



# **Graduate Handbook**

## **Master of Science in Biostatistics**

### **School of Public Health**

#### **The University of Memphis**



(CEPH logo updated Fall 2021)

**Fall 2019**

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## **Section I: Overview of the School of Public Health**

### **A. History of the School of Public Health**

The University of Memphis received approval from the Tennessee Board of Regents to establish a Master of Public Health (MPH) program in August 2006 and accepted its first students in the Fall of 2007. Subsequently, the Tennessee Higher Education Commission (THEC) approved the establishment of a School of Public Health (SPH) at The University of Memphis in November 2007. The SPH became an independent entity of The University of Memphis in July 2009. In addition to the MPH program, the SPH offers a Master of Science in Biostatistics, Master of Health Administration degree and three PhD degrees (Social and Behavioral Sciences; Epidemiology; Health System and Policy). The SPH also offers a Certificate in Population Health, a Certificate in Health Analytics, and multiple dual degrees (JD/MPH; MSW/MPH; AUD/MPH, PharmD/MPH. MA/MPH). The School of Public Health relocated to newly-renovated Robison Hall (3825 Desoto Drive) in October 2011. We received our accreditation from CEPH (Council on Education for Public Health) in June 2015.

### **B. Foundational Public Health Knowledge and Competencies (2017)**

The School of Public Health curriculum ensures that all students are grounded in foundational public health knowledge outlined by the Council on Education for Public Health (CEPH). These areas are:

#### Profession & Science of Public Health

1. Explain public health history, philosophy and values
2. Identify the core functions of public health and the 10 Essential Services
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
6. Explain the critical importance of evidence in advancing public health knowledge

#### Factors Related to Human Health

7. Explain effects of environmental factors on a population's health
8. Explain biological and genetic factors that affect a population's health
9. Explain behavioral and psychological factors that affect a population's health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
11. Explain how globalization affects global burdens of disease

12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)

### **MS in Biostatistics Competencies**

1. Summarize public health data using statistical methods appropriate for the distribution of these data
2. Explain the rationale for common biostatistical methods
3. Evaluate preferred methodological alternatives to commonly used statistical methods when assumptions are not met
4. Use statistical software to analyze clinical and public health data given appropriate for the given study design
5. Effectively communicate the results of statistical analyses both to lay and scientific audiences in writing and oral presentation

## **Section II: Admissions Information**

### **A. Admission Requirements**

The admissions committee will determine admission to the MS in Biostatistics program based on the overall quality of the application.

The following is necessary for application:

1. Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.0 or higher. Current Graduate Record Examination (GRE) scores from within the past five years will be expected for all applicants. Verbal, quantitative, and analytical writing scores will be reviewed and scores above the 50<sup>th</sup> percentile for verbal and quantitative sections are preferred.
2. Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (MCAT, DAT, GMAT, LSAT) may be substituted from the GRE by applicants who are working toward or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, management or law.
3. Applicants whose native language is not English will be expected to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).
4. Letters of recommendation are required from at least three persons familiar with the applicant's academic background or experience in public health related issues. At least one letter from a former

professor or instructor is required. Recommendations should specify in detail the applicant's capabilities for graduate study and for future performance as a public health professional.

5. Each applicant must submit a statement of purpose (~750 words) indicating his or her present interests and career goals, including why s/he wants to pursue an MS in Biostatistics degree.

Students are admitted to the program in the Fall and Spring semesters. Applications are due **April 1** (for Fall) and **November 1** (for Spring). Late applications will be considered, but prospective students are strongly encouraged to submit applications by the due dates for full consideration.

## **B. Transfer Credit Evaluation**

According to Graduate School regulations, up to 50% of coursework may be transferred from other programs if course work was earned at an institution accredited at the graduate level. Up to 15 semester hours with a grade of B or better may be transferred from a complete degree. Up to 2/3 of credit may come from combined transfer credit, credit by examination, course validation, and experiential learning. The content of a degree program and/or be comparable to those offered at the U of M; and must not have been completed more than 8 years before anticipated date of graduation. **An official transcript must be on file at the U of M at the time of this request.** Transfer grades will not be computed in the U of M cumulative GPA.

The request for transfer credit must be approved by the MS in Biostatistics Program Director and the SPH Director of Graduate Studies. The application form is available at [Graduate School Forms](#)

## **C. Shared Credit with another Master's Program**

Up to 15 semester hours of credit earned from another earned Master's degree program may be used as electives toward the MS in biostatistics. The courses must have similar content as biostatistics courses and must be approved by the MS in Biostatistics Program Director and the SPH Director of Graduate Studies.

## **D. Graduate Assistantships**

A limited number of graduate research assistantships may be available on a competitive basis. Graduate assistantships (GA) become available as faculty receives notice of funded research grant awards. Students must indicate their desire to be considered for the GA award on their application to the program.

## **Section III: Program Information**

### **A. Academic Advising**

The Academic Service Coordinator, Ms. Shirl Sharpe, assist students in meeting SPH and Graduate School academic regulations, including filing master's project/thesis and graduation paperwork.

Students are assigned a faculty Academic Advisor during their first semester of enrollment in the MS in Biostatistics program. The role of the advisor is to ensure that optimal intellectual, professional, and personal progress is being made while enrolled in the program. The advisor assists the student in choosing courses and a thesis/Master's project topic in light of their educational and professional goals.

Students also are encouraged to form professional relationships with other faculty members as their interests evolve.

It is expected that students will initiate advising appointments, develop a professional relationship with their assigned advisor, and seek advice when difficulties occur. By initiating regular advising meetings, students ensure professional success and enhance academic performance.

**In general, student and advisor roles and responsibilities are delineated as follows:**

**Student role and responsibilities:**

1. Pre-registering for all courses each semester; this is best done as soon as registration becomes available.
2. Meeting program deadlines for the practicum and thesis/master's project.
3. Meeting course deadlines to complete requirements, follow program sequence, and maintain grade point average of at least 3.0.
4. Consulting with the advisor to assist with planning for important program milestones, including selecting, elective courses, and thesis/master's project topic.
5. Consulting early with advisor and Program Director to resolve academic or personal difficulties.
6. Consulting early with instructors about difficulties related to coursework
7. Notifying SPH office (Academic Service Coordinator) and University Registrar of change of address or telephone.

**Advisor role and responsibilities:**

1. Holding introductory meeting with advisee during the new student orientation. This is an informal and brief opportunity to get acquainted; students can learn about their advisor's research and service expertise as well as teaching philosophy, and the advisor can learn about the student's work experience, along with reviewing statement of purpose and long-term goals.
2. Working out with the student an advising plan for each semester, involving scheduled meetings, phone calls, emails, or some combination, as mutually agreed to by advisor and advisee.
3. Advising the student on academic planning issues such as selection of a concentration, elective courses, and thesis/master's project topic. Advisors and students should begin discussing potential thesis/master's project topics early, and continue these discussions throughout the first year, based on the student's evolving interests in public health. Being available to confer with the student as problems, conflicts or questions occur.
4. Reviewing the student's academic progress at the end of each semester.
5. For students electing the thesis option, serving as chair of the thesis committee, or assisting the student in securing another chair.

6. For students electing the Master's Project option, working with the student and Program Director to ensure that the practicum experience is a positive professional experience that helps the student meet their training goals, and provides suitable opportunity to develop the Master's Project.

**Academic Service Coordinator roles and responsibilities include the following:**

1. Providing permits for courses
2. Serving as a resource for information related to University regulations and procedures

**B. Requests for Course Permits**

Students must email the Academic Service Coordinator ([ssharpe@memphis.edu](mailto:ssharpe@memphis.edu)) to obtain permits. The following information is required for each course when requesting a course permit: **CRN number; course number and title; student's UUID**. Please copy your advisor when emailing Ms. Sharpe.

**C. Program Requirements**

**1. Completion of a total of 36 hours**

This includes 6 hours of general core course requirements, 21 hours of biostatistics core courses, 6 hours of elective courses, and 3 hours of thesis or master's project. A curriculum planning worksheet may be found on the SPH website and on page 31.

**General core**

PUBH 7170 Epidemiology in Public Health	(3) (Fall)
PUBH 7180 Foundations of Public Health	(3) (Fall)

**Biostatistics core:**

PUBH 7150 Biostatistical Methods I	(3) (Fall)
PUBH 7152 Biostatistical Methods II	(3) (Spring)
PUBH 7311 Applied Categorical Data Analysis	(3) (Fall)
PUBH 7309 Applied Survival Analysis in Public Health	(3) (Spring)
PUBH 7310 Mixed Model Regression Analysis	(3) (Fall)
MATH 6636 Introduction to Stat Theory	(3) (Fall)
MATH 7654 Inference Theory	(3) (Spring)

**Electives (6 hours total)**

- PUBH 7190 Advanced SAS/R Programming
- MATH 7680 Bayesian Inference
- PUBH 7308 Applied Multivariate Statistics
- PUBH 7104 Large Data Sets – PUBH 7104
- PUBH 7153 Biostatistics in Bioinformatics
- PUBH 7172 Epidemiology in Public Health II
- PUBH 7141 Epidemiologic Survey Methods
- PUBH 7300 Spatial Analysis and Simulation for Urban Health



- PUBH 7450 Randomized Clinical Trials
- HADM 7206 Managerial Epidemiology
- HADM 7109 Health Administration Information Systems

**2. Qualifying exam**

The qualifying exam covers materials in Biostatistics II (PUBH 7152) and Introduction to Statistical Theory (MATH 6636), and is required for all the students. The qualifying exam will be hosted twice a year (at the beginning of Spring semester and at the beginning of Summer semester). Students have two chances to pass the exam. If a student fails the exam both times, then the student will be dismissed from the Program.

**3. a) Satisfy completion of PUBH 7996 Thesis (3) or  
b) Satisfy completion of PUBH 7992 Master's Project Seminar (Master's project) plus a Written Comprehensive Exam (3).**

Students have the option to choose between a) and b). In b), the comprehensive exam covers material in all the core courses and will be given at the end of MS study for students who decide not to do a thesis (option a).

**D. Typical MS in Biostatistics Course Sequence for Full-Time Student**

**Year 1**

Fall	Spring
PUBH 7150 Biostatistical Methods I	PUBH 7152 Biostatistical Methods II
PUBH 7180 Foundations of Public Health	PUBH 7309 Applied Survival Analysis in PH (or/and an elective)
MATH 6636 Introduction to Statistical Theory	MATH 7654 Inference Theory

**Year 2**

Fall	Spring
PUBH 7170 Epidemiology in PUBH I	PUBH 7309 Applied Survival Analysis in PH (if not taken in the first Spring) or elective
PUBH 7311 Applied Categorical Data Analysis	Elective
PUBH 7310 Mixed Model Regression Analysis	Thesis

## **E. Description of Courses**

### **HADM 7109 – Health Administration Information Systems (3)**

This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

### **HADM 7206 – Managerial Epidemiology (3)**

Introduction to principles and tools of epidemiology, exploring distribution and determinants of disease, and examining ways to apply this knowledge to the management of health service organizations.

### **MATH 6636 – Introduction to Statistical Theory (3)**

Functions of two random variables; gamma, beta, multinomial, and bivariate normal distributions; Bayes estimators; maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing.

### **MATH 7654 – Inference Theory (3)**

Bayes and maximum likelihood estimators, sufficient statistics; Rao-Blackwell Theorem, sampling distributions; unbiasedness, completeness and UMVU estimators; efficient estimators, Cramer-Rao inequality; simple robust estimators; UMP-tests; likelihood ratio tests, t-tests and F-tests.

### **PUBH 7104 - Large Data Sets/PUBH Research (3)**

Health quality and outcomes issues addressed through primary and secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjustment will be applied using public data sets. Course is designed mainly for students admitted to the Health Services Research PhD Program however students from other academic areas are welcome provided they obtain permission from the instructor.

### **PUBH 7141 - Epidemiologic Survey Method (3)**

This course provides students in Public Health with the basic elements in designing and performing survey research. The course describes the initial steps in formulating and focusing the research question and proceeds to the key steps in performing survey research, i.e., identifying the target population, obtaining an appropriate sample, designing the survey instrument and implementing it.

### **PUBH 7150 - Biostatistical Methods I (3)**

Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

### **PUBH 7152 - Biostatistical Methods II (3)**

This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. Students will be introduced to Biometric statistical modeling techniques commonly used in public health, as well as analysis procedures using SPSS and SAS computer software.

**PUBH 7153 – Biostatistics in Bioinformatics (3)**

This course focuses on statistical methods in application to bioinformatics data and other large data sets with similar features. Students will be introduced to R programming, a commonly used programming language implemented in bioinformatics data analyses. This will be an applied course with focus on learning the methods, applying the methods, and programming in R.

**PUBH 7170 - Epidemiology in PUBH (3)**

Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies.

**PUBH 7172 - Epidemiology PUBH II (3)**

This course will expand the student's knowledge about scientific paradigms in epidemiology, epidemiological research methods, understanding of causality and threats to validity in epidemiological research, and the use of epidemiology for the generation of evidence-based knowledge. Prerequisites: PUBH 7170 Epidemiology in Public Health.

**PUBH 7180 - Foundations of PUBH (3)**

Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; urban public health concerns; and current public health practice.

**PUBH 7190 – Advanced SAS for Public Health Professionals I (3)**

This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

**PUBH 7191 – Advanced SAS for Public Health Professionals II (3)**

This class introduces students to advanced SAS programming language statements and methods specifically for Data Management and reporting. Students will learn methods and techniques to identify data errors, use methods for data entry, maintain analytical data sets and summarize clinical/medical encounter data. This is a continuation of PUBH 7190 (Advanced SAS programming I) usually offered in the fall semesters.

**PUBH 7308 – Applied Multivariate Statistics (3)**

Upon completion of this course, you should be familiar with the theoretical and applied issues with multivariate statistical techniques that are commonly used by psychologists and public health researchers.

These methods will include (but are not limited to) discriminant functions, exploratory and confirmatory factor analysis, MANOVA, Profile analysis, Canonical correlation, and cluster Analysis. We will also discuss data collection, screening, and cleaning. I expect that you will be able to understand the research questions best addressed by different methods, run analysis, interpret output, and communicate your results.

**PUBH 7300 – Spatial Analysis and Simulation for Urban Health (3)**

The use of spatial analysis and simulation has become increasingly common in the study of urban health problems. This course aims to provide graduate students the framework and basic concepts of spatial epidemiology, health geography and system sciences. Students are expected to understand and be able to apply the major methods from spatial analysis, GIS, and Agent-based model for health problems. The spatial analysis and simulation methods will be learned within the context of urban health, focusing on

urban environment and health disparities. Students will apply and integrate various methods collectively for a selected project.

### **PUBH 7310 - Mixed Model Regression Analysis (3)**

Instruction in the use of mixed-model regression with a focus on design and analysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310.

### **PUBH 7309 – Applied Survival Analysis (3)**

This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. PREREQUISITE: PUBH 7150 or instructor's permission.

### **PUBH 7311 - Applied Categorical Data Analysis (3)**

Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pursuing a career in research.

### **PUBH 7992 - Master's Project Seminar (3)**

Capstone course for the MPH program, drawing from all previous learning in the program. Students identify a public health problem, develop a format for intervention, develop the intervention strategy, and evaluate program success; requires formal report and oral presentation. PREREQUISITES: Completion of core coursework and minimum of 24 credit hours toward the MPH degree.

### **PUBH 7996 - Thesis (3)**

Grades of S, U, or IP will be given.

## **F. Thesis/Master's Project Overview**

All graduate students must successfully complete either a Thesis or a Master's Project as partial fulfillment of their degree requirements in the MS in Biostatistics program. Either a thesis or Master's Project may be completed at the discretion of the student in consultation with his or her adviser. The master's project or thesis is typically conducted as part of the practicum experience, and planning begins prior to, or early in the practicum experience. The format and rigor of scholarly work should be similar for both thesis and Master's Project. Some differences between the two exist, however, e.g., type of project, committee composition, depth of the project, and disposition of the completed product (see table and guidelines to follow). Both are written in accordance with the AMA Manual of Style or the Publication Manual of the American Psychological Association.

Objectives of the master's project and thesis are as follows:

### **Master's Project**

The Master's Project is a public health-relevant practice-based service project. Its purpose is to provide the student with the opportunity to develop and demonstrate skills that are critical to public health practice, including critical analysis of public health problems, and using biostatistical tools in the assessment of community needs, development of tools, resources, and programs, and evaluation of

public health programs. Choosing the Master's Project option is especially appropriate for students who plan to pursue careers as public health practitioners, such as program planners or implementers in community health organizations or health departments.

The master's project process should begin with a review of the relevant literature and current thinking in the chosen area, and lead to the development of a tangible product that will be of use to public health stakeholders, such as community agencies and other service providers, health departments, and policy makers. The project should demonstrate excellence, and may even be publishable, but may not necessarily carry the same burden of biostatistical methods as the thesis.

## **Thesis**

The thesis is a scholarly treatise that substantiates a specific point of view as a result of original research conducted by the student during graduate training. Its' purpose is to generate new knowledge on biostatistical methods relevant to public health.

Choosing the thesis option is especially appropriate for students who plan to pursue careers in public health research, such as research project managers, and for students who plan to pursue doctoral studies for research or academic careers.

The thesis process involves critical review and analysis of a research area on biostatistical methods closely related to public health, development of an answerable and relevant research question, and rigorous testing of that research question following procedures from established research traditions. The thesis may utilize qualitative, quantitative, or mixed methods.

The thesis may be, but is not limited to:

- A critical, systematic review of a research area to stimulate theory building or theory testing.
- Assessing an advanced biostatistical method via simulations using standard statistics such as mean squared errors, prediction errors, and sensitivity/specificity.
- Extend an existing method to increase its flexibility or robustness, demonstrated via simulations.

The [Thesis Guidelines](#) has a thesis preparation guide, as well as thesis forms and sample pages.

## **Prerequisites:**

- Student must be fully admitted to the Master's degree program.
- Student must have completed a minimum of 21 credit hours including (all but one MS core and required courses).
- Student must be in good academic standing. Once student is registered for thesis/master's project, continuous enrollment is required (exception: summer term). Failure to register continuously will result in the student being charged tuition for each semester he or she did not enroll.

## **Human Subjects Approval**

A student must obtain written approval from the Institutional Review Board prior to undertaking any study involving human subjects, and after consultation with his/her advisor. This rule includes the use of

previously collected data that already has received IRB approval. The student will be required to submit the appropriate forms for review or exemption to the IRB Coordinator in the Office of Research Support. It is the student's responsibility to submit the IRB application or exemption at least six weeks prior to the proposed date of commencement of the research. Submitting it earlier than six weeks, whenever possible, is recommended to prevent delays in beginning the thesis or master's project. Information on human subjects approval can be found on-line at the [University of Memphis IRB website](#).

## Thesis Proposal

The thesis is typically conducted as part of the required research experience of the Program. The student and advisor, in consultation with the Program director should explore possible thesis project topics during the first year of enrollment in the program. It is encouraged that a publication will follow from this research. Further examples and requirements are provided above in the Thesis Overview section.

The student enrolls in the Thesis course (PUBH 7996) and develops his/her Thesis Proposal under the direction of the committee chair, in concert with the identified committee members.

The Graduate School website contains a [Thesis/Dissertation Preparation Guide](#) that students should consult.

An MS Thesis Checklist suggests steps for completing the proposal. A copy of the checklist should be printed for discussion at the initial meeting between student and Thesis committee chair. The checklist should be appropriate for most traditional research projects. Deviations from the recommended steps should be discussed and agreed upon by student and committee chair. The checklist is included below in this document and is available online at [Graduate Forms](#)

The student and committee chair establish specific goals and a timetable for achieving these goals, to produce the thesis/master's project proposal. A recommended timeline is included below.

1. The committee chair reviews and provides feedback on drafts of the proposal and decides when the proposal is sufficiently developed to send to other committee members for their review.
2. The student obtains approval from the committee chair to distribute the proposal and to schedule a committee meeting for presentation of the proposal.
3. The student schedules a meeting with the committee to present the proposal for approval consideration. All committee members must be present, although exceptions can be made at the discretion of the committee chair in extenuating circumstances.
4. The student gives a copy of the proposal to each member of the committee **at least ten working days prior to the presentation of Thesis Proposal**.
5. **Student successfully presents** Thesis proposal, gaining approval from his/her committee. The format of the proposal defense meeting is at the discretion of the committee chair. The chair may require that the student make a formal presentation of the proposed project.

6. In the case that approval is not granted, the student should respond to the concerns of his/her committee and repeat the procedure described above.
7. Student files the [Thesis/Dissertation Proposal Defense form](#) with the Director of Graduate Studies.

### Thesis Preparation and Approval

After receiving approval of the thesis proposal from his/her committee, the student works with the committee chair to conduct the work agreed to (e.g. IRB submission, literature review, critical analysis of empirical literature, programming, simulations, etc) and to prepare a Thesis document that is of acceptable scholarly rigor and presentation quality to meet standards of the School of Public Health and Graduate School.

The student and chair establish concrete goals, and a timetable for achieving these goals, related to completing the proposed work, including IRB submission, data analysis, simulations or simulation studies to assess an existing biostatistical methods or newly designed methods, and writing and re-writing chapters of the thesis/masters project document.

1. The thesis must be prepared according to the guidelines specified by The University of Memphis Graduate School and in accordance with the AMA Manual of Style or the Publication Manual of the American Psychological Association. Your advisor can provide information regarding the style required by the School of Public Health.
2. The student submits revised drafts of the thesis document until the committee chair is satisfied that it meets University of Memphis and School of Public Health standards for quality. A final draft is then submitted to the committee chair. When the committee chair approves, final draft should be circulated to the other committee members, who will give input prior to the defense.
3. The student obtains approval from the committee chair to schedule a committee meeting for defense of the thesis project. The meeting must be scheduled at a mutually convenient time for all committee members. The meeting should be scheduled far enough in advance of submission deadlines to accommodate all committee members' schedules.
4. The student schedules a meeting with the committee to defend the thesis project and obtain final approval of its acceptance. All committee members must be present (exceptions can be made at the discretion of the committee chair in extenuating circumstances).
5. The student gives a copy of the completed thesis to each member of the committee **at least ten working days prior to the presentation of the Thesis**. Committee members will provide feedback to the student regarding modifications to the document so that the student may address/correct all major issues prior to the defense.
6. The committee chair should issue an announcement (i.e., time, location) via email of the defense and invite all SPH faculty and students to attend. Guests from outside of the SPH also may be invited to attend. A copy of the invitation should be filed with the Director of the MS Program.
7. The committee chair will preside over the defense. At the start of the meeting, the committee will conduct a preliminary deliberation, without the student or audience members present, of the thesis to identify questions, concerns, and clarifications that are needed from the student. The student will then make a formal presentation of the thesis project. Following the presentation, questions from the audience (i.e., non-committee members) will be entertained by the student. Audience members

will then be asked to leave, and the student will entertain questions on the thesis from committee members. Committee members also will administer the oral Comprehensive Examination during this questioning period (described below).

8. Immediately following the oral defense, the student's committee will deliberate, in confidence, to determine whether or not the student has demonstrated an acceptable level of performance. Committee members will then provide feedback to the student, including any changes to the thesis that must be incorporated before approval is granted.
9. The student makes all changes recommended by the committee and submits the revised document to the committee chair. The committee chair determines whether the changes adequately address the concerns of committee members. The revised document is distributed to, and reviewed by committee members, if requested by members.

Upon successful completion of the thesis defense, the student should have members sign the Thesis/Dissertation Proposal Defense Form, which is available at [Graduate Forms](#)

10. The signed form is submitted to the SPH Director of Graduate Studies for their signature. Two copies of the signed form are made (one for the student, one for the MS Program). The student delivers the original signed copy to Jennifer Beech in the Graduate School office located in the FedEx Institute of Technology (FIT), Room 201D. (This building is located on Innovation Drive.)
11. Final draft of thesis (not master's project) is forwarded (unbound) to the Graduate Analyst (Jennifer Beech), FIT Building, Room 201D for review and editing. The Graduate Analyst notifies the student when the edited draft can be picked up. (Check graduate school deadline calendar for date the defended draft is due).
12. Final copies of the master's project are forwarded to the College Director of Graduate Studies.
13. For a thesis, the student and committee chair respond to editorial comments from the Graduate Analyst.

After editorial changes of the thesis have been made by the Graduate Analyst, the student returns the final copy of the thesis to the Graduate Office. For a final check on all steps see online: [Graduate Forms](#)

14. Unlike a thesis, the master's project document is not submitted to the Graduate School. Instead, the final document must be provided at the end of the Master's Project Seminar.
15. All student research involving human subjects, including secondary analyses of previously approved research, must be approved by the University of Memphis Institutional Review Board prior to any data collection or analysis.

### **Oral Comprehensive Examination**

The Oral Comprehensive Examination is based on the student's Thesis or Master's Project. The Examination will be conducted during the master's project/thesis defense. Examination questions will focus on the present topic in the context of the student's academic coursework and research/practice experiences. The Examination is designed to assess the student's acquisition of the body of knowledge requisite for the area of study and the student's ability to synthesize and apply that knowledge to issues



and problems in the field of public health. Students are expected to be knowledgeable and conversant in such areas as the methodological and statistical approaches used in their project/thesis, conceptual frameworks/theoretical underpinnings of their work, and the implications of their work to public health practice. Every candidate for the MS is required to pass a final Oral Comprehensive Examination before being recommended for graduation.

Note: Students who work on a Master's project instead of Thesis are also required to take a Written Comprehensive Exam designed based on the core courses.

### **Eligibility and Application for the Oral Comprehensive Examination**

To be eligible to take the oral comprehensive examination, the following is required:

1. The student must have completed all course requirements or must be currently enrolled in the last required course in the program of study (exclusive of Thesis/Master's project and practicum/internship).
2. The student must have a minimum GPA of 3.00.
3. The student applies to graduate in the MyMemphis portal.
4. The student submits the on-line [Master's Degree Candidacy Form](#) at least two weeks prior to the deadline found on the graduate school [website](#). The graduate analyst will route the form for the appropriate signatures.
5. Student prints out the [Comprehensive Examination Results form](#) and brings this to their thesis/master's project defense.
6. Obtain signatures of examination committee members and make two copies. One copy is submitted to the MS Graduate Coordinator, and student retains one copy.
7. The original signed Comprehensive Exam Results Form should be submitted to the Graduate Analyst (Jennifer Beech) by the deadline found on the graduate school [website](#).

### **The Oral Comprehensive Examining Committee**

The Examining Committee for a thesis will consist of the graduate faculty members who serve on the student's thesis committee. In the case of a thesis, the Thesis advisor shall chair the Committee. In the case of a Master's Project, the faculty member leading the Master's Project Seminar will chair the Committee. The other two members will be faculty in attendance at the Exam. In all cases, at least three of the members must be full or associate graduate faculty members in the School of Public Health.

### **The Oral Comprehensive Examination**

Exam committee members will evaluate the overall performance of the student. A committee member's evaluation of the student's responses is not limited to the questions actually posed by him/her. That is, committee members' final recommendation will be based on a student's responses to all questions answered during the exam. All members of the examining committee must judge the student's performance as satisfactory for the student to pass the exam.

## Evaluation of the Oral Comprehensive Examination

Upon completion of the oral examination, the student is dismissed from the room while the committee deliberates on his/her performance. The committee may judge the student's performance to be satisfactory (pass) or unsatisfactory (fail). The student is invited back into the room and informed of the result of the examination.

A student who does not perform satisfactorily on the first oral comprehensive examination will be given an opportunity to retake the examination no sooner than the next semester. The committee will provide written feedback to the student addressing two aspects: 1) specific information outlining the weaknesses in the student's performance on the initial exam, and 2) appropriate measures that may be taken to address those weaknesses as the student prepares to retake the examination. If the student's performance is unsatisfactory on the second examination, he/she will be dismissed from the program.

For students who take the Thesis option, the result of the Oral Comprehensive Examination will be reported on the Comprehensive Examination Results Form. For students who take the Master's project plus Written Comprehensive Exam option, the results of the Written Comprehensive Exam and Oral Comprehensive Exam will be reported on the Results Form. Submit the completed/signed form to the MS Program Director who, in turn, will route the form to the SPH Director of Graduate Studies for signature. The MS Program will then deliver the form to the Graduate School to obtain the needed signature of the Vice Provost for Graduate Programs.

## G. General Requirements for Graduation

The student, when eligible to graduate, will file the Master's Degree Candidacy Form with the Graduate School. Instructions are available on-line at [Degree Candidacy Form Instructions](#).

General requirements are as follows:

- Complete program requirements.
- Earn a cumulative grade point average of 3.00.
- The student applies to graduate in the MyMemphis portal.
- The student submits the on-line [Master's Degree Candidacy Form](#) by the deadline found on the graduate school [website](#). The graduate analyst will route the form for appropriate signatures.
- Successfully complete and file results of comprehensive examination.
- File final approved copy of the Thesis or Master's Project. The Thesis is filed with the Graduate Analyst, and copies are provided to the Program Coordinator and Thesis Committee Chair. The Master's Project is filed only with the Program Coordinator and the student's advisor.

**Meeting Graduation requirements remains the student's obligation. Nevertheless, the advisor has an obligation to become familiar with the guidelines in order to facilitate compliance.**

## Section IV: General Academic Information

### A. Academic Conduct

The University of Memphis, Code of Student Conduct defines academic misconduct as all acts of cheating, plagiarism, forgery, fabrication and falsification. The term "cheating" includes but is not limited to: using any unauthorized assistance in taking quizzes or tests. For purposes of this section the following definitions apply:

**Plagiarism:** The adoption or reproduction of ideas, words, statements, images, or works of another person as one's own without proper attribution,

**Cheating:** Using or attempting to use unauthorized materials information, or aids in any academic exercise or test/examination. The term academic exercise includes all forms of work submitted for credit or hours,

**Fabrication:** Unauthorized falsification or invention of any information or citation in an academic exercise.

- Using sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments
- Acquiring tests or other academic material before such material is revealed or distributed by the instructor
- Misrepresenting papers, reports, assignments or other materials as the product of a student's sole independent effort
- Failing to abide by the instructions of the proctor concerning test-taking procedures
- Influencing, or attempting to influence, any University employee in order to affect a student's grade or evaluation
- Any forgery, alteration, unauthorized possession, or misuse of University documents

**Academic dishonesty also includes:**

- Furnishing false information to any University official, faculty member or office.
- Forgery, alteration, or misuse of any University document, record, or instrument of identification.
- Any student found to have committed plagiarism, cheating and/or fabrication faces dismissal from the MPH program at the discretion of the instructor of the course in which the offense(s) occurred by initiating the Academic Misconduct process.

Additional information is specified in syllabi of MPH courses.

**B. Student Evaluation of Teaching Effectiveness (SETE)**

**How to access online SETEs:**

- Go to [MyMemphis](#), the University of Memphis portal.
- Login using your UUID and Password.
- Click on the gray "Student" tab
- Find the box (also known as a channel) called "SETE"
- Click on the "Complete a SETE Evaluation" link found in this channel
  - A list of courses will load shortly
- Click on the link in the yellow box for the course you want to evaluate.
- Fill out the form and click the submit button\*
- Print the confirmation page and keep for your records.
- If you have any trouble, please contact the IT Help Desk at 678-8888.

\*Make sure you are ready to submit! Once you click the submit button, you cannot access the SETE for that course again.

## **C. Safety alerts/Inclement Weather**

Students should download the LiveSafe app. University of Memphis' new comprehensive personal can be downloaded for free and allows you to receive instant alerts from Police Services. Additionally, it provides a quick, convenient and discreet way to communicate directly with Police Services. The app will allow members of the campus to send text, pictures, video and audio directly to Police Services in real time. It also allows for a live chat with safety personnel. The app includes the option to share tips and information anonymously. In addition, subscribers can use SafeWalk to invite personal contacts to virtually escort you as you chat. For more information go to: [LiveSafe](#).

Additionally, students can call 678-0888 or check the University website for the latest information on class cancellations due to inclement weather.

## **Section V: Student Rights and Responsibilities**

### **A. Civil Rights and Non-Discrimination Policy**

The U of M shall not, on the basis of a protected status, subject any student to discrimination under any educational program. No student shall be discriminatorily excluded from participation or denied the benefits of any educational program on the basis of a protected status.

It is the intent of the University of Memphis that each campus of the University shall be free of harassment on the basis of sex, race, color, religion, national origin, age or any other protected status and shall fully comply with the anti-harassment provisions of Titles VI and VII of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972, as amended, the federal and state constitutions, and all other applicable federal and state statutes.

The University specifically finds that diversity of students, faculty, administrators and staff is a crucial element of the educational process and reaffirms its commitment to enhancing education through affirmative action to increase diversity at all levels.

### **B. Grievance Procedures**

Sometimes during a student's time in graduate school a situation can arise that requires mediation to reduce/resolve conflict. The program has a plan for this. We recommend that you take the following actions for expressing concerns, if possible, in this order:

1. Go to the person with whom you have a complaint and try to come to a resolution.
2. Seek out your advisor to address the issue
3. Go to your Program Coordinator to address the issue
4. Meet with your Division Director
5. Meet with the Assistant Dean for Academic Affairs
6. File formal complaint with:
  - a. Dean of Students (<https://www.memphis.edu/report/submit-a-report/concern-complaint.php>) for general complaints about students, academic integrity or grading concerns
  - b. Office of Institutional Equity (<https://www.memphis.edu/oie/complaint.php>) for discrimination, harassment, or retaliation complaints

## **Section VI: Student Support Services**

### **A. Financial Assistance**

Limited federal assistance, in the form of work-study, Stafford Loans, or Perkins Loans, is also available. Contact the Office of Student Aid at (901) 678-2303 for more information. VA benefits and Title IV funds for enrollment fees are subject to cancellation and immediate repayment if the recipient stops attending, whether or not he/she has withdrawn or dropped a course. The instructor will report the last known date of attendance as the unofficial withdrawal date. Students who stop attending will be assigned a grade of F in courses that do not reflect an official withdrawal.

### **B. University Library Services**

The University Libraries are significant resources for both The University of Memphis and the Mid-South region. While the primary mission of The University Libraries is to serve the University community, library services are extended to students and faculty in other colleges and universities in the Memphis area, local and regional corporations, governmental agencies, and adult citizens of the community, including the libraries' support group, the Friends of the Libraries. Individuals not associated with The University of Memphis can request a Library Privileges Card at the McWherter Library Circulation Desk.

The Ned R. McWherter Library is located west of Zach Curlin Drive and south of Norriswood Avenue. Constructed under earthquake-resistant building codes, the McWherter Library was designed to provide state-of-the-art access to information technology and to be fully accessible to the disabled. It has 725 network connections throughout the building, including those in study carrels, group study rooms and the 24-hour Learning Commons. Wireless connectivity is provided throughout the building on all floors. The building's distinctive feature is the domed rotunda, copper-covered on the outside and centered with an oculus that floods the interior glass walls and grand staircase with natural light and spotlights the compass rose inlay of the granite floor four stories below. The University seal in the center of the eight-point compass contains a date which is changed each year, allowing University graduates to make souvenir rubbings.

Restrooms, elevators, and public copiers are centrally located on each floor. There are public phones in the library which allow free local and toll-free calls. These phones are located on the 1st floor in the elevator lobby, and on the 2nd, 3rd & 4th floors near the men's restrooms.

### **C. Branch Libraries**

The University Libraries includes the McWherter Library and four branch libraries: Audiology & Speech Language Pathology, Chemistry, Mathematics, and Music. All are located on the Main Campus except the Audiology and Speech Language Pathology Library, which is at 807 Jefferson Ave.

### **D. Academic Services- Writing Center**

The ESP provides academic assistance for classes that students are currently taking at the U of M. ESP free services are available to graduate and undergraduate students.

- Learning Centers: Find out about ESP's 5 Learning Centers on campus.
- Supplemental instructions (SI): SI offers weekly study sessions for specific courses.
- Request a Tutor: Submit a request for tutoring at 217 Mitchell Hall or call 678-2704.

- Become a Tutor: Call 678-2704 to inquire about new tutor and advanced tutor training.
- Seminars: Fall 2010 schedule of ESP Seminars TBA
- [Online Tutoring](#): Submit questions online 24/7

## **E. Health Services**

Student Health Services is located on the main campus at 3770 Desoto Avenue, south of McWherter Library. Our mailing address is: The University of Memphis, Student Health Services, 200 Hudson Health Center, Memphis, TN 38152.

### **Hours**

Student Health Services is open Monday 8:00 a.m. to 4:30 p.m., Tuesday 9:00 a.m. to 4:30 p.m., Wednesday 8:00 a.m. to 4:30 p.m., Thursday 8:00 a.m. to 4:30 p.m., and Friday, 8:00 a.m. to 4:30 p.m. throughout the year. During the Fall and Spring Semesters we have extended evening hours Monday-Thursday, 4:30 to 6:00 pm. for the convenience of our students. No appointment is necessary. The facility is closed weekends, holidays, and announced university closures, during these times, students are to use outpatient health care resources.

### **Eligibility for Care**

Medical Services are available to all students, faculty and staff.

**Students** may be seen during the semester in which they are enrolled. A current University ID must be presented for admission. Students may be seen between the Fall and Spring or Spring and Fall semesters for an access fee. Additional service fees may apply.

**Faculty and Staff** must present a current University ID and will be seen until 3:30 p.m. Monday-Friday. Faculty and Staff are charged an access fee. Additional service fees may apply.

**Visitors** on The University of Memphis campus are eligible for first aid only.

### **Services**

Student Health Services is an accessible, cost effective health care facility that emphasizes campus wide health promotion, disease prevention, and acute episodic outpatient medical care. Individualized attention, courtesy and patient confidentiality to all is of primary importance.

Student Health Services is staffed with a Physician, Nurse Practitioners, Registered Nurses, Licensed Practical Nurse, Laboratory and X-ray Technologist, Health Educator, and various administrative support personnel.

Short-term, acute illnesses and injuries are addressed at Student Health Services. Patients with chronic, complex or recurrent medical conditions must continue to use their primary care physician for issues related to their chronic illness. No routine physicals are performed at Student Health Services. Only lab tests ordered by Student Health Service medical providers will be performed.

Job related injuries are not treated at Student Health Services. If you are a student employee at the university and you are injured on the job, you must report the incident to your supervisor who will obtain the appropriate paperwork from the Human Department.

A Family Planning Clinic is provided by the Memphis and Shelby County Public Health Department. The Family Planning Clinic provides birth control information, devices, medications, and examinations by appointment. Family Planning Clinic fees are based on a sliding scale and are separate from Health Services charges. Payment may be made by cash or check only. To schedule or cancel an appointment, please call 678-2643.

### **Immunizations**

The state of Tennessee requires state public institutions of higher education to verify that students have received mandated immunizations (MMR, Varicella, Meningitis, Hepatitis B) and meet certain health requirements (TB skin test).

Students can upload their immunization documentation [here](#).

### **Tuberculosis Screening**

TB skin tests are administered Monday-Wednesday from 8:00 a.m. until 3:30 p.m. All individuals must return 48 hours later for evaluation of their test. There is a fee for this service. As a condition of admission, International Students must have a TB skin test performed at Student Health Services.

### **Health Education Programs**

Student Health Services attempts to optimize student wellness with an emphasis on prevention by developing outreach programs and assisting with University research protocols. The Health Educator is available to provide free, health-centered educational programs for organizations, classes, and groups of interested students. The Health Educator will assist students with selection of appropriate information, brochures, handouts, provide individual counseling, and will serve as a health resource for students. Nutrition education is also available.

### **Charges**

**Students** enrolled at the university are not charged an access fee. Most routine diagnostic and laboratory analyses required for treatment will be at NO charge. Students pay fees for dispensary medications, and vaccinations. Students will be notified of any charges before a test or procedure is performed. Student Health Services requests payment before services are provided. Payment may be made by cash, check, credit card, or Tiger Funds. Students may be seen between the Fall and Spring or Spring and Fall semesters for an access fee. Additional service fees may apply. When more in-depth evaluation or treatment is needed the patient is referred off-campus. All charges are the responsibility of the patient.

### **F. Counseling Center**

The [Center for Counseling, Learning and Testing](#), made up of the Career and Psychological Counseling Center, the Educational Support Program, and the Testing Center, is a comprehensive student development agency committed to providing a seamless set of services to assist student in actualizing their maximum potential. Our Career Counseling staff offers a wide variety of services: individualized career exploration and planning, topical workshops and outreach programming for faculty, classes, and campus organizations. The Educational Support Program provides academic assistance for classes that students are currently taking at the U of M. ESP's free services are available to graduate and

undergraduate students. Our Testing Center Main Office is in the John W. Brister Building in Room 112. In addition to the U of M Prometric Center, accessing several thousand computer-based tests, this Center assists in a full range of student assessment needs.

### **G. International Student Advisement**

The International Student Office extends a warm welcome to all international students and visiting scholars who have chosen or who are considering The University of Memphis as their center for study. The International Student Office is one of the divisions that comprise the Center for International Programs and Services. The CIPS staff assists the now more than 1000 foreign students, scholars and professors on our campus. We look forward to meeting you.

The International Student Office supports the international population at The University of Memphis by providing advice on immigration matters, employment, taxation, cultural adjustment, and other practical issues. We are also responsible for maintaining University compliance with the United States Student and Exchange Visitor System (SEVIS) which reports directly to the U.S. Immigration and Customs Enforcement office. Additionally, we conduct an international student orientation each semester, coordinate insurance information, and assist student groups in the development of International Night and other cultural functions.

### **H. Student Housing**

Residence Halls: For information concerning application for rooms, contact the Office of Residence Life 901-678-2295 or visit their website: [ResLife](#)

Application Procedures: Applications for residence hall space may be obtained from the Office of Residence Life, University of Memphis, Memphis, TN 38152, or from their website. Because spaces are allocated by date of receipt and home address, completed applications accompanied by the required \$100 application/reservation deposit should be returned to the Office of Residence Life as soon as possible. Checks or money orders should be made out to the University of Memphis. Please do not send cash.

Receipt by the Office of Residence Life of the housing application and \$100 check or money order, however, does not guarantee admission to the University or to a residence hall. The Director of Residence Life reserves the right to refuse any housing application, to change or cancel any assignment, or to terminate a resident's occupancy for justifiable cause.

Contract Period and Conditions: Fall assignment/contracts are for the full academic year (fall and spring semesters). Fall residents wishing to petition for release from their contract for the spring semester must do so in writing by November 1. Residents, who cancel after this date, but prior to claiming their key for the spring semester, will forfeit 50% of their application/reservation deposit. Residents who fail to cancel by the close of the check-in period will forfeit the entire \$100 deposit. The application/reservation deposit, once submitted with the application, covers the initial term of occupancy and all subsequent terms of occupancy and continues until such time as it is cancelled in writing. There will be no penalty if written cancellation is received prior to the published deadline for any specific contract period.

Residents claim and vacate their rooms according to directions issued by the Department of Residence Life. Returning and new residents will have claimed their spaces if any or all of the following procedures have occurred: (1) receiving the room key during the check-in period, (2) paying residence hall rent in full or in part by the end of the check-in period, (3) returning the signed contract with the rental payment.



Cancellation Policy: Full deposit and pre-payment of rent will be refunded if: (1) the institution is notified by the following cancellation deadlines for the first semester in which the contract is in force: July 1 for fall residents; December 1 for new spring residents; May 1 for summer residents; (2) the student is prevented from entering the University because of personal medical reasons confirmed in writing by a licensed physician; (3) residence hall space is not available; (4) if the applicant has not been assigned to a room at the time written cancellation is received by Residence Life; or (5) the student is denied admittance or re-admittance to the University. Full refund will be made in the case of death. Fall residents wishing to petition for release from their contract for the spring semester must do so in writing by November 1. No refunds will be made for other than the above conditions. Assigned applicants who fail to cancel by the deadline referred to in (1) above but cancel before the close of the check-in period will forfeit 50% of their deposit. Assigned residents who fail to cancel by the close of the check-in period will forfeit their entire deposit. (This is applicable to both the Fall and Spring semesters.)

Refund of Residence Hall Rent: Refunds of residence hall rent after registration will be prorated on a weekly calendar basis when the student is forced to withdraw from the residence halls: (1) because of personal medical reasons confirmed in writing by a licensed physician, or (2) at the request of the institution for other than disciplinary reasons. Full refund will be made in the case of death. For reasons other than those stated above, the following procedure shall apply: 75% of fees will be refunded for withdrawal from the residence halls for a period of approximately 14 calendar days beginning with and inclusive of the first official day of classes or within an equivalent period for a short-term course. Twenty-five percent (25%) of fees will be refunded following expiration of the 75% period, for a period of time extending approximately 25% of the time covered by the term. The periods during which refunds of 75% or 25% will be made are exactly the same as the periods during which the same refund percentages are made for maintenance fees. No refunds will be made for other than the above conditions.

## **Student Family Housing**

Student Family Housing is located on the South Campus approximately one mile from the main campus. Phase One consists of 56 one-bedroom townhouse apartments, 62 two-bedroom townhouse apartments, and 8 two-bedroom flats. All apartments are equipped with stove, refrigerator, garbage disposal, living room carpet, and venetian blinds. Electric central heat and air are also provided. Each apartment has an enclosed private patio at the rear. The new Phase Two consists of 24 two-bedroom flats. These apartments are equipped with stove, frost-free refrigerator, garbage disposal, dishwasher, venetian blinds, thermal pane windows, hook-ups for stackable washers and dryers, and carpet for living room and bedrooms. Gas central heat and air are also provided. Each apartment has a patio/balcony with locking storage area. Four apartments are specifically designed for physically disabled students. Application forms may be obtained from the Office of Residence Life in Room 011, Richardson Towers or from their website, [ResLife](#). A \$100 application/ reservation deposit is required when the application is submitted.

## **I. Parking**

General Permit Parking is paid for through the Maintenance Fee portion of semester tuition. Once the student has registered for classes, a semester validation sticker will be mailed to the address on file with the Student Records Department. New students are mailed a permit (hangtag) along with a semester validation sticker prior to Fee Payment. The permits (hangtags) run on a three-year cycle and need to be updated every semester. If, for any reason, the student does not receive the semester validation sticker

or permit through mail, he/she needs to come to the Parking Office the first week of class to obtain one. The semester validation sticker should be placed on the right side of permit. This validates the permit (hangtag) to be used in General Parking Lots **only**.

### **Notice to all Permit Holders**

1. Any lost or stolen permits **must** be reported to the Parking Office. There is a \$10.00 replacement fee for all lost or stolen permits (hangtags).
2. METERS ARE FOR **VISITORS ONLY**. Permit (hangtag) holders may not park at meters at any time.
3. All internal streets on campus that are not gated are restricted for Residents Only. For more information about parking contact: (901) 678-2212 or 120 Zach Curlin Parking Garage.

## **Section VII: Student Associations**

### **A. University of Memphis Graduate Student Association**

The University of Memphis Graduate Student Association:

- Provides opportunity for discussion and recommendations on matters of concern to graduate students
- Represents the interests of all graduate students campus-wide
- Is the official liaison for graduate students to communicate as a group with University and Graduate School administrators
- Advocates for support of graduate student research and teaching experience

Who are the members of the Graduate Student Association?

All enrolled graduate students are automatically members of the GSA, are encouraged to participate in GSA discussions and activities, and may serve on GSA committees and working groups.

How is the Graduate Student Leadership Council Chosen?

Every fall, and as needed throughout the academic year, a student from each department is elected or chosen to represent that department as a voting member of the GSA Leadership Council. If you are interested in serving as a representative please contact the GSA President (901.678.3220).

### **B. Public Health Student Association**

The Public Health Student Association (PHSA) is a student organization for graduate public health students enrolled in the School of Public Health at the University of Memphis. The PHSA serves as a forum for student concerns and activities.

The purpose of the PHSA is to facilitate student-student and student-faculty communication and cohesiveness within the School of Public Health. The organization advocates on issues pertaining to all aspects of the academic experience, including research opportunities, student representation, and public health issues. Ultimately, the PHSA will strive to create a strong and enduring foundation for future public health leaders.

**Our Mission:**

1. Promote awareness of career and academic issues related to the field of public health by serving as a voice to the faculty and administration.
2. Support all public health students at U of M academically, professionally, and socially.
3. Organize health-related volunteer activities within the community.
4. Collaborate with health organizations agencies, and associations regarding public health programming activities.
5. Encourage students to actively pursue educational and professional development.
6. Host regular social events for public health students to foster positive interactions among students, faculty and staff.

Membership is open to all students enrolled in a School of Public Health degree program. Meetings are held a minimum of once a month. Contact an officer for more information.

Dr. Marian Levy and Dr. Vikki Nolan serve as Faculty Advisors to the PHSA.

## Section VIII: Forms

### Thesis Research Planning Thesis Checklist

The major goal/outcome of this course is the development of a research proposal suitable for completing the Master's thesis requirement. To achieve this goal, the following tasks/activities are prescribed:

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Date Completed		Task / Activity
	1.	Meet with advisor to discuss research ideas and/or brainstorm research questions and explore research opportunities.
	2.	Identify research topic, question. Type an idea paragraph (maximum of one page). State in general terms the purpose, rationale, and feasibility for the proposed research project.
	3.	Select thesis/special project chair.
	4.	Write topic analysis. Present in outline format as follows (3-5 pages) <ol style="list-style-type: none"> <li>1. Title (proposed)</li> <li>2. Introduction               <ol style="list-style-type: none"> <li>a. Purpose of study</li> <li>b. Rationale, need for study</li> </ol> </li> <li>3. Literature Review               <ol style="list-style-type: none"> <li>a. Key studies and findings directly related to central purpose of study</li> <li>b. Research findings related to ancillary topics, issues</li> <li>c. Key studies related in methodology, instrumentation, and/or content</li> </ol> </li> <li>4. Research Questions and Hypotheses               <ol style="list-style-type: none"> <li>a. Research questions</li> <li>b. Hypotheses</li> </ol> </li> </ol>

		<p>5. Methodology</p> <ul style="list-style-type: none"> <li>a. Subject/Participants</li> <li>b. Assessment and evaluation instrumentation</li> <li>c. Procedures</li> <li>d. Data collection</li> <li>e. Data analysis (topical)</li> </ul>
	5.	Select thesis/special project committee members. Submit approval form.
	6.	Review Graduate School guidelines and checklist for preparation of thesis at <a href="#">Thesis Preparation Guide</a>
	7.	Prepare first draft of prospectus; submit to thesis/special project Chair. See attached outline.
	8.	Revise prospectus; resubmit to thesis/special project Chair.
	9.	Submit prospectus draft to committee members 10 days prior to scheduled prospectus presentation.
	10.	Set time, day, and place for prospectus presentation.
	11.	Obtain committee signatures on thesis/special project approval form.
	12.	Prepare final, approved draft of prospectus.
	13.	Duplicate copies for committee members.
	14.	Complete and submit Application to Conduct Research with Human Subjects Application Form: <a href="http://www.people.memphis.edu/~ressvc/hsform.htm">www.people.memphis.edu/~ressvc/hsform.htm</a>
	15.	Submit the following to HSS Graduate Coordinator: (1) Prospectus approval page with signatures, (2) Confirmation of human subjects approval, and (3) Final copy of prospectus.
	16.	Committee Chair submits course grade to SIS.
	17.	Student registers for thesis/special project course.

## 1. Chapter One: Introduction

**1.1. Introductory paragraph:** Begin with a capsule statement of what is being proposed, and then proceed with an introduction of the subject. The introduction should be comprehensible to an informed lay person and give enough background to enable the reader to place the particular research problem in a context of common knowledge.

**1.2. Statement of the problem:** Make a brief declarative statement that indicates what research question(s) will be addressed in this study. All of the problem elements, including the variables to be studied, should be expressed in an orderly system of relationships. Research questions must be clear, consistent, and measurable. They guide the research design process.

**1.3. Purpose of the study:** Indicate “why” the study is being proposed. Spell out the reason(s) or objective(s) for doing the study. Try to answer the question: “what potential impact will the results of the study have on the current body of knowledge?” **Caveat:** don’t confuse the statement of the problem with the purpose of the study. The statement of the problem tells **what** is to be done; the purpose tells **why**.

**1.4. Need for the study:** Use the literature to elaborate on the purpose of the study, to help show why the study is needed, to explain why it is significant, or to justify its content. The development of this section should try to demonstrate one or more of the following: more knowledge is needed in this area, a knowledge gap exists between the theoretical and practical aspects of the problem, a solution to the problem needs to be explored, and/or current knowledge and/or assumptions related to the problem

require validation. Establish or emphasize what is original about the proposed study, what circumstances have changed since related work was done, or what is unique about the proposed study.

**1.5. Delimitations:** In research, this refers to the scope of the study.

**1.6. Limitations:** In research, this refers to possible weaknesses of the study.

**1.7. Assumptions:** Assumptions state what the literature suggests can be assumed to be true for purposes of planning the study. Assumptions serve as the basis for much of the development of the study and then become the basis for the hypotheses.

**1.8. Hypotheses:** Hypotheses are statements that permit the researcher to predict the outcome of the study in advance. Some researchers prefer to express hypotheses in the null form.

## **2. Chapter Two: Review of Literature:**

**2.1.** The review of related literature should be a selective, critical summary of recent research on the topic of interest. It may identify gaps or weaknesses in prior studies that can build a case or justify a new investigation. It should follow a logical flow and lead the reader to a clear impression of how the proposed study will build upon what has already been done. Researchers usually organize the literature review in two ways: studies related to the present study in content and/or methodology, and studies classified according to topics. Content literature presents facts, theories, and background kinds of information. Methodology-related studies present information on design, techniques, instrumentation, and analysis.

**2.2.** This chapter should begin with an opening paragraph that relates the literature to the problem and explains how the chapter is organized.

**2.3.** Conclude chapter with a brief summary.

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\*Excerpts from: Baumgartner TA, Strong CH. (1998) Conducting and reading research in health and human performance, 2nd ed., WCBrown McGraw-Hill. 10/3/01 mhamrick p.2

**3. Chapter Three: Methods and Procedures:** This chapter should provide a clear, detailed picture of what is to be done and how it will be accomplished in sufficient detail so that another researcher could replicate the study. The following topics should be described:

**3.1. Research Design:** Indicate if the research design is descriptive, experimental, prospective, retrospective, longitudinal, or some combination of these traditional designs.

**3.2. Subjects:** Describe the target population, exactly who will be studied and how they will be selected and/or placed into study groups.

**3.3. Intervention:** If applicable, describe the treatment or intervention that will be used. How will it differ from the control group? How long will the intervention last?

**3.4. Variables:** Describe dependent or outcome variables (presumed effect) and independent or predictor variables (presumed cause).

**3.5. Sources of Information:** Describe the sources of information for the study (medical records, school records, observations, etc.)

**3.6. Instrumentation:** Describe how each variable will be recorded and measured. Justify the selection of each instrument (are they valid and reliable?).

**3.7. Procedures:** Describe the procedures for conducting the research. Indicate what will be done, how and when it will be done, and who will be doing it?

**3.8. Ethical Considerations:** Describe how the confidentiality of students, clients, patients will be maintained throughout the study and after completion of the study. How will informed consent be obtained?

**3.9. Data Analysis:** Describe the statistical procedures that are required to address research questions.

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\*Excerpts from: Baumgartner TA, Strong CH. (1998) Conducting and reading research in health and human performance, 2nd ed., WCBrown McGraw-Hill. 10/3/01 mhamrick p.3

**Documents and forms associated with these guidelines may be found at these websites:**

[Graduate School Forms](#)

[Thesis Preparation Guide](#)

[Thesis Style Checklist](#)

**University of Memphis School of Public Health  
MS in Biostatistics**

NAME:

**I. General Core Courses**

COURSE #	COURSE DESCRIPTION	TERM	GRADE
PUBH 7170	Epidemiology in Public Health (Fall)		
PUBH 7180	Foundations of Public Health (Fall)		

**II. Biostatistics Concentration Courses**

COURSE #	COURSE DESCRIPTION	TERM	GRADE
PUBH 7150	Biostatistical Methods I (Fall)		
PUBH 7152	Biostatistical Methods II (Spring)		
PUBH 7311	Applied Categorical Data Analysis (Fall)		
PUBH 7309	Applied Survival Analysis in Public Health (Spring)		
PUBH 7310	Mixed Model Regression Analysis		
MATH 6636	Introduction to Statistical Theory		
MATH 7654	Inference Theory		

**III. Elective Courses. Courses must be approved by faculty advisor**

COURSE #	COURSE DESCRIPTION	TERM	GRADE

**IV. Thesis/Master's Project**

COURSE #	COURSE DESCRIPTION	TERM	GRADE

**Graduation Requirements\*:**

1. Pass Comprehensive Examination (Oral exam taken at Thesis or written comprehensive exam if opting for Master's project).
2. Satisfy all University requirements for Master of Science in Biostatistics.
3. Complete a minimum of 36 semester hours of graduate level coursework in approved program.
4. Earn a minimum overall GPA of 3.0 in all coursework completed.
5. Apply to graduate in the MyMemphis Portal. (Check website for most current deadlines).

\* Refer to [graduate catalog](#) for complete requirements.

*Effective Jan. 2019*