projects at the school or beyond that you may be able to become involved with. You may also want to discuss what kind of employment may be most beneficial in terms of your academic and career plans.
- You should return to these topics in your next meeting with your advisor.

You should consult with your advisor and/or Chelsea periodically. To consult about course selection, you can email the list of courses you plan to take each semester; your advisor can approve the list via email.

You should also stay in contact throughout the semester and email or call him/her with any questions, concerns, or changes in your agreed-upon course of study.

Degree Requirements

MS Degree Requirements

The MS degree in PopFam requires 30 credits in total and a thesis. This program is designed to be either completed in one academic year or part-time over 2-3 years, not to exceed 5 years.

The coursework requirements are as follows:
- *Required Courses (7.5 credits)*
  The required courses or equivalents are: P6400 Principles of Epidemiology (3 credits), P6103 introduction to Biostatistics (3 credits), and P8698 Interdisciplinary Seminar in Population and Family Health (1.5 credits). Required courses can be substituted with additional elective courses where the student can demonstrate they have already achieved the relevant competencies.

- *Elective Courses (22.5 credits)*
  Students should work with their advisor to tailor a plan of study to augment their professional skills and experience and to deepen their knowledge in a key concentration area of the Department, such as maternal/child health; child, youth and family health; sexuality, sexual and reproductive health; and forced migration and humanitarian action.

A master's thesis is required; topic to be associated with selected content area. Reviewer to be selected in consultation with advisor. Thesis should demonstrate mastery of professional and research skills acquired through the MS. It will generally take the format of a scholarly manuscript of publishable quality or detailed program proposal for an institutional donor.

MPH Degree Requirements

In PopFam, the MPH degree is offered in three formats, the Columbia MPH (two-year), the Accelerated MPH (one-year), and Dual Degree program. All programs require coursework, practicum, and a capstone paper. The coursework requirements are as follows:

- *Mailman Core (15 credits)*

  The Core is built around six studios (listed below), which represent the core areas of knowledge in the field of public health. Additionally, cross cutting competencies are embedded throughout the semester, including systems thinking, public health biology, and program planning.
  The Columbia Core Studios:
  1) P6020 Foundations of Public Health (1.5)
  2) P6031 Research Methods and Applications (4.5)
  3) P6040 Determinants of Health (3)
  4) P6051 Public Health Interventions (1.5)
  5) P6052 Global and Developmental Perspectives (1.5)
  6) P6060 Health Systems (3)

  It is through this integrated experience that students achieve the foundational and interdisciplinary knowledge necessary to move forward in the MPH program.

- *Integration of Science and Practice (ISP) (3 credits)*

  In addition to the Core, Mailman students will take the case-based Integration of Science and Practice (ISP) course. The small-group ISP sessions bridge the gap between classroom learning and the real-world experience of working as a public health professional. This course consists of 1.5 credits in the fall semester and 1.5 credits in the spring.

- *Leadership Development (1.5 credits)*

  All Mailman students also receive intensive leadership training through the Leadership Development course in the spring semester, which focuses on teamwork, leadership, and innovation in public health. Students will learn how to work effectively in both large and small teams while embracing the complexity and diversity of working in complex systems and organizations as a window into true public health practice.

- *PopFam Required Coursework (16.5 credits)*

  In addition to completing the Mailman School core, PopFam students must take three department core courses, two selectives, and one elective that provide an overview of the field of Population and Family Health and the application of social sciences to public health.

Columbia MPH Certificate Program (52 credits minimum)

The balance of the credits (52 minimum) for the MPH degree consists of certificate-specific courses and electives. Every student in the two-year Columbia MPH program enrolls in a certificate program that provides training in a focused area of expertise and leads to a Columbia University- and CEPH-approved credential.

Accelerated MPH Program (42 credits minimum)

The Accelerated MPH is an intensive, one-year program designed for highly motivated professionals seeking to enhance their career with a degree in public health. The curriculum is similar to the innovative curriculum of the two-year Columbia MPH but completed in three semesters (fall, spring, summer). The profile of a typical Accelerated MPH student is an individual who has earned a doctoral degree, an MD student mid-way through their study, or an individual who as has several years of work experience. Students in the accelerated program are not eligible for a certificate.

There is a 45 credit limit on tuition across this three semester program (Fall/Spring/Summer). Any courses taken over the 45 credit limit must be paid for on a per credit basis. The summer courses as described in the program plan are included in the flat tuition rate but must not exceed 45 credits.

Dual Degree Programs (42 credits minimum)

The Mailman School offers dual master's degrees with 10 schools across the university through our MPH program. Applicants seeking admission to dual degree studies must apply separately to each of the two collaborating schools and must meet the admissions requirements of each. Once both schools grant admission to their individual degree programs, the student may begin an integrated dual degree program.

Dual-degree students are required to take 42 public health credits. Most of these students will complete the majority of their program in their first year of residence at the Mailman School and

complete some requirements in their second year (when students are in residence at partner schools). The requirements in year two potentially include some coursework and the student's capstone/thesis.

Registration and Tuition for Dual Degree Programs

- All students in the dual-degree programs will spend a consecutive fall and spring semester at Mailman earning a minimum of 33 credits through a flat-fee tuition model
- All students will earn an additional nine credits in either the summer of their first year or in year two as a cross-registrant (or a combination of both).
- Certificate programs are not available to dual-degree students
- All dual-degree students will pay a flat-rate tuition charge

It is extremely important that dual degree students seek guidance from the program coordinators and academic advisors in both programs and the Director of Student Services in the Mailman School of Public Health. Students must be careful to both register for the correct number of credits in each school and to complete all program requirements for each school. Dual degree students must consult with and get approval from the PopFam Academic Coordinator, Chelsea Kolff, before registration.

Practicum

All MPH students in accredited schools of public health in the United States must complete "a planned, supervised and evaluated practice experience (as part of their) public health professional degree program." Within PopFam, students devote 140 hours and 8-12 weeks to the practicum.

The practicum should provide the opportunity to apply the concepts and methods of social science and public health learned in the classroom to actual public health problems. During the practicum, a student works under the guidance of a supervisor who agrees to orient, supervise, and evaluate the work of the student.

The settings of student practica vary by program and certificate. The acceptable content of a practicum is flexible to meet a diverse range of student interests, educational needs, professional objectives, and career goals. However, in all cases the practicum experience must be consistent with the academic goals and objectives of the Mailman School and the Heilbrunn Department of Population and Family Health.

General Objectives

The practicum provides an opportunity to apply material learned in class and to develop professionalism. The practicum will allow the student to:
- Synthesize and integrate one's area of substantive expertise with competencies in program design, implementation, management, and evaluation; research data collection, analysis, and reporting; and policy analyses and advocacy;

- Apply this learning to distinct, coherent practicum projects focusing on reproductive health, child health, adolescent health; and

- Provide host sites with valuable materials, services, analyses, and/or research that relates directly to the ongoing activities and mission of the site, and that meets the defined health care needs of the site's surrounding community.

Prior to the Practicum

Most full-time MPH students will complete their practicum in the summer between years 1 and 2. However, other arrangements are acceptable: a practicum may be carried out over a semester during the academic year or over a full calendar year, depending on the student's schedule and the needs of the sponsoring organization.

Many factors influence a student's final practicum selection. Although it is helpful to have specific interests already in mind, the practicum also affords a great opportunity to explore areas of potential interest. Some students use this time to learn more about areas they may be considering for a career.

As students are balancing their areas of interest, family commitments, and geographic and financial constraints, it may be helpful to consider some of the following:
- How geographically mobile am I? Do I want to do a domestic or an international practicum? Must my practicum be in NYC?
- What do I envision myself doing after graduation?
- Do I want to use my practicum as a possible future job placement and, if so, in what job or agency do I envision myself working after graduation?
- What skills would I like to practice in my practicum? What would I like to learn?
- Do I have career goals that include further academic pursuits, such as obtaining a PhD or other advanced degree?
- Do I want to do a practicum that offers the possibility of a publication or presentation at a scientific session?
- How important are financial consideration, such as whether my practicum must be paid?
- Do I want to do my capstone as an extension of my practicum?

As students are balancing their areas of interest, family commitments, geographic and financial constraints, it may help to consider some of the following:

Finding a Practicum Placement

There are many ways to find a practicum placement. Students may contact a faculty member or an organization with which they would like to work. Students can search **Mailman CareerLink,** the Career Services search engine, for paid and unpaid internships and should also review the Friday OCS Announcements for featured internship opportunities.

Students can also get ideas for potential practica by reading previous students' practicum title and organization, which Chelsea provides to first-year students each spring. Frequently, email announcements of available practica are sent to the student listserv.

Office of Field Practice (OFP)

The Office of Field Practice provides an array of resources to support and promote student participation in public health field-practice, including the administration of various School-wide components of the required practicum within the MPH curriculum. OFP works with all academic departments and programs, and develops inter-disciplinary practice sites available to students across the School.

The OFP Team has created multiple tools and assignments to assist in this submission process, including "How To" guides for students, faculty and practicum administrators. All students will have access to the OFP CourseWorks website, beginning spring semester of their first year. There are several steps and assignments students must take to i) submitting the Scope of Work and ii) receive the stipend.

It is important to note the completed SOW must be approved before students may begin the practicum.

i) *Practicum Scope of Work Form*

The practicum scope of work (SOW) form is an important tool for planning your practicum and meeting the School's requirements for engaging in a structured and approved practicum process. It is mandatory for all students to develop a practicum SOW in collaboration with the practicum organization, and to get the completed SOW approved by their faculty adviser and the department Academic Coordinator (Chelsea) before the start of the practicum. Your practicum stipend will be disbursed only after the approval of your SOW. The Office of Field Practice has developed an online system to make the submission process quick and easy. You can locate the online SOW at https://www.sac-cu.org/MSPH/PracTrac/Home.aspx.

Once the practicum agency and project have been identified and agreed upon, it is the student's responsibility to submit the SOW via the online SOW Database. The objectives and activities of the practicum should reflect as many of the core competencies of PopFam as possible. These objectives should be initially outlined in the form by the student with input from the practicum preceptor.

4 Steps to Complete the Scope of Work form:

Step 1: Student Completely Answers all Questions in the Form
Step 2: IRB Review
Step 3: Faculty Advisor Approval
Step 4: Final Review by Academic Coordinator for Department Approval

As stated above, online SOW approval by both faculty advisor and associate director is required before students begin their practicum.

ii) *Practicum Funding/Stipends*

OFP administers a small stipends program. The program provides students who complete their initial requirements on time with a small sum to partially support their expenses during the practicum. The initial requirements are in the Assignments section of the OFP CourseWorks

page. The Office of Field Practice begins the processing of stipends starting in mid-April, based on approved SOW and Compliance with Safety and Security as needed.
The entire process from time of departmental approval of your SOW (not submission of the SOW) to receipt of funds in your account averages one month.

Students are responsible for covering the full cost of their practicum and personal expenses. Some agencies offer paid practicum opportunities. For Mailman students, a paid practicum is acceptable but not required.

The anticipate stipend amounts for the 2019-20 academic year are listed below:

Category	Amount
International 6-month practica	$2000
International 2-3 month practica	$1000
Domestic sites (outside of tri-state area)	$500
Local (tri-state area – NY, NJ, CT)	$250

During the Practicum

Once a student begins the practicum, the supervisor who coordinates and supervises the student's work is responsible for seeing that the specific objectives and activities agreed upon in the practicum agreement are being carried out according to schedule. The preceptor orients the student to the agency and project and meets with the student on a regular basis to monitor the student's progress. During the practicum, the student is responsible for performing according to the practicum agreement and for fulfilling the usual responsibilities of punctuality, accountability, and appropriate deportment and initiative expected of all public health professionals. If there are any problems or concerns the Academic Coordinator is available to meet with the student and/or the student's supervisor. If for any reason the student or the supervisor is unable to fulfill his or her responsibilities according to the practicum agreement, plans and activities for the practicum may be changed or modified with the approval of the advisor and the practicum preceptor.

Following the Practicum

After completion of the practicum all Mailman students are required to file for completion and complete a brief evaluation of the practicum experience, both of which are the final step in the SOW online database.

In addition, all PopFam students must **present on their practicum experience**, including data, preliminary conclusions, etc. For most PopFam students in the MPH program, this presentation takes the form of the Practicum Poster Presentation, held each fall. For PHHA students, this is done through the Forced Migration Seminar, in which students present a PowerPoint of their practicum and findings. Global Health Students hold a practicum poster presentation of their own each spring. Presentation at a student's respective event is *mandatory*; dates for the event are circulated several months in advance to avoid any scheduling conflicts.

Students in the Accelerated MPH program have the option to submit a portfolio to present their practicum experience. The portfolio will allow students to engage critically and innovatively to integrate their practicum with other curricular and co-curricular activities they have engaged in during the MPH program. Students have the option to include their Capstone paper as a part of their portfolio.

Capstone

Overview for Current Students Overview for Current Students

The Capstone Paper serves as the final step in the Capstone Experience of the Heilbrunn Department of Population and Family Health.

Purpose of the Capstone Paper

The Capstone Paper requires students to demonstrate their abilities to think and communicate clearly, reflect on their new knowledge and training, and make professional contributions to their main fields of interest, with guidance from faculty capstone readers. It serves as the final piece of evidence that the student is prepared to practice as a public health professional.

The value of a well-researched and well-written Capstone Paper extends far beyond the MPH degree. Effective organizations depend upon staff members who can design needs assessments, programs, evaluations, and strategic plans, and document them in writing. Policy advocates seek professionals to articulate complicated public health evidence and ideas in briefs, articles, reports, and monographs. Doctoral programs look for students who can conceptualize, analyze, and communicate complex, interdependent health circumstances.   Capstone Papers stand as concrete examples of students' mastery of substantive areas, as well as proof of their competencies in key public health skills.

Options

In the Heilbrunn Department of Population and Family Health, students can choose from one of four options to meet their Capstone Paper requirement. They may write a:
1. Manuscript of publishable quality (e.g. a research article, a review article in journal format, or a book chapter);
2. Proposal narrative, including an executive summary, for a major service-based research or evaluation project aimed at a specific funding agency or foundation;
3. Rigorous reflective paper about the practice of public health service delivery (based upon one's practicum); or
4. Paper presenting the theory-based development of innovative educational curriculum (the curriculum itself stands as an addendum to the Capstone Paper).

Each option is available to all students in the Department. Students choosing Options One or Two may base their Capstone Papers upon their practica, but are not required to do so. Options Three and Four must be based on a student's practicum.

Capstone Reader

The role of the Capstone Paper Reader is to provide students with guidance and feedback during the writing process, and read and evaluate the final product. The Capstone Reader will need to review and approve the capstone proposal before it is submitted to the Academic Coordinator. Additionally, s/he will work with the student on a timeline in order to provide feedback on the capstone as it is being written.

Input from students is one of several factors considered when the Department matches Capstone Readers. Students who wish to express their preferences should do so via the SurveyMonkey link (emailed to you by Chelsea Kolff). In consultation with the Certificate Leads, the Academic Program makes final decisions regarding students' Readers.

In some cases, a student may wish to consult with other faculty or non-faculty members. Students are asked to inform the Capstone Reader first. Only the faculty member designated as the Capstone Reader is able to approve that student's Proposal and grade the final Capstone Paper.

Prerequisites

Before beginning the Capstone Paper, students must have completed the following components towards their MPH degree:

- The Core
- Leadership in Public Health
- Integration of Science and Practice
- Research Design and Data Collection
- Department Selectives: Quantitative Data Analysis, Qualitative Data Analysis, Public Health Aspects of Child Health, Public Health Aspects of Adolescent Health, Investigative Methods in Complex Emergencies, A Health Systems Approach to Maternal Mortality, or Methods In Program Evaluation

Time Frame

If you think you may need IRB approval, you should begin to think through the process at least 6 months in advance of beginning your paper.

You will request a Capstone reader via an electronic survey distributed in the fall of your second year (timeline will vary for February and October graduates).

Once assigned, you should plan to meet with your capstone reader, and, if you are pursuing the manuscript or proposal option, finalize your Capstone Proposal before its due date. **Students electing to write a Reflective Paper or Curriculum do not need to prepare a Capstone Proposal; instead, they should present an annotated literature review of the sources they intend to incorporate into the Background section of the paper, and meet with the Capstone Reader.** Your final, approved Capstone Proposal or Literature Review should be delivered to your reader and the Academic Coordinator no later than **November 22nd.**

Dual degree, part-time, and off-cycle students will follow adjusted time frames set in consultation with the Academic Coordinator and their Capstone Readers. **It is the responsibility of students in this category to remain informed of the Department's policies, processes, and deadlines.**

Due dates for Capstones are:

December 1 for February Graduation
March 23 for May Graduation
July 15 for October Graduation

Late Capstones may delay your graduation.

Capstone Grading

The final, graded Capstone Paper will become part of the five-piece Capstone Experience package that will be reviewed by the Academic Program, and approved prior to graduation.

The Paper itself will be graded by the Capstone Reader according to these criteria:

A **High Pass** will be reserved for papers that are excellent. These papers are well-written and organized. They present new insights and make significant contributions in their fields.

A **Pass** will be given to papers that are solidly acceptable. They meet the stated purpose or goal. They demonstrate solid writing and organization, within a range from good to very good.

A **Low Pass** will be given to papers that are minimally acceptable, but lack certain aspects of writing and organization, within the range from average to good.

If a paper is not adequate—meaning poorly written and organized, missing critical elements, or is written in such a way that the thoughts and ideas are inaccessible to the reader—the student must rewrite the Capstone Paper to the level of a Pass before s/he can graduate.

The quality of writing will factor highly into the final Capstone grade. Students who want to improve upon their writing abilities should review the Resources for Current Students web page: http://www.mailman.columbia.edu/academic-departments/population-family-health/resources.

Technical Considerations

Authorship:
Usually, peer-reviewed articles, book chapters, review articles, and/or monographs are written by more than one person. Certainly in public health, the steps underlying articles (including the conceptualization of the research question, instrument design, sampling, field work, and data collection, analysis, processing, and interpretation) are typically collaborative

activities. Specific individuals may be more involved in some steps than in others, and it is often the case that many people indirectly contribute to the research by maintaining the ongoing health care services on which the research is based.

Department students may be involved in some or all of these steps, including the proposal or writing of a manuscript or proposal for submission. Thus, even if a student (or any other individual) has drafted much or all of an article, he or she may not be the first author when the article is published due to prior contributions from other authors. Because such earlier contributions may not be apparent as time passes, the *names and order of authorship will be a joint and early decision of those involved in the research or proposal writing*. It is appropriate for the student to be listed as an author on the article, providing that she or he has contributed to 1) the conception, design, acquisition of data, or analysis and interpretation of data, and 2) drafting the article. The student and, ideally, any other author listed should, have participated sufficiently in the work to *take public responsibility* for it.

The Department does expect and require that the student will be making a substantial contribution to the writing, regardless of whether she or he is the first author on the final product. The student is expected to explain his or her role as an author as well as to provide a rationale for author order.

Format:
- White paper and black ink only.
- 1" margins.
- Page numbers.
- 12 pt Times New Roman or 11 pt Arial fonts.

Length:
1. A manuscript should be about 25 double-spaced pages; or (for a peer-reviewed journal) about 3,500 words – excluding tables, figures, and references.
2. A complete proposal narrative should follow the length and spacing specified in the target agency guidelines.
3. A reflective paper should be a minimum of 20 double-spaced pages, not including attachments.
4. A paper describing a curriculum should be a minimum of 20 double-spaced pages, not including attachments.

Capstone Paper Proposal or Literature Review Outline

If you are electing Option One or Two (a manuscript or proposal), you need to prepare a Capstone Proposal, according to the following guidelines:

1. **Cover page:** The title of your paper, your name, your certificate track, option selected for your paper (manuscript, evaluation proposal, etc.), expected date of graduation, and the name of your Capstone Reader. Also indicate whether IRB approval (if necessary) has been received or is in progress.
2. **Description of project:** Limiting yourself to two double-spaced pages, incorporate the following elements:

      a. **Statement of the problem**: Issue to be addressed.
      b. **Background and significance:** Briefly sketch the basis for the Capstone Paper proposal, the existing knowledge on the topic, and the importance of the project for public health in general and your area of specialization in particular.
      c. **Specific aims:** State concisely and realistically what your Capstone Paper intends to accomplish.
      d. **Project plan:** Provide a brief description of the proposed project, target population(s) or sample(s) to be used, specific theory(s) to be applied, program components (if applicable), proposed methods, and data analysis plan (if you plan on using data).

3. **Authorship**
      a. **Listing of joint authors, in order.**
      b. **Rationale for student's name:** Explain why your name appears in the order that it does.
      c. **Delineation of student's expected contribution:** Describe the portion of the final joint-authored paper for which you are responsible.

If you are electing write a **Reflective Paper**, follow these guidelines:

1. **Cover page:** This should include the title of your paper, your name, your certificate track, expected date of graduation, and the name of your Capstone Reader.
2. **Description of project:** In two double-spaced pages, incorporate the following elements:

      a. **Description of the practicum site and project (two paragraphs)**.
      b. **Annotated Relevant Literature** – Identify and summarize at least eight peer reviewed sources that speak to one or more of the issues your will reflect upon in your paper. Briefly note the importance of the issue(s) for public health in general and your practicum experience in particular.

3. **Authorship:** Students may submit reflective papers on an individual basis only.

If you are electing to write a **Curriculum**, follow these guidelines:

1. **Cover page.** The title of your paper, your name, your certificate track, expected date of graduation, and the name of your Capstone Reader.
2. **Description of project.** In two double-spaced pages, incorporate the following elements:

      a. **Purpose of curriculum**, description of the target audience and potential training site(s) for curriculum use (two paragraphs).
      b. **Annotated Relevant Literature** – Identify and summarize at least eight peer reviewed sources that speak to one or more of the theories upon which you will base your curriculum. Briefly note the importance of the theories for public health in general and for your curriculum in particular.

3. **Authorship:** Students may submit reflective papers on an individual basis only.

A copy of your final, approved Capstone Paper Proposal or Annotated Relevant Literature must be approved by your Faculty Reader and submitted to the Academic Coordinator via email by **November 22nd, 2019**.

Practicum Confirmation and Capstone Paper Submission Form

Submit this form to the Academic Coordinator **via email** by the appropriate deadline. Missing the deadline may delay your graduation.

Deadlines:

March 23 for students graduating in May

July 15 for students graduating October

December 1 for students graduating in February

Date for which you have applied for graduation:

☐May ☐October ☐February   Year:

Note: If you do not complete your Practicum or Capstone in time to graduate, you may not reapply for graduation again until *after your paper is final and the grade submitted*.

• •

Name: Uni:

If you would like to receive a copy of your reader's comments please provide a mailing address:

• •

Capstone Reader:

Did you meet with your Capstone Reader at least once during the semester? ☐ **Yes**   ☐ **No**

If joint-authored, identify your specific contribution to the final paper (use additional page if necessary):

Type of capstone:
☐ Manuscript ☐ Evaluation or Research Proposal ☐Curriculum ☐Reflective Paper

• •

Practicum Site:

Practicum Supervisor:

Practicum Semester: Practicum Year :

• •

For Internal Use:

The above-named student has met the Practicum requirement of the Heilbrunn Department of Population and Family Health. S/he has submitted the Capstone Paper. The Capstone grade is forthcoming.

Signed:

_____   _____

Academic Directory   Date

Detailed Guidelines for Capstone Options

Manuscript of Publishable Quality

Overview

Students may elect to write high-quality review articles, or manuscripts targeted at specific peer-reviewed journals.

Manuscript Targeted for a Peer-Reviewed Journal

A manuscript published in a peer-reviewed journal is an excellent way to highlight original research or evaluation findings. Students considering this option should consult with their faculty academic advisors regarding the necessity of obtaining IRB approval during their first spring semester.

Most peer-reviewed journal articles consist of: a set of arguments that illustrate the public health relevance of the topic or question under study, the purpose of the study and proposed hypotheses, the methodology employed to examine this question, the scientific results, and a discussion of these results within the context of the available literature.

Peer-reviewed publications vary in their focal areas and structural requirements, but most include quantitative studies, such as surveys and secondary data analysis, and qualitative studies, such as ethnographic studies.

In the peer review process, each submission is reviewed by two or three outside experts in the subject area, who provide recommendations to the journal editor about the manuscript's scientific quality and merit for publication. Reviewers provide constructive criticism, whether or not manuscripts are deemed acceptable for publication. Their recommendations may include:

- Strengthened rationale for the study;
- Additional literature to review;
- Correcting errors in logic or analysis;
- Considering perspectives or alternative statistical methodologies that will improve the study's scientific rigor; and/or
- Clarifying research findings.

Sometimes, manuscripts are rejected by editors due to reviewers' assessments of weak scientific quality, or because of a mismatch between the journal audience and the focus of the study.

Notes:

1) Students selecting this option are encouraged to submit their work for publication and should organize their papers according to the guidelines of the target journal. Although they need not actually submit to the journal to meet the Capstone requirement, it should be ready to submit in manuscript format.
2) If the target journal's word limit is substantially shorter than the 3,500 recommend for a Capstone Paper, students should discuss how to supplement the article with their faculty readers in order to meet the Capstone requirement.

Structure

Journals require distinct formats for submitted manuscripts. It is the student's responsibility to prepare the manuscript according to the guidelines of the target publisher (often found in the "Instructions for Authors" section). Submitted manuscripts usually are divided into five main components, namely: abstract, introduction, methods, results, discussion, and references.

Abstract

The abstract of the manuscript is a concise summary of the research problem, objectives, research design, results, and conclusion. Usually the word count for the abstract is between 250–300 words. Some journals require a structured abstract that includes subheadings such as objective, design, setting, participants, outcome measure, results, and conclusion.

Introduction

This section provides a literature review. Here, the goal is to present:

a) A detailed description of the research problem, including its magnitude, scope, and significance;

b) The key findings in the scientific literature regarding your research problem;

c) How your study will contribute to the existing knowledge gained from prior findings;

d) If appropriate, the theoretical framework that guides your hypothesis; and

e) The purpose of the investigation and hypotheses.

Method

After you select a research problem, determine the most effective design for investigating. In your manuscript, you will need to decide which of the following sub-sections to include, and the approximate length of each:

Overview of Research Design: Briefly describe the overall approach of your study. If it has phases, describe these too.

Source(s) of Data: Depending upon the type of study that you are designing, you should include as many of the following sub-sections as necessary:

Sample: In writing this sub-section, try to answer the following questions: What is the general study population from which you are planning to draw your sample? Who are you selecting to participate in your study? Who is not eligible? In other words, what are the inclusion and exclusion criteria for your study? What are the reasons for your selection criteria? How many people do you plan to include in the study? What are the reasons for your sample size? How much power does your study have to detect an effect? What are your estimates of participant attrition? How do you plan to recruit research participants? Be very specific. For example, *Latina women between the ages of 60 and 75 who reside in upper Manhattan, New York City will be recruited.* If you have completed a secondary data analysis, you should answer the following questions: What is the data set that you have selected for your research? How were the data collected for the selected data set? What are the benefits and limitations of the data set?

Research Setting: Describe in detail the geographical and/or social community that you have selected for your study and the reasons for your selection.

Data Collection Method(s): Present a general overview of the method(s) you selected, your reasons for selecting it, and how this is going to be implemented in your data collection. If your research proposal only concentrates on secondary data analysis, you should focus this section on the types of measures that you are going to use in your analysis.

Measures: Describe what measures will be used, the reliability of each measure, the suitability of each measure for the study population.

Analytical Methods: Specify the types of methods that you are going to use to analyze your data (e.g., logistic regression, historical trends, and content analysis) and the reasons for your selection. Describe how these methods address specific aims.

Ethical Concerns and Protection of Human Subjects: For all original research and/or secondary data analysis, protection of human subjects must be addressed, i.e., was IRB approval requested and approved, or if not, was this study exempted. This information is usually one or two sentences in the methods section.

Results

In the *Results* section, accurately account for the study findings. Once you have completed your analyses, and decided how best to present each one, think about how you will arrange them. Your analyses should tell a story that will lead your readers through the steps needed to logically answer the question(s) you posed in the *Introduction*.

Because the order in which you present your results can be as important as what you actually say in the text, authors usually begin this section by reporting descriptive statistics, i.e., sample characteristics. Often, tables are used to present comprehensive pictures of the sample and their characteristics. Text should not reiterate data that are presented in tables or graphs, but complement what is written in the narrative.

After you have outlined your descriptive results, the next task is to provide the results of any statistical analysis that have been performed on your data. There are distinct conventions concerning how your analysis should be described. A good reference for conventions can be found in Lang TA, Secic. How to Report Statistics in Medicine: Annotated Guidelines for Authors, Editors, and Reviewers. Philadelphia: PA: The American College of Physicians. 1997. The basic pattern is as follows: the data analysis plan is outlined (the statistical test that was used should be named), the actual results in figures of the analysis are given, with a short verbal description, e.g.:

The recall scores for condition 1 and condition 3 were compared using an independent t-test and a significant difference between the two conditions was found, (t (28) = 17.86, p<0.002).

One important issue is how to give the actual statistical results in figures. The main information that should be given is the statistic used, the degrees of freedom of the actual analysis, the obtained value of the statistic (the t-score, etc.) and the probability of the results (the p-value). The example below provides an illustration:

$t^1(28)^2=17.98^3;p<0.002^4$

Students commonly provide too much information in the *Results*. Typically, editors want a maximum total of 4-5 tables, graphs, and/or figures. Only the most salient results should be reported. Also, remember that the purpose of this section is to describe the obtained results, not to provide interpretation of their meaning. Interpretation will be presented in the *Discussion* section.

The two examples that follow demonstrate well-presented results. When you prepare yours, consider:

- Are your data are reported in a clear, concise, logical, and well-organized manner?
- Are your data are presented on any measurement that was not described in the Methods?
- Are your findings are internally consistent?
- Do the numbers add up? (e.g. text and tables)

Example 1:

Approximately 30% (n=203) of young women reported having an unwanted sexual experience during the previous 12 months; 21 (3%) reported that their sexual victimization occurred during their most recent date. Specifically, 41 (6%) subjects reported unwanted touching, 71 (10%) reported verbal sexual coercion, 91 (14%) reported rape or attempted rape, and 486 (70%) did not report any sexual victimization. Of those who reported sexual victimization 35%(192 of 542) were between the ages of 14 to 19 years and 27.5% (41 of 149) were young adults.

Few differences in demographic and reproductive characteristics emerged (Table 1). No differences in victimization groups were noted for age, place of birth, employment status, school enrollment, having repeated $\geq$ 1 grades in school, or early menarche ($\leq$10 years).

Victimization as a child or adolescent was associated with rape/attempted rape and verbal sexual coercion (Table 2). We did not find differences in age at first date (14.2 years for no victimization vs 14.8 years for rape/attempted rape), but did find that those who reported rape/attempted rape were less likely to report having a bisexual dating history (12% vs 6%, $P < .10$)

Several date-specific behaviors and social context variables were related to assault status (Table 3). Those young women who reported rape/attempted were significantly less likely to report that this was a single date (57% vs 74%, $P < .01$) and that this person asked them out for this date (69% vs 85%, $P < .001$). However, no differences between those who reported verbal sexual coercion were found on these same variables. Those who reported rape/attempted rape (45%) and verbal sexual coercion (49%) were significantly more like to report that they went to the date's house to be alone as compared to those who did not report any victimization (28%). Of interest, going to a park or to a friend's house to be alone and whether or not the date drove was unrelated to sexual victimization. Those who experienced verbal sexual coercion were also significantly more likely to report high levels of past verbal aggression from this dating partner.

We found that those young women who reported rape/attempted rape were significantly more likely to report a history of using hard liquor (71%), marijuana (45%), and other illicit drugs (9%) when compared to those who didn't report an unwanted sexual experience (58%, 34%, and 4%, respectively, $P < .05$). Similar findings were detected for those who reported verbal sexual coercion (72%, 56%, and 9%, $P < .05$). No difference in alcohol use by the victim during the date was found (18% vs 23% of rape/attempted rape victims). Interestingly, those who reported verbal sexual coercion were significantly less likely to drink during this date (6%, $P < .01$). Young women who experienced rape/attempted rape were significantly more likely to report pressure by the date to use either alcohol or marijuana (31%, 18%, respectively) as compared to those not victimized (4%, 4%, $P >.001$). Those who reported verbal sexual coercion were also more likely to report experiencing pressure to use alcohol (12%, $P < .01$).

Example 2:

Perpetrator use of alcohol or marijuana was significantly associated with rape/attempted rape. Young women who reported that their date drank ≥ 1 drinks (40%) or used marijuana (25%) were significantly more likely to report rape/attempted rape than those who did not report any victimization (20%, 14%, respectively, P <.01). Of interest, only perpetrator use of marijuana was associated with verbal sexual coercion (24%, P < .05). Too few subjects (<1% reported the use of illicit drugs such as ecstasy during the date to perform these analyses.

Distinct profiles of risk emerged for each type of sexual victimization when compared to no victimization in the last year (Table 4). As expected, prior sexual victimization as an adolescent, prior verbal or physical victimization by the dating partner, and going to the date's house or apartment to be alone were associated with both types of sexual assault. Although length of relationship was not significantly related to sexual victimization, a lowered level of romantic involvement increased the likelihood of reporting both rape/attempted rape and verbal sexual coercion. Contrary to expectations, the use of alcohol by the victim or dating partner was not significantly associated with either type of sexual assault.

Table 1.— Selected demographic and reproductive health characteristics of sample stratified by victimization status [*]

Variable	**Victimization Status**							
	None (n=486) *N (%)*		Unwanted Rape/ Contact (n=41) *N (%)*		Verbal Attempted rape (n=91) *N (%)*		Sexual Coercion (n=71) *N (%)*	
Demographic								
Race/ethnicity								
Caucasian	41	(8)	6	(15)	9	(10)	11	(16)
African American	189	(39)	25	(61)a	44	(48)	31	(44)
Puerto Rican	167	(34)	3	(7)	26	(29)	19	(27)
Dominican	89	(18)	7	(17)	12	(13)	10	(14)
Ethnic identity (mean, sd)	6.6	(5.8)	7.9	(7.8)d	8.3	(7.3)b	7.0	(6.1)
Family Structure								
Independent of parents	42	(9)	6	(15)	14	(15)	8	(11)
Lives with one parent	284	(58)	19	(46)	42	(46)c	42	(59)
Lives in two parent	112	(23)	10	(24)	20	(22)	11	(16)
Lives with other adult	48	(10)	6	(15)	15	(17)	10	(14)
Maternal education								
< High school or GED	175	(36)	15	(37)	22	(24)	18	(25)
High school	96	(20)	10	(24)	13	(19)	12	(17)
Some college or degree	210	(44)	16	(39)	56	(62)b	41	(58)d

[*] Comparisons between each victimization group and no victimization abuse. Percentages may not total 100 because of rounding and/or missing data.
a P < .001
b P < .01
c P < .05
d P < .10

Discussion

In the *Discussion* section, begin with a narrative summary of your study's findings. (Do not repeat the *Results* section here; simply summarize. Nor should you include tables or figures from the results.) Then, explain and expound upon your findings in the context of existing literature. (i.e. Does your study extend the literature? Provide new findings? Contradict findings?)

Next, you can attempt to explain the results by relating your findings to other research findings and theoretical models (which you already referred to in the *Introduction*). Do your results support or refute the theoretical framework you may have employed? If you are looking at HIV prevention interventions, for example, you might ask: How does the finding that there is no difference between two interventions relate to what others have found about what makes a successful HIV prevention program? Do our findings agree with or contradict the published research? How can what we have found be explained in terms of the theoretical models outlined in the introduction?

Then, analyze the methodology. Were there any weaknesses that could have affected the results? Were your experimental results due to the manipulation of the independent variable or were they due to some other factor? If you found no difference among conditions (and thus accepted the null hypothesis), is this because there is no real difference or are there other explanations? Could there be other reasons?

The role of the final part of the discussion is to suggest further research in light of your results. An attempt should be made to move beyond simply saying that "there should be more participants" or that the experiment should "be more controlled." Your suggestions should show a full grasp of the methodology or the actual area being studied. You should try to elaborate on the implications of your results and fruitful areas for new studies.

The *Discussion* section should close with the conclusions of your study.

References

This section lists the sources that you cited in the text. Depending on the style specified by your journal guidelines, references may be listed either numerically as they are cited in text, or alphabetically (for more detail about citing references and sources within a manuscript, see section entitled "Citations" in this handbook.)

You want to make sure that references are:
- current;
- the most important sources for this topic, in your opinion;
- accurately stating the information from sources; and
- accurately cited (all types, including journal articles, books, reports, etc.).

Tables and Figures

The last section of a submitted manuscript is the tables, graphs, and/or figures. They should be presented in order of appearance in the text and all should be clearly titled.

Tables: Tables present lists of numbers or text in columns, each column having a title or label. Do not use a table when you wish to show a trend or a pattern of relationship between sets of values - these are better presented in a Figure. For instance, if you needed to present population sizes and sex ratios for your study organism at a series of sites, and you planned to focus on the differences among individual sites according to (say) habitat type, you would use a table. However, if you wanted to show us that sex ratio was *related to* population size, you would use a Figure.

Figures: Figures are visual presentations of results, including graphs, diagrams, photos, drawings, schematics, maps, etc. Graphs show trends or patterns of relationships.
Graphs are the most common type of figure.

Review Article

A review article (or book chapter) consists of selecting a problem; reviewing what is currently known in the scientific literature; and building an argument that will lead to new insights, a set of suggestions, and recommendations. Review articles or book chapters typically fall into one of the following categories:

- Theoretical reviews focus on the theoretical underpinnings and frameworks around a particular issue, develop an argument that constructively critiques current thinking, and propose alternative ways or frameworks for analyzing the issue.
- Methodological reviews focus on a particular method or methodology for research, evaluation, or intervention on a specific research or service delivery problem, discuss the strengths and limitations of the method, and offer a critique and suggestions for future work.
- Service-based research reviews focus on scanning findings from research on a particular issue, summarizing findings (for example, using meta-analysis), analyzing trends discovered in the summary, and suggesting new research and/or program directions in the field.
- Policy reviews focus on analyzing the impact of a specific policy or set of policies in certain populations, and suggesting arenas and strategies for advocacy and points of intervention.

Structure

The structure of a review article or book chapter will depend in part upon the content of the material that you collect, and upon the desires of the editor for whom you might be writing. Your argument will need to be consistent with your editor's mission. Most review articles or book chapters contain these common components:

Introduction
(Approximate length**:** 2-3 pages)

Introduce the central issue or topic of your argument, state the significance of the issue or topic, and present an overview of the overall manuscript.

Argument/Subtopics

(Approximate length**:** 20 pages)

Divide the second part of your essay into the subtopics that will allow you to build your argument. Be strategic and creative in efficiently conveying the elements of your argument. Delineate the different subtopics with subheadings. You may want to elaborate a progression in your argument that starts from the basic points and moves through to the more complex ones.

Conclusions

(Approximate length**:** 4-6 pages)

In the concluding part of your argument, you will summarize the primary points of your general thesis, advance any new directions, and provide recommendations or suggest approaches you have identified after analyzing this body of information.

Common Errors

The main error that students make is failing to provide a comprehensive discussion.   Do not merely repeat your findings, actually discuss them, compare them to other findings, and relate them to important models or theories. Also, do not neglect to evaluate your own methodology. Show thought and imagination when you suggest further research.

Service-Based Research or Evaluation Proposal

Overview
Research Proposals
Evaluation Proposals

Overview

As you know from Public Health Program Planning, a well-written proposal is one of the primary means through which public health programs are funded. Because the final project in that course was the framework for a program proposal, it is not an option for your Capstone Paper.

The *Social Science Research Council* has an online publication entitled, "Art of Writing Proposals" by Adam Przeworski and Frank Salomon, which is available electronically at http://www.ssrc.org/publications/view/7A9CB4F4-815F-DE11-BD80-001CC477EC70/.

The "Quick Guide for Grant Applications" by the National Institutes of Health also offers specific tips on writing the different sections of a research proposal for funding at this government agency (see http://deainfo.nci.nih.gov/extra/extdocs/gntapp.htm#6).

If you choose to write a research or evaluation proposal, you should obtain the guidelines of a funding agency which might consider proposals like the one you are writing, and follow those guidelines closely.

Research Proposals

A research proposal presents a set of arguments that illustrate the public health relevance (at the theoretical and/or programmatic level) of the specific topic of investigation, followed by a convincing methodology to investigate the research problem. Research proposals may be approached from multiple methodological perspectives, including but not limited to quantitative studies (such as surveys and secondary data analysis), historical studies (such as those using archival data), and qualitative studies, such as ethnographic studies.

Note: All figures in this section are excerpts from a study at the National Institute for Child Health and Development.

Structure

Most research proposals are divided into three main components, namely: the abstract, the research or evaluation protocol, and the references.

Abstract *Approximate length: half a page*

The abstract of your proposal is a concise summary of your research problem, objectives, and research design. It is the last thing that you should write and the first thing that you should present.

Research Protocol

Section 1: Specific Aims *Approximate length: 1 page*

In this section, you should describe: the research problem, the overall purpose of the study, the specific objectives of the study (i.e., what you explicitly want to investigate), the hypotheses (if applicable), and the implications of the study (see Figure 1 below).

	Understanding the impact of social inequalities on health has become a public health priority in the new millennium. Social, political, and economic factors now are acknowledged to be "fundamental causes" of disease that affect behaviors, beliefs, and biology. Throughout industrialized countries, lower socioeconomic status (SES) has been clearly linked to poorer health. Additionally, SES gradients in adolescent health have been documented in both the United States and Europe. The goal of the study is to investigate the population-level impact of SES on adolescent health in the United States. That is, we seek to determine the population attributable risk (PAR) for lower education and lower household income on adolescents' physical and mental health. We hypothesize that lower household income will have substantial population-level effects on two major public health problems of youth: depression and obesity.
Research Problem	
Overall Purpose	
Specific Objective	
Hypothesis	

Source: Goodman, E., Slap, G. & Huang, B. (2003). The public health impact of socioeconomic status on adolescent depression and obesity. American Journal of Public Health, 93 (11): 1844-1850.

Section 2: Background and Significance *Approximate length: 6 pages*

This section provides a literature review. Here the goal is to present:

a) A detailed description of the research problem, including the magnitude, scope, and significance of the research problem that you have elected to address;
b) The key findings in the scientific literature regarding your research problem;
c) How your study will contribute to the existing knowledge gained from prior findings; and
d) If appropriate, the theoretical perspective that your study is guided by (e.g., social learning theory, social constructionism) and your reason for selecting it. Remember to be concise.

Section 3: Preliminary Work (optional) *Approximate length: 1 page*

In this section, you should describe the findings from prior studies that you have conducted or have been involved with. Do not repeat findings mentioned in the prior section. This section allows you to argue why you and/or your team will be capable of conducting the proposed study.

Section 4: Research Design *Approximate length: 18–21 pages*

This is the part of the proposal where you need to be the most creative. After you select a specific research problem, you need to decide upon the most effective design for investigating it. Therefore, you need to determine which of the following sub-sections to include and the approximate length of each:

Overview of Research Design: Briefly describe the overall approach of your study. If it has phases, describe these, too (e.g., household survey of clients, focus groups, interviews).

Source(s) of Data: Depending upon the type of study that you are designing, you should include as many of the following sub-sections as necessary:

> **Sample:** In writing this sub-section, try to answer the following questions: What is the general study population from which you are planning to draw your sample? Who are you selecting to participate in your study? Who is not eligible? In other words, what are the inclusion and exclusion criteria for your study? What are the reasons for your selection criteria? How many people do you plan to include in the study? What are the reasons for your sample size? How much power does your study have to detect an effect? What are your estimates of participant attrition? How do you plan to recruit research participants? Be very specific. For example, *Latina women between the ages of 60 and 75 who reside in upper Manhattan, New York City will be recruited*.

> **Archival Materials:** In writing this sub-section, try to answer the following questions: Which archives do plan to visit? What are your reasons for selecting these archives? What type of materials will be included as part of the study? Which materials will be excluded?

Secondary Data Sets: In writing this sub-section, try to answer the following questions: What is the data set that you have selected for your research? How were the data collected for the selected data set? What are the benefits and limitations of the data set?

Research Setting: Describe in detail the geographical and/or social community that you have selected for your study and the reasons for your selection.

Data Collection Method(s): Present a general overview of the method(s) you selected, your reasons for selecting it, and how this is going to be implemented in your data collection. If your research proposal only concentrates on secondary data analysis, you should focus this section on the types of measures that you are going to use in your analysis.

Measures: Describe what measures are used, the reliability of each measure, the suitability of the measures for the study population.

Analytical Methods: Specify the types of methods that you are going to use to analyze your data (e.g., logistic regression, historical trends, content analysis) and the reasons for your selection. Describe how these methods address specific aims.

Data Management: How are you going to organize the collection and storage of data? You should include a timeline or timetable for the duration of the project period. Describe how these methods address specific aims.

Ethical Concerns and Protection of Human Subjects: Discuss the most salient ethical concerns related to your research proposal, whether or not these relate to human subject research or broader ethical implications of your research study, and what mechanisms you propose to use to address them. While you are not expected to write a Protection of Human Subjects Protocol for an Institutional Review Board for every MIP, you must write at least one Informed Consent Form.

Section 5: Feasibility *Approximate length: 1-2 pages*
In this section, you ought to consider the feasibility of the proposed study. Discuss the resources that will be needed to implement the research project. It is very important that it is possible and practical to conduct the study. Take into consideration the resources needed to complete the study. If these exceed the benefits of the study, it is unlikely that it will be funded. As part of the feasibility section, include a timetable to show when and how the different components of the research study are going to be implemented.

Evaluation Proposals

If your practicum exposed you to a program that was particularly successful or particularly ineffective, or if you are interested in policy impact analysis, you may want to explore your questions through an evaluation proposal.

Structure

Evaluation proposals for the Capstone Paper are divided into three main components: the abstract, the evaluation protocol, and the references.

Abstract *Approximate length: Half a page*

The abstract of your proposal is a concise summary of your evaluation problem, objectives, and evaluation design. It is the last thing that you should write and the first thing that you should present.

Evaluation Protocol
Section 1: Specific Aims
Approximate length: 1 page

In this section, you should describe the overall purpose, specific objective(s), and implications of the evaluation (see Figure 2 for an example).

Section 2: Background and Significance
Approximate length: 6-8 pages

This section is dedicated to your literature review. Here the goal is to present:

   a) A detailed description of the evaluation problem and the significance of conducting a rigorous evaluation of the problem that you have selected;
   b) The key findings in the scientific/evaluation literature regarding ways to evaluate your selected problem;
   c) A discussion of how your study will contribute to the already existing knowledge base from prior findings;
   d) The theoretical perspective from which your evaluation design emerged; and
   e) Any conceptual innovations in the approach of your evaluation. Remember to be concise.

Section 3: Evaluation Design
Approximate length: 8-21 pages

This is the part of the proposal where you need to be the most creative. After you select a specific evaluation problem, you need to decide upon the most effective design for investigating it. Therefore, you need to determine which of the following sub-sections to include and the approximate length of each:

	Unintentional injuries are the leading cause of death among U.S. children and a major cause of childhood morbidity. Most injury morbidity and mortality occur in the home or automobile, and may be decreased through the use of preventive safety practices. The purpose of this evaluation is to determine the effectiveness of tailored injury prevention information provided in the primary care setting on parent adoption of injury prevention practices. Initial investigation demonstrated the potential feasibility and effectiveness of a computer-tailored information approach to the provision of injury prevention education during well-child visits. The objective of this evaluation is to test the impact of the delivery of concurrent tailored parent and physician information on (1) physician-parent communication during the well-child visit regarding injury prevention behaviors and (2) subsequent parent adoption of new safety practices. This evaluation will inform the potential development and use of strategies employing tailored communications for pediatric injury prevention in the primary care setting.
Evaluation Problem	
Overall Purpose	
Specific Objective	
Implications	

Source: *Research Study: Pediatric Injury Prevention Health Communications Study* (Principal Investigator: Dr. Nansel) at the Prevention Research Branch from the National Institute for Child Health and Human Development (http://www.nichd.nih.gov/about/despr/prbrsh.htm).

- Overview of evaluation design: Briefly describe the overall design/approach of your evaluation (outcome evaluation, process evaluation, structural evaluation, etc.) and your reasons for selecting it. *Approximate length: 1-2 pages*
- Target Program/Initiative: Describe the program/initiative that you plan to evaluate, its components, its target population (e.g., urban youth), and its expected goals. *Approximate length: 2-3 pages*
- Indicators: Identify and define the specific indicators that you are going to use in your evaluation, and your reasons for selecting these indicators. *Approximate length: 2-3 pages*
- Data collection methods: Describe the methods and strategies that you are going to use to assess the indicators of the proposed evaluation. For each data collection method/strategy, present a general overview, your reasons for selecting it, and how it is going to be implemented in your data collection. *Approximate length: 3-5 pages*
- Validity: In this part of your proposal, you ought to identify the issues of internal validity, construct validity, and external validity of your evaluation design, and discuss the ways that you are going to address them in your evaluation. *Approximate length: 1-2 pages*
- Analytical methods: Specify the methods that you are going to use to analyze your data (e.g., logistic regression, historical trends, content analysis) and the reasons for your selection. *Approximate length: 2-3 pages*
- Data management: Describe how are you planning to organize the collection and storage of your data. You need to include a timeline or timetable for the duration of the project. *Approximate length: 1-2 pages*
- Ethical concerns and protection of human subjects: Discuss the most salient ethical concerns related to your evaluation proposal, whether or not these relate to human subjects research or broader ethical implications of your evaluation, and the mechanisms you propose to use to address them. You are not expected to write a Protection of Human Subjects Protocol for an Institutional Review Board.

Section 4: Feasibility
Approximate length: 1-2 pages

In this section, you ought to discuss the feasibility of conducting the evaluation design that you propose. The viability of the evaluation is a very important component of your proposal. Take into consideration that if the resources necessary to complete the evaluation exceed the actual benefits, it is unlikely that such an evaluation will be funded. As part of the feasibility section, include a timetable to show when and how the different components of the evaluation are going to be implemented.

Section 5: Results
How will the information be used for decision-making? Who will be involved? How will the results, findings, and lessons be shared with the organization, the population of interest, and the broader professional community?

Reflective Paper

Overview

This Capstone Paper option involves writing a cohesive synthesis of the practicum experience that includes a literature review (incorporated into the background section); a comprehensive description of the project's history, goals, methods, and findings (or products); and a reflective section connecting the project to classroom learning. The paper must illustrate how various components of the practicum project reflect key topics in public health practice as discussed in the Practicum Seminar and in the current literature. Use the following outline to structure your paper.

The length for your paper should be a minimum of 20 double-spaced pages, not including appendices.

Section 1: Background
Approximately 4-5 pages

This section should contain background information regarding both the practicum organization or agency, and the particular project you were working on. On the macro level, the goal here is to discuss your project within a broader social and public health context. **Current literature should be reviewed (note: this review forms the main focus of the background section and should include a minimum of eight carefully selected sources)**. Areas of focus for this section include a brief history of the agency/project; social, demographic, political, and/or cultural issues that have shaped your project historically and in the present, and how the project reflects or contributes to broad public health objectives and challenges.

On a micro level, you will want to briefly describe your practicum site: its location, population, demographics, and mission. This section should also **include the specific goal(s) of your project** and how they relate not only to the mission of your agency, but also to the broader macro context you described. Specific goals may include answering a research question (or

questions) through data collection/analysis, developing educational materials, implementing a program, etc.

Section 2: Methodology

Approximately 1-2 pages

Once you have provided sufficient background, describe the methodologies or processes you used to conduct your work. Be specific about project design, sample, instrument construction, data collection, and data analysis procedures. If your project involved program or education components, describe in detail the theoretical framework that these were based on as well as the methods utilized to develop, implement, and assess the activities or materials. All papers should include a section evaluating the strengths and weaknesses of your methods, including any methodological problems encountered and the strategies you used to minimize them. Also discuss how and what you would modify to improve the methodology, if appropriate.

Section 3: Findings and Deliverables

Approximately 4-5 pages

Research Project: If you collected primary data or analyzed secondary data, this section should describe your methodology, analysis plan, and main findings. If you developed research instruments, refer to them here. Describe how they were developed and how they were (or will be) used. If other components of the research process constituted your deliverables, describe them, the methodology you applied, and the contributions they will make to the overall project.

If you conducted qualitative or quantitative data analysis, make sure to discuss the public health implications of your findings (or potential findings), both at the individual/agency level, and within a broader social context. What steps need to be taken to integrate your findings into service delivery/program development? Are there unanswered questions raised by your study findings that should be followed up with further research?

Program/Educational Project: Describe and include (as an attachment) the deliverables you completed. Was there (or could there be) an effect or outcome among the population you were attempting to serve? Was there (or will there be) organizational changes as a result of your work? What challenges need to be overcome for change to take place, again on both the micro and macro levels?

For all projects: What are the next steps that can /should be taken in this particular area of public health practice? Reflect on those steps that should be taken at various levels of social organization (individual, institutional, and policy).

Section 4: Reflections and Conclusions

Approximately 6 - 8 pages

In this final section, the student is required to place the practicum experience within the context of classroom learning. Please reflect upon one theme from each of the following areas:

Area A: How did classroom learning compare with your field learning and experiences?
- What *specific* theoretical approaches, skills, or other class-based information, from specific courses, were relevant to your practicum?
- What were areas of convergence and divergence in class versus field "material," and how can the two combine (or not) to offer a holistic view of the public health issue/problem/challenge addressed by your practicum?
- What field lessons were not taught in the classroom and vice-versa?

Area B: Select an important area of public health practice and critically assess how it is relevant to your practicum experience. **This is a critically important area of your Capstone Paper**. As you explore your chosen area, refer to recent literature including theoretical and/or research/program/clinical discussions. Include the strengths and limitations of your practicum experience as it did (or did not) reflect best practices in the area you choose. These include (but are not limited to):
- Cultural Competency;
- Community Involvement, including a CBPR model;
- Advocacy;
- Mission/Goals (including long-term versus short-term goals).

Theory-Based Educational Curriculum

Overview

In this paper, a student will describe the development of a curriculum, usually prepared during the practicum, including its theoretical bases, learning objectives, pilot results (if applicable) and other components described in the Handbook. If a student wishes to base the Capstone Paper on a curriculum developed outside of the practicum experience (a curriculum created as a course assignment is not eligible), s/he must obtain the approval of the Practicum Director prior to initiating the project.

Section 1: Literature Review
Identify the health problem or issue.

Section 2: Target Population
For whom is the curriculum intended?

Section 3: Theoretical Framework
   (Discuss relevance of at least two aspects listed below)
- Theories of Health Behavior
- Theories of Adult/Adolescent/Child Learning
- Pedagogical Approaches
- Other Models

Section 4: Goals and Objectives of the Curriculum
- Utilization of the SMART model (see below)
- Learners will be able to…. (see Haller example below)

Section 5: Content of the Curriculum
- Given the learning objectives of the curriculum, many different topics areas could have been included. You likely included some topics and not others. Justify those decisions.
- Some topics/themes/skills rose to a central position in your curriculum (which may be reflected in their coverage across a variety of sessions). How and why did you choose the ones you did for this central position?
- How did you decide what material to utilize from other curricula and what to create on your own?
- Instruction Strategies
  - Method(s) of Instruction
    - Mode(s) of presenting material (actual activities of teachers and learners; didactic and interactive components)
    - Connection to theoretical framework and objectives
  - Implementation: frequency, setting, train the trainers (if applicable)

Section 6: Quality Control, Supervision and Limitations
- Address the assurance of fidelity in the delivery of the curriculum
- Address ideas/plans for re-dosing of the curriculum (as applicable) as well as preparation of new educators as staff changes
- What are the limitations of the curriculum?

Section 7: Evaluation Outline
Outline a plan for evaluating the effect(s) of the curriculum on learners, including key indicators.

Section 8: APPENDIX OF CURRICULUM COMPONENTS

SMART Goal Setting

- **S = Specific**
- **M = Measurable**
- **A = Attainable**
- **R = Realistic**
- **T = Timely**

Specific

Goals should be straightforward and emphasize what you want to happen. Specifics help us to focus our efforts and clearly define what we are going to do.

Specific is the What, Why, and How of the SMART model.

- WHAT are you going to do? Use action words such as direct, organize, coordinate, lead, develop, plan, build etc.
- WHY is this important to do at this time? What do you want to ultimately accomplish?
- HOW are you going to do it? (By…)

Ensure the goals you set are very specific, clear and easy.

Measurable

If you can't measure it, you can't manage it. In the broadest sense, the whole goal statement is a measure for the project; if the goal is accomplished, the project is a success. However, there are usually several short-term or small measurements that can be built into the goal.

Choose a goal with measurable progress, so you can see the change occur. How will you see when you reach your goal? Be specific! Assign numbers / quantity to goals.

Establish concrete criteria for measuring progress toward the attainment of each goal you set. When you measure your progress, you stay on track, reach your target dates, and experience the exhilaration of achievement that spurs you on to continued effort required to reach your goals.

Attainable

When you identify goals that are most important to a project, you begin to figure out ways you can make them come true. You develop attitudes, abilities, skills, and financial capacity to reach them. Your begin seeing previously overlooked opportunities to bring yourself closer to the achievement of the goals.

Goals you set which are too far out of reach will not be sustainable. A goal needs to stretch the project slightly so you feel it is possible, yet realistic.

Realistic

This is not a synonym for "easy." **Realistic, in this case, means "do-able."** It means that the learning curve is not a vertical slope, that the skills needed to do the work are available, that the project fits with the overall strategy and goals of the organization. A realistic project may push the skills and knowledge of the people working on it but it shouldn't break them.

Devise a plan or a way of getting there which makes the goal realistic. The goal needs to be realistic for the project, organization or company. Be sure to set goals that can be attained with some effort! Too difficult and you set the stage for failure, but too low sends the message that the project is not very capable. **Set the bar high enough for a satisfying achievement!**

Timely

Set a timeframe for the goal: for next week, in three months, by next year. Putting an end point on your goal gives you a clear target to work towards.

If you don't set a time, the commitment is too vague. It tends not to happen because you feel you can start at any time. Without a time limit, there is no urgency to start taking action now.

Time must be measurable, attainable and realistic.

HALLER-HDPFH HEALTH EDUCATION-2010

PROGRAM CONTENT EXAMPLE-SEX EDUCATION

SESSION 1: HIV/STIS, PREGNANCY PREVENTION
Goals: To identify risk factors for HIV/STIs and pregnancy and contraceptive methods to prevent disease and unwanted pregnancies. Students will be able to identify that abstinence is the only 100% effective means to avoid sexually transmitted diseases and pregnancies, and identify the responsibility of both partners to communicate about contraception and the use of an effective birth control method.
Objectives:
➢ Students will identify at least 3 methods of birth control and the prevention of HIV/STIs and pregnancy.
➢ Students will identify 2 advantages, 2 disadvantages, and 2 risks of various forms of birth control.
➢ Students will identify at least 3 long term consequences of STIs and pregnancy in terms of their health and life goals.

SESSION 2: SUBSTANCE USE AND ADDICTION
Goal: To identify different substances and their impact on their bodies and health. Students will be able to analyze different situations that lead to use and abuse of substances. They will also be able to critically assess the role of advertising in teenager's view of alcohol and tobacco.
Objectives:
• To be able to state the cycle of use for substance use
• To list 3 effects of different substances, e.g tobacco and alcohol
• To increase student's knowledge of advertising strategies by listing at least 3 strategies advertisers use
• To increase student's ability to critically evaluate ads and messages and have them demonstrate 2 ways to debunk ads

SESSION 3: DATING VIOLENCE
Goal: To challenge myths regarding abuse in dating relationships and to educate about the different forms of relationship abuse.
Objectives:
➢ To identify and clarify at least 3 myths about abuse.

➢ To identify and list at least 4 different forms of abusive relationships.
➢ Define and identify 3 aspects of abusive relationships.
➢ To demonstrate and list 3 factors that increases the risk of date rape.

SESSION 4: COMMUNICATION
Goal: To emphasize the importance of effective communication skills to reduce the risk of engaging in sexual risk-taking behaviors and increase the prevention of STIs. Students will learn the application of assertive communication and interpersonal skills through skill building and dialogue.
Objectives:
➢ Students will be able to list 3 techniques of effective communication strategies to prevent pregnancy and STIs/HIV.
➢ Students will demonstrate through role play how to communicate about risk reduction with their partner.
➢ Students will be able to state 3 specific facts about STIs.

Appendix A: Institutional Review Board Approval

Not all Capstone Papers will require Institutional Review Board (IRB) review and approval. Approval may involve a full review or an exemption. An exemption can only be granted by the IRB. That is, neither you nor the faculty member with whom you are working can make the determination that your project is exempt.

The following types of Papers will need approval by the IRB:

- Papers that involve the collection and analysis of data from human subjects need to be submitted for review to the IRB before any data are collected.
- Papers that involve the secondary analysis of previously collected data may require IRB approval, and need to be submitted to the IRB so that it can determine if your project is exempt from IRB review or needs approval.
- Papers that involve the collection or analysis of data from human subjects as part of an already approved IRB study may require submission to the IRB of a modification or amendment to the IRB protocol and/or the addition of you to the personnel listed on the IRB protocol.

The IRB review process can be complex and lengthy. Thus, if your Capstone Paper may require IRB approval, submit the IRB application as soon as possible. You should consult with your Capstone Reader about this process when developing your proposal.

The Columbia University Medical Center Institutional Review Board does not permit students to be listed as Principal Investigators on IRB protocols. Applications that are submitted to the IRB need a Columbia University faculty member sponsor listed as the Principal Investigator (PI) on the IRB protocol. Students can be listed as Investigators. In the protocol, the project can be identified as Capstone Paper research that you are conducting under faculty mentorship.

If you seek to work on a project that may require an application to the IRB, you should discuss your project with your capstone reader before beginning the process, and obtain her/his agreement to serve as the PI on your project.

All personnel listed on the protocol (including students) need to have passed the Good Clinical Practices (GCP) exam and the Health Insurance Portability Accountability Act (HIPAA) training exam.

Submission of IRB protocols and correspondence with the IRB is conducted on-line using RASCAL (see https://www.rascal.columbia.edu/). At the RASCAL website, click on "Compliance" and then click on "Human Subjects Protocols" or "Consent Forms" as applicable. Under "Human Subjects Protocols" you can also click on "Helpful Information," a comprehensive archive of information and commonly asked questions.

Appendix B: Writing and Style Tips

In writing, think about your audience. An effective essay is one that argues a point. Imagine that you are arguing your point to a class, during a meeting, or to friends. Write in a formal (social science) style, but write clearly. Use simple language. Avoid jargon, fancy words, and florid styles. Use terms consistently. Try to be very economical. Even if you have many interesting ideas, concentrate on one or two major themes. Introduce the theme or themes early on, preferably in the first paragraph (e.g., "In this essay I will argue that…"). Use a title and headings to help your reader move along through your essay; these will make it clearer when you move to the next step of your argument, or from one topic to another.

Often, the most important part of the writing process is in the editing stage. You are unlikely to come up with a clear structure on your first draft. Allow yourself the freedom to write unreservedly, but then edit your work closely. Even if you did start out with a clear structure, outline your essay after it is written. This provides an opportunity for you to add headings if you didn't start out with them. Make sure your arguments are built logically and coherently. Careful editing will help you to see where you drift from a main argument, or where a second argument needs an introduction. Don't hesitate to remove passages if they distract from the main theme(s) of your essay. Even if these extrinsic arguments are interesting, it is better to be coherent and stay on topic. You may expand on such passages in another essay or place them in a footnote.

Provide evidence to support to your statements and arguments. Imagine your readers are a jury in a court of law. You have to convince us! Why should we agree with what you say? What is your reasoning? Where is your evidence? In the social sciences, we use and cite sources of both ideas and facts. But remember, evidence may be of mixed validity – use it critically! Don't just say, for example, "Young people have unsafe sex because of low self-esteem." Be clear when you are mentioning this as a fact based upon research evidence by citing the source of the information. If instead you are proposing this as a hypothesis, let your readers know. If the hypothesis is someone else's, cite the source. Furthermore, you will help the reader assess the evidence you provide by qualifying it. Is there overwhelming evidence for this assertion, or is it merely suggested by one research project? Is the evidence convincing to you? It is more than all right if you don't know the answer to everything. Raise questions. Discuss problems.

Draw conclusions and take sides. Your paper should reflect your own thinking. Take care <u>not</u> to be simplistic or overzealous. Complex problems often have complex, somewhat conflicting, or even bewildering conclusions. This makes them interesting.

Citations

Use a consistent scientific style of citation. You may choose to use either the *American Medical Association Manual of Style: A Guide for Authors and Editors* (http://www.amamanualofstyle.com/)or the *Publication Manual of the American Psychological Association* (5th ed.) (http://www.apastyle.org/) in preparing this section. For certain disciplines (history, anthropology, sociology), the endnote conventions of the Chicago Manual of Style (14th ed. 1993:487-635) may prove more apt.

Make sure that you properly cite the sources of information that you use throughout your proposal. When citing in the text, use the last name of the author or authors and the year of

publication (e.g., Markel, 1995). The following are examples of AMA and APA reference citation styles.

AMA Journal Article
Golding JM, Cooper ML, George LK. Sexual assault history and health perceptions: seven general population studies. *Health Psychology* 1997; 16:417-425.

AMA Book:
Hall R. *Rape in America: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 1995. pp.188-202.

AMA Newspaper article:
Di Rado A. Trekking through college: classes explore modern society using the world of Star Trek. *Los Angeles Times*. March 15, 1995:A3.

AMA Book Chapter:
Plichta SB. Violence and abuse. Implications for women's health. In: Falik MM, Collins KS, eds. *Women's Health. The Commonwealth Fund Survey*. Baltimore, MD: The Johns Hopkins University Press, 1996:237-70.

APA Journal Article:
Drucker, E. (1986). AIDS and Addiction in New York City. *American Journal of Drug and Alcohol Abuse* 12:165-81.

APA Book:
Gartner, A. & Riessman, F. (1979). *Selfhelp in the Human Services*. San Francisco: Jossey Bass.

APA Newspaper article:
Lambert, B. (1989). In Spite of Crisis, New York Lacks Basic Services for AIDS Patients. *New York Times*, January 3, pp. A1, B2.

APA Book chapter:
Weissman, H. (1983). The Social Welfare System. In:, S. Richard Sauber, (Ed.), *The Human Services Delivery System* (pp.184-222). New York: Columbia University Press.

Appendices

Appendices are not required. Questionnaires, scales, interview schedules, maps, photographs, and so on, can be included in an *Appendices* section, after the *References* section. There is no limit on the number of appendices or the number of pages in the appendices.

Additional Help on Writing

The Columbia University Writing Center
http://www.college.columbia.edu/core/uwp/writing-center is open to you.

The Resources for Current Students section on the PopFam website contains several links.
http://www.mailman.columbia.edu/academic-departments/population-family-health/resources.

For a general writing manual see, for example, Lunsford, A. & Connors, R. (1989). *The St. Martin's Handbook*. NY: St. Martin's Press, or any of many other guides.

For writing research papers see Booth, W.C., Colomb, G.G., & Williams, J.M. (1995). *The Craft*

of Research. Chicago: The University of Chicago Press.

An excellent resource for review articles is the *Handbook of Research Synthesis* by H. Cooper & L. Hedges (eds.), (1994). New York: Russell Sage Foundation.

For writing about multivariate analysis, see Miller, Jane E. (2005) *The Chicago Guide to Writing about Multivariate Analysis.* Chicago: The University of Chicago Press.

Appendix C: Potential Capstone Paper Readers

David Bell
Bill Bower
Sara Casey
Marina Catallozzi
Wendy Chavkin
Joanne Csete
Linda Cushman
Melanie Gold
Patrick Kachur
Helen de Pinho
Sally Findley
Lynn Freedman
Samantha Garbers
Cassie Landers
Terry McGovern
Rachel Moresky
Ginny Rauh
Les Roberts
Goleen Samari
John Santelli
Craig Spencer
Melissa Stockwell
Vandana Tripathi
Mike Wessells
Monette Zard

Appendix D: Survey of Capstone Intentions

Note: Please complete the online survey:
https://www.surveymonkey.com/r/J8BHLYQ

The content of the survey is this:

> Please provide us with information about your plans for the Capstone Paper.
>
> 1. Your Name
> 2. Certificate
> 3. Which Capstone Paper option you plan to do (this can be modified later, if you change your mind)
> 4. The Department matches students with faculty capstone readers. If you would like to express your preference, please provide the names of three potential capstone readers.
> 5. Capstone comments? Questions?