



**TULANE
UNIVERSITY**

**School of
Public Health
& Tropical
Medicine
2024-2025**



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SCHOOL OF PUBLIC HEALTH AND TROPICAL MEDICINE

Dean: Thomas A. LaVeist, PhD
Weatherhead Presidential Chair in Health Equity

Mission and Values

Our Mission

As stewards of the first school of public health in the United States, the Tulane University School of Public Health and Tropical Medicine cultivates independent thinkers, innovative leaders, fierce advocates, and accomplished scholars.

From the neighborhoods of New Orleans to communities worldwide, we conduct research and collaborate with our partners to ensure that all of humanity has an equitable opportunity to be healthy and pursue optimal well-being.

We train the problem solvers.

Our Values

Legacy: We were the first; we lead

Diversity: Leverage our collective genius

Collaboration: Cultivate a culture of shared success

Excellence: Whatever we do, do it well

Discovery: Solve problems that matter

Engagement: Be of value to New Orleans and the world

Balance: Have fun!

Our Vision

Optimal health and well-being for all.

About Us

In 1912, the Tulane University School of Public Health and Tropical Medicine (SPHTM) became the very first school of public health in the country. In fact, Tulane's commitment to public health goes back to 1834 when the university was founded to address concerns of cholera, yellow fever, smallpox, and malaria. Today Tulane SPHTM continues to live out that mission with research and education that spans the gamut of specialty areas in public health, from biostatistics to maternal and child health, epidemiology to nutrition, health policy to clinical research, environmental health sciences to violence prevention, and much, much more.

Students learn from faculty who are actively engaged in the health needs of communities around the corner and around the globe. We've long been known for our hands-on approach to public health education, and employers routinely report that our graduates are prepared and ready to work on day one. This approach is true whether students learn in person or through one of our growing list of high-caliber online programs.

The school is located in the culturally rich city of New Orleans, Louisiana, and we are the leading school of public health in the Gulf Coast. We're dedicated to improving the health and wellbeing of residents throughout the region and serving as a collaborative partner on initiatives to address the inequities plaguing our communities. At the same time, we have long held a wide and diverse global footprint. Faculty conduct research and operate programs that prioritize capacity building and sustainability in numerous countries around the world, such as the Democratic Republic of the Congo, Mali, Zambia, Peru, Bolivia, Taiwan, and Cambodia, just to name a few.

The school's strengths are diverse and many. As the first school of tropical medicine in the country, we have studied vector-borne diseases extensively, with ongoing research in malaria, dengue, Ebola, and several neglected tropical diseases. We also have a strong focus on cardiovascular disease, health equity and disparities, reproductive health, and disaster response and displacement, along with growing strengths in genomics, epigenetics, and other aspects of personalized health and medicine. Topics like climate change and health, data science and artificial intelligence, and cancer prevention and control will offer interdisciplinary options to faculty and students alike in the coming years.

Our diverse faculty are committed public health professionals regularly recognized among their peers with awards, prestigious memberships, and important roles and responsibilities on editorial boards and within associations. They take their job preparing the next generation of public health professionals very seriously. Our students gain a very skills-based education here, and we are fortunate to count ministers and commissioners of health, deans of schools of public health, and presidents and CEOs of health organizations among our alumni. No matter what their role, all of our graduates go on to do important, life-changing work.

Join more than a century's worth of Tulane graduates who have arrived with passion and left with purpose as leaders in public health.

Our Leadership

Dean

Thomas A. LaVeist, PhD

Weatherhead Presidential Chair in Health Equity

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Academic Policies

Academic Policies

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School of Public Health and Tropical Medicine Undergraduate Student Policies

A full description of academic policies for all students in Newcomb-Tulane College (<https://catalog.tulane.edu/newcomb-tulane/#academicpoliciestext>) can be found in the college's section of this catalog. Students should review these policies thoroughly.

Office of Graduate and Postdoctoral Studies Policies

A full description of academic policies for all students in Graduate Programs (<https://catalog.tulane.edu/graduate-degrees-professional-programs/graduate-postdoctoral-studies/policies/>) can be found in the Office of Graduate and Postdoctoral Studies section of this catalog. Students should review these policies thoroughly.

School of Public Health and Tropical Medicine Graduate Student Policies

Academic Advising

At matriculation, each student is assigned a faculty advisor who provides information on the degree and program requirements, advises students on course selection, assists students with practice and integrative learning experiences and/or research experiences, mentors students on academic and professional issues, and assess students' progress toward their degrees. Students and faculty advisors are expected to meet at least once each semester. Students may change faculty advisors with the agreement of another faculty to serve as their advisor. Students must inform the departmental administrator of the change in faculty advisor in writing.

Upon paying the admission deposit and confirming intent to enroll, master's and DrPH students are assigned a student success advisor who collaborates with the student's faculty advisor and department. The student success advisor provides information on degree requirements, assists students with addressing academic and transition related issues, monitors fulfillment of degree requirements, aids students in interpreting university policies and procedures, coordinates the completion of relevant university forms and requests, and acts as a liaison to various university departments. Students are expected to meet with their student success advisor at least once each semester.

Class Attendance

Graduate Courses - Residential

Class attendance is a critical component of learning and students are expected to attend and participate fully in all scheduled class meetings and activities. Attendance policy is established by the instructor for a given course and is stated in the syllabus. It is up to the instructor to determine whether the student can make up missed quizzes, examinations or other exercises, and grades may be adjusted accordingly. Students are responsible for notifying instructors and the Office of Student Experience about significant absences that result from serious illnesses, injuries, or critical personal problems. Course instructors must clearly state expectations for class participation in the syllabus. Students experiencing barriers to meeting attendance requirements due to disabilities are encouraged to register with the Goldman Center for Student Accessibility to discuss accommodations and to make the necessary arrangements with their Instructor.

Graduate Courses - Online

Success in online courses is dependent on active participation and engagement throughout the course. Students are required to complete all assignments by the due date. Live sessions in online learning create an interactive and effective learning environment. There may be some live, synchronous sessions that students are expected to attend during which class assignments are completed for a grade. The dates for these sessions will be stated in the course syllabus. It is the responsibility of the student to notify the instructor in advance if unable to attend to discuss alternative assignment options. For all other live sessions, attendance will not be graded, however you are responsible for all the content covered. All live sessions are recorded.

Course Add/Drop

Students can Add/Drop courses according to the dates set each semester by the Registrar's Office. Please refer to the academic calendar for Add/Drop dates. Tuition refund is determined by drop date and refunds are automatically computed in Gibson. During the Add/Drop period the student can add and drop courses through Gibson without any signatures or other approval. Courses dropped during Add/Drop will not appear on the student transcript. Students dropping all courses in a semester must complete a resignation form. Students completing the resignation form are only resigned from the current semester and are still considered enrolled in their degree program. Students adding and/or dropping courses must be aware of potential financial aid and visa implications and should check with the Office of Financial Aid or the Office of International Students and Scholars. After the Add period, no courses can be added and after the Drop period, no courses can be dropped without record, please refer to the withdrawal policy.

Readmitting Students to Degree Programs

Students that have not registered for courses for more than 12 consecutive months must seek readmission. Students seeking readmission must contact the SPHTM Advising and Student Success Office at sphtmadvising@tulane.edu. The readmission packet will be reviewed and approved by the Department Chair and Program Director. If readmitted, the student must satisfy the current degree requirements as shown in the current course catalog and not the degree requirements under which they originally enrolled. Students who are readmitted can apply applicable earned credit hours to their degree, provided that those credit hours have not expired. This policy does not apply to students on medical leave or leave of absence.

Medical Withdrawal, Leave, and Return

Students may experience medical and/or psychological conditions as well as problems around substance misuse that significantly impact their ability to complete their academic pursuits. During such circumstances, a medical leave of absence from the University provides the student an opportunity to remain a matriculated student while also allowing time away for appropriate treatment and recovery.

Any student who wishes to request a complete medical withdrawal from classes or leave of absence from the University should review the information here (<https://cmvss.tulane.edu/content/medical-withdrawal-leave-return/>).

Incomplete (I) Grades

Students must work with instructors on a plan and timeframe to complete remaining work. A grade of "I" automatically becomes an "F" one year after the final examination date. An extension may be obtained with the permission of the instructor by requesting an extension with the Office of Academic Affairs.

Transfer Credits

Please note this policy exclusively pertains to transfer credits from courses that were not completed at Tulane University. Students that completed previous graduate coursework at Tulane University must contact their faculty advisor and the Office of Academic Affairs to determine shared credit hours.

Courses for transfer credit are reviewed on a course-by-course basis and SPHTM reserves the right not to accept the transfer of credit toward a SPHTM degree. Only academic credits from didactic courses can be considered for transfer credit.

Maximum number of credits potentially accepted for transfer is determined by degree:

- MPH, MSPH, MPHTM, and MS degrees – 12 credit hours
- DrPH degree - 15 credit hours (Foundational Coursework - Prerequisites only)
- MHA and PhD degrees – 18 credit hours

For a course to be eligible for transfer to SPHTM, a course must be:

- taken at a regionally US Department of Education accredited 4-year college or university. Courses taken at universities outside of the United States must be evaluated by a transcript evaluation service (such as the World Education Service, “WES”). For universities with formal partnerships with Tulane, credit transfers will be guided by policies outlined in the Memorandum of Understanding.
- a grade of B or higher
- a graduate level courses taken after completion of an undergraduate degree
- completed within the last 7 years at time of enrollment

Transfer Credits and GPA

Grades of courses accepted for transfer credits are not included in the GPA calculation.

Transfer Credits from Quarter-based Systems

Credits completed at an institution that uses a quarter credit system rather than a semester credit system will be accepted at 2/3 the number of hours on the transcript. For instance, a three-credit hour course from an institution that uses quarter credits will transfer to Tulane University as two hours of credit.

Transfer Credits – At the time of matriculation

In order to process transfer credit for coursework completed prior to matriculation, the student must complete a Transfer Credit Approval Form and provide the course syllabus and an official transcript. Transfer requests for courses required by the degree program must be reviewed and approved by the Course Director. Transfer requests for elective courses will be considered on a case-by-case basis. A similar course must be taught at Tulane University and the syllabus reviewed and approved by the Program Director and Course Director. New students should submit the request for transfer credits the semester before starting the program and no later than 2 semesters into the program.

Graduate Credit Earned before the Bachelor's Degree is Conferred

Generally, no credit is given for graduate courses taken before a student has completed a bachelor's degree from an accredited institution. The exception to this policy are students in an accelerated bachelor's to master's degree program.

Transfer Credits – After matriculation

Current students may need to take and transfer courses outside of Tulane University as part of their degree program if the course is not offered by Tulane University. These requests will be evaluated on a case-by-case basis and must be pre-approved by the Faculty Advisor and Graduate Program Director. Transfer of credit is not automatic and not all courses may be accepted toward their program. Once matriculated, students cannot enroll in a course at a different university and apply for transfer credits when an equivalent course is offered at Tulane University.

Transfer Credit Expiration

No credit earned at another college or university more than seven (7) years previously at the time of matriculation may be applied to a SPHTM degree.

Course Waivers

Course Waiver: For SPHL 6020 Foundations in Public Health

Tulane School of Public Health and Tropical Medicine must ensure that all degree seeking students are grounded in foundational public health knowledge. These foundational learning objectives are taught in SPHL 6020 Foundations in Public Health. All SPHTM students (all degree programs) that meet the criteria for option 1 or 2 below are eligible to apply for a course waiver.

OPTION #1 – PREVIOUS PUBLIC HEALTH DEGREE:

Students with a previous Bachelor's, Master's or Doctoral degree from a CEPH-accredited public health program or school can request a waiver from SPHL 6020 Foundations in Public Health. A list of CEPH-accredited schools and programs can be found here: <https://ceph.org/about/org-info/who-we-accredit/accredited/> (<https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Fceph.org%2Fabout%2Forg-info%2Fwho-we-accredit%2Faccruited%2F&data=05%7C01%7Ctal%40tulane.edu%7C78ded40909d64f61cc0c08db439590b4%7C9de9818325d94b139fc34de5489c1f3b%7C0%7C0%7C638178081872209969%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikt1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=9rznaQvYEr40ZI4zxT75oK9oSx%2B7otqWnKucDVAPyg%3D&reserved=0>). Students who receive the waiver are required to take an additional elective to fulfill the 3 credit hours.

OPTION #2 – CHALLENGE EXAM:

The challenge exam assesses student mastery of foundational public health knowledge. Students that successfully pass the exam receive a course waiver from SPHL 6020 Foundations in Public Health. All students are eligible to sit for the SPHL 6020 Foundations in Public Health Challenge Exam. Students must score at least 70% to pass the Challenge Exam. Students who receive the waiver are required to take an additional elective to fulfill the 3 credit hours. Students who score below 70% must register for SPHL 6020 Foundations in Public Health.

The Challenge Exam can only be taken one time. If a student has taken SPHL 6020 Foundations in Public Health and failed, they are not eligible to take the Challenge Exam and must repeat the course.

For students that receive a course waiver for SPHL 6020, transfer credit may also be available.

Course Waiver: All Courses (except SPHL 6020 Foundations in Public Health)

Course waivers will be considered on a case-by-case basis. To request a waiver of a course students must consult with their Faculty Advisor and complete a Course Waiver Request Form. Depending on the course, students may be required to take a challenge exam. A course waiver must be approved by the Course Director, Program Director, and Department Chair. If the request for course waiver is approved, students must still fulfill the required number of credit hours. The credit hours of a waived course do not count toward total credit hours for the degree.

Cross Registration

Students are identified as either online or residential students based on degree program enrollment. Students registered for ≥ 9 credit hours in a single semester can take up to 3 credit hours in the other modality, either online or residential, during that semester. Students interested in cross registration should consult with their Faculty and/or Student Success Advisor. This policy applies to Fall, Spring, and Summer semesters.

Change in Degree Requirements for Academic Programs

If degree program requirements change while a student is enrolled, the student completes the degree under the requirements in which they matriculated. Students enrolled in a degree program that has been revised will be notified. A student may voluntarily opt to complete the degree under the new requirements; however, all new program requirements must be fulfilled. Students should consult with their faculty advisor when considering their options and will be provided guidance on how to opt into the revised plan of study. If students choose the revised plan of study, they will receive a letter of the updated requirements to complete the degree.

Academic Standards

MPH, MSPH, MPH&TM, and MHA Degree Programs

Academic Requirements

- GPA - Cumulative grade point average (GPA) of at least a 3.0 on a 4.0-point scale. GPAs below 3.0 cannot be rounded up.
- Course Grade Minimum - Grades below C will not count towards the total credit hours required to complete the degree. A course can be repeated only one time. The original grade remains on the transcript but is not included in calculating the overall GPA.

Transfer Between Programs/Concentrations

- Students in the MPH, MSPH, MPH&TM or MHA programs may transfer to other SPHTM master's programs/concentrations and apply credits earned. The student must fulfill all of the degree requirements for the program they transfer into, even if it requires more total credits for the degree. Departmental and Graduate Program Director approval is necessary to transfer.

Academic Probation

- A student with a GPA < 3.0 or a grade below C in any course will be placed on academic probation. A student placed on probation has 12 months to return to good academic standing. Probation status may lead to withdrawal of financial support.
- A student placed on probation must work with their faculty and student success advisors to propose in writing a plan and timeline to return to good academic standing. This plan must be approved by the Senior Associate Dean of Academic Affairs. A copy of the plan must be sent to SPHTM student records no later than two weeks after delivery of the probation letter.

Dismissal

A student will be dismissed from a master's program if any one of the following occurs:

- Not meeting the terms of probation.
- GPA, based on the number of credit hours remaining, cannot be brought above 3.0.
- Receiving a grade lower than C in a required course that has been repeated.
- Failure to meet departmental milestones, such as finishing coursework and passing applied practice experiences, residencies, integrative learning experiences, and/or thesis within the time frames established by the school.

MS, PhD and DrPH Degree Programs

Academic requirements

- GPA - Cumulative grade point average (GPA) of at least a 3.0 on a 4.0-point scale. GPAs below 3.0 cannot be rounded up.
- Course Grade Minimum - Grades below B- will not count towards the total credit hours required to complete the degree. Only two grades of B- will count toward the degree. Courses can be repeated one time only. The original grade remains on the transcript but is not included in calculating the overall GPA.

PhD Program Continuous Registration

- A doctoral student must be continuously registered in a degree-granting division of the university during the academic year (exclusive of the summer session) in either full-time or part-time status from the date of the first registration until the awarding of the degree. Failure to be continuously registered is *de facto* withdrawal and the school reserves the right not to readmit. Students who are readmitted may be subject to any changes in degree criteria in place at the time of readmission.

Transfer Between Programs/Concentrations

- MS students may transfer to other SPHTM master's programs/concentrations and apply credits earned but must fulfill all of the degree requirements for the program they transfer into, even if it requires more total credits for the degree. Departmental and Graduate Program Director approval is necessary to transfer.
- PhD students may transfer to a master's program or other PhD concentration but must fulfill all of the degree requirements for the program they transfer into, even if it requires more total credits for the degree. Departmental and Graduate Program Director approval is necessary to transfer.
- DrPH students may transfer to a master's program but must fulfill all of the degree requirements for the program they transfer into, even if it requires more total credits for the degree. DrPH students need to reapply to move to a PhD program. Departmental and Graduate Program Director approval is necessary to transfer.

Academic Probation

- A student with a GPA <3.0. or three B-grades, or one grade of C or lower in any course will be placed on academic probation. A student placed on probation has 12 months to return to academic good standing. Probation status may lead to withdrawal of financial support.
- A student placed on probation must work with their faculty advisors to propose in writing a plan and timeline to return to good academic standing. This plan must be approved by the Senior Associate Dean of Academic Affairs. A copy of the plan must be sent to SPHTM student records no later than two weeks after delivery of the probation letter.

Dismissal

A student will be dismissed from a doctoral program if any one of the following occurs:

- Not meeting the terms of probation.
- GPA, based on the number of credit hours remaining, cannot be brought above 3.0.
- Three or more grades of B- with no more repeats. One grade of C or lower in a required course with no more repeats.
- Failure to meet departmental milestones, such as finishing coursework, passing qualifying or cumulative exams, defending a prospectus, and/or defending a thesis or dissertation within the time frames established by the school.

Student Appeal of Dismissal

The steps to appeal a dismissal are:

1. Submit a written explanation to your faculty advisor and department chair explaining extenuating circumstances or other matters pertinent to the appeal.
2. The department determines if the appeal has merit and submits their decision in writing and the student appeal to the Senior Associate Dean for Academic Affairs. If the department does not feel that the appeal deserves further consideration, the dismissal stands. If the department supports the appeal, it is forwarded to the Academic Standards Committee for review.
3. The decision of the Academic Standards Committee shall be considered final.

Grading Scale - Graduate Courses

Grades are reported as follows:

Grade	Description
A	4.00
A minus (A-)	3.67

B plus (B+)	3.33
B	3.00
B minus (B-)	2.67
C	2.00
F	0.00
WF	0.00
I (Incomplete)	

Time for Completion of Degrees

Students enrolled in any SPHTM degree program are required to complete the degree requirements within seven (7) years.

Degree Requirements

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 - Bachelor of Public Health (p. 10)
 - Newcomb-Tulane College Requirements (p. 11)
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 - Distribution Requirements (p. 12)
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Graduate Academic Degrees (p. 12)

- Graduate School Requirements (p. 12)
 - Master of Science (MS) (p. 12)
 - Doctor of Philosophy (PhD) (p. 13)

Public Health Professional Degrees (p. 13)

- Master of Public Health (MPH)
- Master of Public Health and Tropical Medicine (MPH&TM)
- Master of Health Administration (MHA)
- Master of Science in Public Health (MSPH)
- Master of Medical Management (MMM)
- Doctor of Public Health (DrPH)

Undergraduate Public Health Degrees

School of Public Health and Tropical Medicine

Bachelor of Public Health (BSPH)

The Tulane Bachelor of Science in Public Health (BSPH) degree is an academic degree addressing the health of populations and communities through instruction, service, and community based research. Grounded in a background of humanities, social science, and the liberal arts, the

degree fulfills Tulane University's campus-wide undergraduate core proficiency while stressing an additional commitment to quantitative and scientific skills. This degree program is nationally accredited and has specific competencies, or educational targets. Competencies for the BSPH cover core concepts and structures of public health, along with university-required proficiencies, writing and math skills, and a foreign language.

Newcomb-Tulane College Requirements

Newcomb-Tulane College General Education Curriculum

The Newcomb-Tulane College Core Curriculum allows students to explore a wide-range of disciplines and embodies the mission and values of the College by allowing students to have flexibility in their core curriculum courses while exploring a full-range of courses.

The core curriculum—which is composed of a minimum of 30 credits—is divided into three parts: proficiency requirements, distribution of knowledge requirements, and additional requirements. To ensure that students experience the breadth of knowledge at the collegiate level, AP, IB, and Cambridge A-Level courses can be used to satisfy proficiency requirements only in Formal Reasoning and Foreign Language.

Courses will be designated as satisfying the distribution requirements according to the content and methodology rather than the departmental affiliation of the course.

The new core curriculum general education requirements went into effect with the entering class of 2018.

Courses proposed to satisfy core requirements will be ratified by the Newcomb-Tulane Curriculum Committee.

Proficiency Requirements

Writing Skills (2 courses and 6 credits)

- Tier 1: Freshman writing (ENGL 1010 Writing or ENGL 1011 Writing for Academic Purposes) unless the student is exempt because of their score on the A.P./I.B./Cambridge-A level exams.
- Students receiving exemption from ENGL 1010 Writing/ENGL 1011 Writing for Academic Purposes are required to take an approved writing class during their freshman year. Approved courses will have at least 1/3rd of the grade based upon writing (excluding in class exams), but no revision is required.
- Tier 2: One additional writing course at the 2000 level or above taken from an approved list. Approved courses will have at least 1/3rd of the grade based upon writing (excluding in class exams), to include revision and re-evaluation by the instructor.
- Students are encouraged to take the Tier-1 writing course prior to taking the Tier-2 writing course; however, students are not prohibited from taking the Tier-1 and Tier-2 courses simultaneously.

Note: creative writing courses cannot be used to satisfy the writing proficiency requirement.

Formal Reasoning (1 course and 3 credits)

- One course in mathematics or symbolic logic from an approved list.

Foreign Language (0-3 courses)

The foreign language proficiency requirement is achieved in any of the following ways:

- A passing grade in a course at the 2030 level (3rd semester of Tulane 4-credit hour Foreign Language or ASLS coursework) or higher in accordance with assigned placement level.
- A passing grade on a Tulane-administered proficiency exam for students with assigned placements above the 2030 level. Students who do not successfully pass the proficiency exam will be automatically placed and must successfully complete a course at the 2030 level.
- A passing grade in a course at the level of placement above 2030.
- Advanced Placement score of 4 or 5 in a foreign language test as noted in the AP/IB chart
- Higher-Level IB score of 5 or higher in a foreign language test as noted in the AP/IB chart
- Cambridge A-Level score decided by the appropriate language department.
- SAT II achievement test of 640 or higher in a foreign language.

Note: This requirement is waived for students in B.S.E. programs.

Distribution Requirements

(A course can satisfy only one of the distribution areas.)

Mathematics and the Natural Sciences (2 courses including 1 lab science course and 7 credits)

(Those completing the B.F.A. degree need only complete 1 course with lab)

Social and Behavioral Sciences (2 courses and 6 credits)

Textual and Historical Perspectives (2 courses and 6 credits)

Aesthetics and the Creative Arts (3 credits), which can be fulfilled in 1-3 courses.

Additional Core Requirements

The First Year Seminar (<https://catalog.tulane.edu/newcomb-tulane/first-year-seminar-courses/>) (1 course, 1-3 credits)

This requirement can be satisfied by a Tulane Interdisciplinary Seminar (TIDES) course or Colloquium course (COLQ 1010 Freshmen Colloquium Seminar (1-3 c.h.) or COLQ 1020 Freshman Colloquium (1-3 c.h.))

Public Service (2 courses)

Students develop their commitment to civic engagement through the completion of service learning courses experiences. All students will complete their public service through service-learning courses, an approved public service internship, or an approved public service research experience. These courses can also be used to satisfy other areas of general education.

- To meet this requirement for graduation, all students must complete two semesters of service. One of these semesters must be at the 2000 level or above. The first experience should be completed by the 2nd semester of the sophomore year.
- Service Learning courses require a minimum of 20 hours of service per semester. Those service-learning courses designated as requiring a minimum of 40 hours of service carry one additional credit hour. No course may carry more than 4 credits.

Race and Inclusion (1 course, 3 credits)

One course and 3 credits. Courses that fulfill this requirement will focus on the intersections of race with power, privilege, equity, justice, and/or inclusion and will focus at least 60% their content on these issues in the United States. These courses may also be used to satisfy proficiency or distribution core curriculum requirements.

Global Perspectives (1 course, 3 credits)

One course and 3 credits. Courses that fulfill this requirement will focus at least 60% content with stated objectives to develop historical, cultural, and societal knowledge of an area beyond the United States. These courses may also be used to satisfy proficiency or distribution core curriculum requirements.

For more information please visit the Core Curriculum website (<https://college.tulane.edu/core-curriculum/>).

Graduate Academic Degrees

Graduate School Requirements

A full description of Master's (<https://catalog.tulane.edu/graduate-degrees-professional-programs/graduate-postdoctoral-studies/masters-programs-requirements/>) and PhD Degree (<https://catalog.tulane.edu/graduate-degrees-professional-programs/graduate-postdoctoral-studies/phd-program-requirements/>) requirements for all students can be found in the Office of Graduate and Postdoctoral Studies section of this catalog. Students should review these policies thoroughly. The MS and PhD programs follow the University academic requirements as well as the SPHTM degree requirements.

Master of Science (MS)

The Master of Science degree is an academic research degree with study in biostatistics, epidemiology, clinical research, or tropical medicine. Students are prepared to work on research projects as study managers, data analysts, and biomedical sciences. The MS degree requirements range from 36-45 credits.

The MS is offered in the following areas:

- MS in Biostatistics
- MS in Epidemiology

- MS in Clinical Investigation
- MS in Tropical Medicine

Doctor of Philosophy (PhD)

The Doctor of Philosophy in Public Health is an academic research degree that prepares students for research roles in a variety of public health settings. The PhD provides an understanding of theory and mechanisms of a topic area, research methods for conducting original research, and problem-solving approaches in public health settings. Students obtain in-depth knowledge of a public health field plus skills in research applications and methods. Graduates are prepared for careers in academic research, research institutes, and agencies.

The PhD in Public Health is offered with concentrations in:

- PhD in Biostatistics
- PhD in Epidemiology
- PhD in Environmental Health Sciences
- PhD in Health Policy and Management
- PhD in International Health and Sustainable Development
- PhD in Social, Behavioral, and Population Sciences
- PhD in Tropical Medicine

Public Health Professional Degrees

Master of Public Health (MPH)

The Master of Public Health is the recognized professional degree for careers in public health. The MPH degree is based on a multidisciplinary field of study that addresses the health of populations throughout the world and covers evidence-based approaches to public health; public health and health care systems; planning and management to promote health; policy in public health; leadership; and communication. The MPH degree requires 45 credits.

The MPH is offered in the following concentrations:

- MPH in Community Health Sciences (online)
- MPH in Disaster Management (in-person and online)
- MPH in Epidemiology (in-person)
- MPH in Health Education and Communication (in-person)
- MPH in Health Policy (in-person)
- MPH in Health Systems Management (in-person)
- MPH in International Health and Sustainable Development (in-person)
- MPH in Maternal and Child Health (in-person)
- MPH in Nutrition (in-person)
- MPH in Social, Behavioral and Population Sciences (in-person)

Master of Public Health and Tropical Medicine (MPH&TM)

The Master of Public Health and Tropical Medicine is a practice-oriented program that prepares students to recognize and control infectious diseases found in tropical and subtropical regions and developing countries. This degree is unique to Tulane and reflects a century of work with tropical diseases. The MPH&TM requires 45 credits.

Master of Health Administration (MHA)

The Master of Health Administration, offered in-person and online, trains future managers and leaders who strive to improve the delivery of health services in diverse settings. The MHA degree requires a total of 54 credits plus an administrative residency. The in-person program has been accredited by the Commission on Accreditation of Healthcare Management Education (CAHME) since 1971.

Master of Science in Public Health (MSPH)

The Master of Science in Public Health is a public health professional degree with a science orientation. Students obtain a public health foundation with additional study in a scientific topic. Students are prepared for public health practice as well as in research. The MSPH degree requires 42-47 credits.

The MSPH is offered in the following areas:

- MSPH in Biostatistics (in-person)
- MSPH in Environmental Health Sciences (in-person)
- MSPH in Industrial Hygiene (in-person and online)

Master of Medical Management (MMM)

The Master of Medical Management degree prepares current and aspiring clinical leaders with the quantitative and evidence-based management, leadership, and personal mastery skills, which are requisite to assuming leadership roles in the evolving consumer-driven healthcare market. The MMM degree requires 36 credits.

Doctor of Public Health (DrPH)

The Doctor of Public Health is a part-time, applied professional doctoral degree that prepares students for leadership roles in public health practice. It is intended for early to mid-level career professionals to prepare them for positions of leadership in public health practice settings. The program is comprised of foundational and advanced training in leadership, advocacy, equity, and evaluation, and grounded in a solid understanding of the impact of the social determinants of health on community and individual level outcomes. The DrPH degree requires 57 credits (15 credit hours pre-requisites and 42 credit hours doctoral coursework).

The DrPH is offered with a concentration in:

- DrPH in Leadership, Advocacy, and Equity (online)

Academic Departments

- Department of Biostatistics and Data Science (p. 15)
- Department of Environmental Health Sciences (p. 24)
- Department of Epidemiology (p. 37)
- Department of Health Policy and Management (p. 52)
- Department of International Health & Sustainable Development (p. 64)
- Department of Social, Behavioral, and Population Sciences (p. 72)
- Department of Tropical Medicine and Infectious Disease (p. 91)

Programs

Undergraduate

Major

- Public Health, BSPH (p. 111)

Minors

- Public Health Minor (p. 110)
- Public Health Nutrition Minor (p. 114)

Graduate

- Biostatistics, MS (p. 19)
- Biostatistics, MSPH (p. 21)
- Biostatistics, PhD (p. 22)
- Clinical Investigation, MS (p. 42)
- Clinical Investigation, PhD (p. 44)
- Community Health Sciences, MPH (p. 77)
- Disaster Management, MPH (p. 30)
- Environmental Health Sciences, MSPH (p. 32)
- Environmental Health Sciences, PhD (p. 33)
- Epidemiology, MPH (p. 46)
- Epidemiology, MS (p. 47)
- Epidemiology, PhD (p. 49)
- Health Administration, MHA (p. 58)
- Health Communication and Education, MPH (p. 79)
- Health Policy and Management, PhD (p. 59)
- Health Policy, MPH (p. 61)
- Health Systems Management, MPH (p. 62)
- Industrial Hygiene, MSPH (p. 35)
- International Health & Sustainable Development, MPH (p. 68)

- International Health & Sustainable Development, PhD (p. 69)
- JD/MPH or MHA Dual Degrees (p. 98)
- Leadership, Advocacy, and Equity, DrPH (p. 99)
- Maternal and Child Health, MPH (p. 82)
- Nutrition, MPH (p. 84)
- Nutrition, MSPH (p. 86)
- Public Health and Tropical Medicine, MPHTM (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/public-health-tropical-medicine-mphtm/>)
- Social, Behavioral, and Population Sciences, MPH (p. 87)
- Social, Behavioral, and Population Sciences, PhD (p. 89)
- Tropical Medicine, MS (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/tropical-medicine-ms/>)
- Tropical Medicine, PhD (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/tropical-medicine-phd/>)

Graduate Certificates

- Biostatistics Certificate (Graduate) (p. 18)
- Clinical and Translational Research Certificate (Graduate) (p. 41)
- Clinical Tropical Medicine Certificate (Graduate) (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/tropical-medicine-certificate/>)
- Disaster Management Certificate (Graduate) (p. 29)
- Epidemiologic Methods Certificate (Graduate) (p. 45)
- Genetic Epidemiology Certificate (Graduate) (p. 50)
- Industrial Hygiene Certificate (Graduate) (p. 34)
- Maternal and Child Health Certificate (Graduate) (p. 81)
- Methods in Monitoring and Evaluation Certificate (Graduate) (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/methods-monitoring-evaluation-certificate/>)
- Public Health Certificate (Graduate) (p. 101)
- Social Epidemiology, Certificate (Graduate) (p. 51)
- Violence Prevention Certificate (Graduate) (<https://catalog.tulane.edu/public-health-tropical-medicine/social-behavioral-and-population-sciences/violence-prevention-certificate/>)

Graduate Internships

- Dietetic Internship (p. 79)

Dual and Accelerated Degrees

- Dual and Accelerated Degrees (p. 95)

Department of Biostatistics and Data Science

Programs

Chair: John Lefante, PhD

Mission

The Department of Biostatistics and Data Science advances biostatistics, bioinformatics and data sciences by conducting original methodological research, collaborating on interdisciplinary research teams, training students in the application of biostatistics and bioinformatics methods and public health data analytics, and providing high quality services to the academic, research and professional communities.

About Biostatistics

The Department of Biostatistics and Data Science has expertise in biostatistics, bioinformatics, genomics, biomedical informatics, big data and data analytics, including data capture and data management.

The BIOS faculty take great pride in providing a strong nurturing learning environment and are very accessible to students. Faculty are highly engaged in collaborative and independent research and encourage student participation in research projects both within and outside the department. Faculty

serve on interdisciplinary research teams and provide expertise in statistical methodology, sample size estimations, data analysis, techniques for handling missing data, design of experiments, robust estimation, survival analysis, analysis of microarray data, genomics and proteomics.

Faculty research areas include biostatistics methods and applications, bioinformatics related to cancer, osteoporosis, respiratory and cardiovascular disease, health informatics and data analytics, big data, data capture, management analysis for large clinical trial studies.

Graduate Degrees

- Biostatistics, MS (p. 19)
- Biostatistics, MSPH (p. 21)
- Biostatistics, PhD (p. 22)

Graduate Certificates

- Biostatistics Certificate (Graduate) (p. 18)

Courses

Biostatistics (BIOS)

BIOS 6040 Intermediate Biostatistics (3)

This is an intermediate course in applied biostatistics. The course covers Analysis of Variance and Multiple Regression and Correlation Analysis, and Logistic Regression. The focus will be on numerical computation and interpretation of results of statistical application using statistical packages. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030, SPHL 6850 or 6050).

BIOS 6220 Database Management (3)

An introduction to the principles and application of data management, techniques in data collection, data cleaning, data reporting, database design, and implementing databases for managing large data systems. After taking the course, students will be able to create databases with applications to public health intervention and surveillance, use SQL to administrate, manage, and retrieve data for statistical analysis. **Prerequisite(s):** Basic knowledge of MS Office.

BIOS 6290 Data Management and Statistical Computing (3)

This course presents basic knowledge and techniques in data management and practice. Topics include data import and export, processing and cleaning data, variable and data manipulation, descriptive summary report development, and graphic report creation. The course emphasizes hands-on experience, particularly, allowing students to develop a working knowledge and essential programming skills of commonly used statistical packages, such as SAS, R and STATA, for managing and characterizing public health-related data.

BIOS 6300 Introduction To ArcGIS (1)

This course covers the elementary concepts and applications for mapping using the ArcGIS software. The course focuses on a wide variety of public health applications and is applicable to virtually all academic and professional settings where mapping is used. Each lecture begins with a PowerPoint presentation to introduce fundamental mapping concepts and is followed with in-class exercises to reinforce hands-on application. Two in-class, paper-based exams are given to monitor and assess students' understanding of the course concepts.

Prerequisite(s): (BIOS 6030* or SPHL 6050*).

* May be taken concurrently.

BIOS 6800 Public Health GIS II (3)

The course is an introduction to desktop mapping and spatial analysis. The first part of the course covers geographic information systems (GIS) concepts and mapping using the ArcGIS software. The second part of the course covers introductory spatial analytical techniques, including spatial autocorrelation quantification, cluster analysis, and spatial modeling. The student will develop a public health GIS project that requires the synthesis of mapping and spatial analysis.

BIOS 7040 Statistical Inference I (3)

The course is the first of a sequence in the theory of statistical interference and probability. The first part of the course covers probability theory; discrete, continuous, and exponential distribution functions; moment generating functions; and differentiation. The latter part of the course covers joint and marginal distributions and concepts of random samples. Students taking this course need to have completed at least one year of college calculus. Students will develop a project that synthesizes the course learning objectives through an applied course project. The course focuses on the theoretical underpinnings of biostatistics and improving understanding of statistical application and problem solving approaches.

BIOS 7050 Statistical Inference II (3)

The course is the second part of a sequence for introduction to statistical inference and probability. The first part of the course covers data reduction, point estimation, hypothesis testing, and interval estimation. The latter part of the course covers asymptotic evaluations, analysis of variance, and regression modes. The student will develop a project that synthesizes the course learning objectives through an applied course project. The course focuses on the theoretical underpinnings of biostatistics and improving understanding of statistical application and problem solving approaches.

Prerequisite(s): BIOS 7040.

BIOS 7060 Regression Analysis (3)

This is an advanced course on selected statistical techniques for analyzing data on multiple variables, both continuous and categorical. This course ultimately provides the student with insight into the application of regression techniques to the medical and health sciences. It focuses on statistical methodology with emphasis on selection of appropriate applications and interpretation of results. Elementary knowledge of the use of statistical computing package is needed.

Prerequisite(s): (BIOS 6030, SPHL 6850 or 6050) and BIOS 6040.

BIOS 7080 Design of Experiments (3)

This course deals with fundamental topics in design of experiments including principle theory of experimental designs (randomization, replication, and balance). It focuses the main elements of statistical thinking in the context of experimental design such as completely randomized design, randomized complete block design, experiments with two factors, factorial design, Latin Square, nested designs, repeated measurement design, and split-pot designs. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030, SPHL 6850 or 6050) and BIOS 6040.

BIOS 7150 Categorical Data Analysis (3)

Fundamental concepts and methods for analysis of categorical outcomes. Topics include analysis of 2-way tables, unconditional and conditional logistic regression, power and sample size computation, and modeling of dependent categorical outcomes via mixed models and GEE methods. Course covers the mathematical basis of the statistical procedures but the emphasis is on application of the methods using statistical software and interpretation of results. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030, SPHL 6850 or 6050) and BIOS 6040.

BIOS 7220 Nonparametric Statistics (3)

Nonparametric inferential statistical methods are introduced. Topics include single, paired, independent, and multiple sample hypothesis testing and confidence interval methods; non parametric regression and correlation methods; categorical data and measures of concordance. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030 or SPHL 6050) and BIOS 6040.

BIOS 7250 Principles of Sampling (3)

This course introduces core principles of survey sampling, with emphasis on sampling plans, methods of estimating unknown parameters of population and subdomain, and techniques for calculating precisions of the estimators. Topics include: basic concepts in survey sampling, simple random sampling; stratified random sampling; systematic sampling; one-, two-, and multi-stage cluster sampling; probability proportionate to size sampling. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030, SPHL 6850 or 6050).

BIOS 7300 Survival Data Analysis (3)

Topics include analysis of survivorship data including estimation and comparison of survival curves, regression methods in the analysis of prognostic and etiologic factors, concepts of competing risks, and the analysis of clinical trial data. Software used for problem solving. Emphasis placed on the application of methods to the analysis of public health data with examples of clinical trials, cancer survivorship, and other data sets for which there is partial follow-up of subjects. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030, SPHL 6850 or 6050) and BIOS 6040.

BIOS 7380 Bayesian Inference (3)

This course examines theoretical foundations and applications of Bayesian paradigm, including Bayes' theorem, prior distribution, likelihood function, deriving posterior distributions, and point and interval estimations. A variety of topics are covered, which encompass Bayesian inference for single- and multi-parameter models, linear regression, hierarchical models, and commonly used Gibbs sampler and Metropolis-Hastings algorithm. Assessment of convergence, the evaluation of models, and the presentation of the results are also illustrated. Real world examples drawn from medical research are used to show practicality of Bayesian approach, particularly how to update beliefs and make inferences from observed data. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030 or SPHL 6050) and BIOS 6040.

BIOS 7400 Clinical Trials (3)

Covers design, implementation, analysis and reporting of clinical trials. Topics encompass trial design, hypothesis formulation and testing, methods of randomization, ethics, sequential trials, sample size determination, blinding, subject recruitment, data collection and management, quality control, monitoring outcomes and adverse events, interim analysis, statistical methods in analyzing trial data, and addressing scientific issues in reporting and interpreting trial results. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030*, SPHL 6850 or 6050*) and BIOS 6040.

* May be taken concurrently.

BIOS 7650 Statistical Learning in Data Science (3)

This course provides detailed overviews over the evaluation and application of statistical learning theories and techniques for inference and prediction in data science, particularly for biological and public health data. Topics include linear and nonlinear models, resampling techniques, tree-based methods, unsupervised learning such as clustering, support vector machine, graphical models, etc. Working on real and/or simulated data through assignments, students will apply the knowledge learned and practice their skills in solving various biological and public health problems, such as sequence alignment, gene prediction, subtype identification and classification, and disease risk and prognosis prediction. Discussion on model assessment and selection are also included. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030 or SPHL 6050) and BIOS 6040.

BIOS 7990 Masters Independent Studies (1-3)

Masters students and advisor select a topic for independent study and develop learning objectives and the expected written final product.

BIOS 8350 Clustered and Longitudinal Data Analysis (3)

This is an advanced course in analysis of clustered and longitudinal data, with or without missing values. Students will compute power and sample size for clustered and longitudinal data using generalized linear mixed effect models and estimating equations. Class discussion, lecture, and assignments emphasize application of methods to the analysis of public health data with examples of clinical trials and epidemiological observational studies. Use of standard statistical software and methods required. Elementary knowledge of the use of statistical computing packages is needed.

Prerequisite(s): (BIOS 6030, SPHL 6850 or 6050) and (BIOS 6040 or 7060).

BIOS 8500 Monte Carlo and Bootstrapping Methods (3)

This hands-on course introduces the methods used for Monte Carlo simulations and nonparametric bootstrapping. Students learn how to design, program, and interpret a simulation study, uses of bootstrapping for estimation and inference, jackknifing, and other resampling methods. Monte Carlo Markov Chain methods and Bayesian inference in Monte Carlo methods will be introduced. This is an advanced, computer-intensive course, so knowledge of programming language (SAS or R preferred) as well as ability to work independently are required.

Prerequisite(s): (BIOS 7060, 7080, 7150, 7220 or 7300).

BIOS 8820 Multivariate Methods (3)

This is a doctorate level course that covers techniques used to conduct analysis with more than one outcome variable. The focus will be on association methods and predictive models between multiple independent and multiple dependent variables. Additionally the students will learn techniques for variable reduction, path models, and factor analysis. Students will conduct numerical computation and interpretation of results of statistical application using statistical packages. Doctoral status required. Students should have completed at least two 7000 level biostatistics courses and have working knowledge of programmable statistical software, (SAS, R, STATA).

BIOS 8990 Doctoral Independent Study (1-3)

Doctoral students and advisors select a topic for independent study and develop learning objectives and the expected final written product.

BIOS 9980 Master's Thesis Research (0)

MS Students engaging in thesis research. Course may be repeated up to unlimited credit hours.

Course Limit: 99

Biostatistics Certificate (Graduate)

The Certificate in Biostatistics provides students with skills in applied data analysis in the areas of public health and medicine. The coursework concentrates on developing statistical skills through the use of actual data sets and computerized statistical software packages. The certificate program will benefit students who want to strengthen their public health study with strong applied data analysis skills.

Offered by: Department of Biostatistics and Data Science

Faculty Lead: A (<https://sph.tulane.edu/gbds/john-lefante-phd/>)rti Shankar, PhD

Purpose

This certificate program provides students with skills in applied data analysis in the areas of public health and medicine.

Eligible Students

This certificate is designed for students not enrolled in a degree-seeking program in the School of Public Health and Tropical Medicine. Tulane students enrolled in degree programs in other schools and persons not enrolled in a degree program but have a prior bachelor's degree are eligible to apply. Current SPHTM students can apply for the certificate, however, only 3 credit hours of the certificate can be shared with their degree.

Certificate Competencies

Students who earn then the Certificate in Biostatistics will be able to:

- Formulate appropriate linear regression models and conduct simple and multiple linear regression analysis.
- Differentiate between various analysis of variance procedures and analyze data using these procedures.
- Distinguish between procedures for analyzing discrete data and conduct logistic regression and other categorical procedures.

Number of Credits Required for Completion: 15

Requirements

Prerequisite Courses

Course ID	Title	Credits
SPHL 6050	Biostatistics for Public Health	3

Required Courses

Course ID	Title	Credits
BIOS 6040	Intermediate Biostatistics (fall and spring)	3
BIOS 7060	Regression Analysis (fall and spring)	3
BIOS 7080	Design of Experiments (spring)	3
BIOS 7150	Categorical Data Analysis (fall)	3
Select one of the following 7000-level Biostatistics Electives:		3
BIOS 7220	Nonparametric Statistics (spring)	
BIOS 7250	Principles of Sampling (spring)	
BIOS 7300	Survival Data Analysis (fall)	
BIOS 7400	Clinical Trials (every other fall)	

Total Credit Hours

15

Biostatistics, MS

The Master of Science in Biostatistics educates students in the basic methods of mathematical and applied statistics for health data analysis. Through courses in epidemiology and related subjects, students become familiar with the general areas of public health to which statistical methodologies may be applied. Coursework includes mathematical statistics and probability theory, applied and theoretical multivariate methods, stochastic processes, basic epidemiology, and demography, enabling the student to assist in the application of statistical theory to applied statistical problems. Graduates from the MS in Biostatistics program typically pursue careers in academic research or as statisticians on projects.

Program Competencies

- Define and use the principles of probability and mathematical statistics to guide the selection and application of data analysis methods.
- Apply descriptive and inferential methodology based on study design in solving research questions.
- Design experimental and observational studies for research projects, addressing specific questions in statistics or in an applied field.
- Interpret and effectively communicate research results orally and in writing.

Requirements

The MS Degree in Biostatistics requires a total of 42 credits that includes:

Course ID	Title	Credits
Biostatistics Course Requirements		
SPHL 6020	Foundations in Public Health	3

BIOS 6040	Intermediate Biostatistics	3
BIOS 7040	Statistical Inference I	3
BIOS 7050	Statistical Inference II	3
BIOS 7060	Regression Analysis	3
BIOS 7080	Design of Experiments	3
BIOS 7150	Categorical Data Analysis	3
BIOS 7250	Principles of Sampling	3
BIOS 7300	Survival Data Analysis	3
SPHL 6060	Epidemiology for Public Health	3
BIOS 9980	Master's Thesis Research	0
Elective Courses		
Select 12 credits of Biostatistics and other relevant elective courses at the 6000 or higher level ¹		12
Total Credit Hours		42

¹ Students should choose these courses in consultation with their faculty advisor

Thesis

Students must successfully complete a thesis. Students register in BIOS 9980 Master's Thesis Research (0 c.h.). The thesis is based on a supervised research project demonstrating scholarship in the area of statistical methodology. The results will be presented orally and in writing. The project will be supervised by a thesis director who is a faculty member of the Department of Biostatistics and Data Science, and approved by at least one other member of the Biostatistics faculty. The master's thesis must be completed within a year of completion of the required courses.

MS in Biostatistics Model Schedule

*For Fall or Spring entrance

Year 1		Credit Hours
Fall		
BIOS 6040	Intermediate Biostatistics	3
SPHL 6060	Epidemiology for Public Health	3
BIOS 7040	Statistical Inference I	3
SPHL 6020	Foundations in Public Health	3
Credit Hours		12
Spring		
BIOS 7060	Regression Analysis	3
BIOS 7080	Design of Experiments	3
BIOS 7050	Statistical Inference II	3
Elective		3
Credit Hours		12
Year 2		
Fall		
BIOS 7150	Categorical Data Analysis	3
BIOS 7300	Survival Data Analysis	3
Elective		3
BIOS 9980	Master's Thesis Research	0
Credit Hours		9
Spring		
BIOS 7250	Principles of Sampling	3
Select two Electives		6
BIOS 9980	Master's Thesis Research	0
Credit Hours		9
Total Credit Hours		42

Biostatistics, MSPH

The MSPH program in Biostatistics emphasizes applied data analysis in the areas of public health and medicine, by preparing students to analyze data in a wide range of settings, including public health surveillance and research programs; local, state, and federal government agencies; pharmaceutical research divisions; university research programs; and consulting firms. Students learn to assist in selecting research design appropriate for the goals of the research, estimate sample size requirements, establish and maintain databases, select and conduct the appropriate statistical analysis, and communicate the results of the analysis orally and in writing fields of public health. Coursework concentrates on developing these statistical skills through the use of actual data sets and computerized statistical software packages.

Program Competencies

- Incorporate knowledge of the core areas of biostatistics, epidemiology, environmental health, health systems management, and the behavioral, social, and cultural aspects of health in addressing and solving problems.
- Select and conduct appropriate statistical procedures for evaluation of public health intervention and surveillance programs.
- Contribute to the design of public health programs by estimating the required sample size and power for program monitoring.
- Incorporate knowledge of databases and information systems in data collection and study management of public health intervention and surveillance programs.
- Interpret and effectively communicate statistical analysis results orally and in writing to public health investigators, collaborators, and members of general community.

Requirements

The MSPH Degree in Biostatistics requires a total of 42 credits that includes:

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Biostatistics Course Requirements		
BIOS 6040	Intermediate Biostatistics	3
BIOS 6220	Database Management	3
BIOS 7060	Regression Analysis	3
BIOS 7080	Design of Experiments	3
BIOS 7150	Categorical Data Analysis	3
BIOS 7300	Survival Data Analysis	3
Electives		
Select 9 credits ¹		9
Additional Coursework		
SPHL 9980	Applied Practice Experience	0
SPHL 7950	Integrative Learning Experience	0
Total Credit Hours		42

¹ Selected from courses offered within the department, school, or university in consultation with an academic advisor.

MSPH in Biostatistics Model Course Schedule

*Shown as Fall Start

Year 1		Credit Hours
Fall		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3

SPHL 6070	Health Systems Policy and Management	3
Credit Hours		12
Spring		
BIOS 6040	Intermediate Biostatistics	3
BIOS 6220	Database Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Applied Practice Experience Planning		
Credit Hours		9
Summer Session		
SPHL 9980	Applied Practice Experience	0
Credit Hours		0
Year 2		
Fall		
BIOS 7150	Categorical Data Analysis	3
BIOS 7300	Survival Data Analysis	3
Select two Electives		6
Credit Hours		12
Spring		
BIOS 7060	Regression Analysis	3
BIOS 7080	Design of Experiments	3
Elective		3
SPHL 7950	Integrative Learning Experience	0
Credit Hours		9
Total Credit Hours		42

Biostatistics, PhD

PhD in Biostatistics

The PhD program in Biostatistics educates advanced students in the theory and application of biostatistics and data science methods and prepares them to be on the forefront of leadership in these areas. Education in the advanced theory of probability and statistical inference is combined with applied methods in complex study design and analysis.

Graduates from the PhD program typically pursue careers as academic researchers and teachers; in industry, such as the pharmaceutical and biomedical fields; and in other research pursuits, both public and private. Typical roles include teaching, collaborative research and independent research in statistics, biostatistics, bioinformatics methods, design, and data analysis.

Program Competencies

- Develop new biostatistical and data science methods for application to biomedical and public health research problems.
- Assess the performance of advanced statistical methods applied to biomedical and public health research.
- Design a statistical analysis plan to analyze complex data.
- Design teaching and learning experiences grounded in pedagogical best practices in a chosen area of expertise.
- Develop a grant proposal for a public health research study with a compelling scientific narrative, description of investigator capacity, timeline, and budget.

Requirements

Students must complete 48 credit hours of coursework and doctoral studies beyond the baccalaureate, with a minimum of 30 didactic hours at Tulane in the doctoral program. Up to 18 Credits can be transferred from Master's degree.

The PhD must be completed within seven years of matriculation into the doctoral program.

Course ID	Title	Credits
PhD Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6060	Epidemiology for Public Health	3
BIOS 7040	Statistical Inference I	3
BIOS 7050	Statistical Inference II	3
Select two of the following three courses:		6
BIOS 7060	Regression Analysis	
BIOS 7080	Design of Experiments	
BIOS 7150	Categorical Data Analysis	
PhD Core Courses		
SPHL 7500	Public Health Grant Writing	3
SPHL 8080	Public Health Pedagogy	3
EPID 7120	Epidemiologic Methods II	3
BIOS 7300	Survival Data Analysis	3
BIOS 7380	Bayesian Inference	3
BIOS 8350	Clustered and Longitudinal Data Analysis	3
BIOS 8820	Multivariate Methods	3
Elective Courses		
Select a minimum of 9 credits from relevant advanced level courses in consultation with an academic advisor.		9
Total Credit Hours		48

Research Ethics

Students are required to take online research ethics training via CITI or another equivalent training program in research ethics. This certification must remain current throughout the program duration.

Teaching Assistant Experience

All PhD students at SPHMT are required to serve as a teaching assistant (TA) for two SPHMT courses while enrolled in the PhD program. Students should register for Teaching Assistantship Educational Experience (0 credits) during the terms they complete each TA requirement.

Comprehensive Exam

Students are required to pass a written comprehensive examination that demonstrates general knowledge of biostatistical methods and research applications. The department administers a written comprehensive examination upon completion of the required coursework. The exam is administered twice a year (October and March) and must be taken within a year after the completion of the coursework. The exam has two parts: an applied biostatistics component; and a probability and mathematical statistics component. Candidates must pass both parts to successfully complete the comprehensive exam requirement. Students have two attempts to pass each component of the examination; the second attempt must take place within a year of the first.

Doctoral Committee

After successful completion of the comprehensive examination, the student forms a dissertation committee and develops a prospectus. The committee must include a minimum of three members with at least two faculty from the Department of Biostatistics and Data Sciences and one external to the school.

Prospectus

Students work with their advisor and doctoral committee to determine a research hypothesis and prepare a prospectus of proposed dissertation research. The research prospectus is presented and defended at least one semester before the dissertation defense. Following the successful defense of the prospectus, students are admitted to PhD candidacy and proceed with dissertation research.

Dissertation

Students must conduct original research and defend a dissertation based on that research. The dissertation research demonstrates scholarly work and is the basis for the dissertation. The student defends the dissertation to their committee; the dissertation committee and SPHMT Executive Faculty approve the dissertation.

Department of Environmental Health Sciences

Programs

Chair: Melissa Gonzales, PhD, MS

Environmental Health Sciences

Environmental Health Sciences prepares students to improve the health of populations through strengthening environmental health protection and management systems, building stronger communities, providing technical assistance, and facilitating health risk reduction strategies in an increasingly complex and changing world.

Environmental Health Sciences Programs train students to identify health impacts and develop strategies to reduce health risks across work, home, and ambient environments posed by natural and man-made sources and disasters, which are modified by climate change and unequally distributed among communities.

Our mission is to equip the next generation of environmental public health leaders with the knowledge and skills to protect the health from the impacts of environmental exposure.

Our vision is a world in which one's health status and life chances are supported by the environments in which they live, work, and play.

Graduate Degrees

- Disaster Management, MPH (p. 30)
- Environmental Health Sciences, MSPH (p. 32)
- Environmental Health Sciences, PhD (p. 33)
- Industrial Hygiene, MSPH (p. 35)

Graduate degrees in Occupational and Environmental Health, MPH and Occupational Health and Safety Management, MPH will not be admitting students for academic year 2024-2025.

Graduate Certificates

- Disaster Management Certificate (Graduate) (p. 29)
- Industrial Hygiene Certificate (Graduate) (p. 34)

Graduate certificates in Occupational and Environmental Health, Occupational Health and Safety Management, Disaster Management and Resilience, and Environmental Health will not be admitting students for the academic year 2024-2025.

Courses

Environmental Health Sciences (ENHS)

ENHS 6030 Survey of Environmental Health (3)

This course is designed as a survey course which introduces students to basic environmental health topics and it fulfills the school core requirement. The course focuses on environmental factors impacting human health and the environment. Sources of these factors, methods of identification, recognition, evaluation and regulatory framework control are discussed. Factors might include health hazards associated with contaminated water, food and air, vectors of disease, exposure to toxic chemicals, environmental justice, regulations, and safety in the work place.

ENHS 6080 Fundamentals of Environmental Health Sciences (3)

This course introduces students to environmental health concepts and principles used to anticipate, evaluate, and reduce health risks posed by chemical, biological or physical agents in their environment with an emphasis on our changing climate. The course will be taught as a series of modules and assignments designed to provide a framework of fundamental environmental health sciences from which to expand upon to understanding how environmental hazards and our changing climate affect health. Case studies and discussions will bridge the gap between concepts and application to real world scenarios. Contemporary examples of environmental issues will be discussed. After completing this course, students are expected to be able to apply fundamental environmental health paradigms to the critical public health need for understanding the impact of environmental agents in a complex and changing world.

ENHS 6300 Radiological Health (3)

This course is an introductory course in health physics, medical uses and university uses of ionizing radiation. The course includes radiation protection for both workers and general public. The course is designed to meet the needs Industrial Hygienists. Topics include nuclear reaction terminology, the interaction of alpha particles, electrons, and photons with matter, basic instrumentation for radiation protection, and the use of Poisson counting statistics, radiation medicine issues including radiation epidemiology, internal dissymmetry, use of the LLNL code Hotspot for dispersion calculations, and various advanced topics, including nuclear weapons effects.

ENHS 6320 Workplace Wellness (3)

Health, as it relates to the workplace, is created by two major forces; what employees bring with them into the workplace (e.g. personal resources, health practices, beliefs and attitudes) and the impact of the workplace on employees (e.g. organization of work in both a physical and psychological sense). Health promotion focuses on the elements that make up a healthy workplace and includes the physical environment, health practices and social environment & personal resources. This course focuses on the total well-being of individuals and groups within a corporate and community context. It emphasizes a holistic approach to achieving workplace, community, and personal wellness.

ENHS 6420 Global Food Safety and Public Health (3)

This course introduces students to local, national, and international food safety. Food resources, production, biological, chemical and radiological contaminants are discussed. Focus will be on health effects resulting from exposure to contaminated food. Sanitary regulations/codes addressing food safety including inspection of food establishments, investigation of food outbreak diseases will also be discussed. Genetically modified foods will also be addressed.

ENHS 6430 Disaster & Emergency Communication (3)

This course presents the application of evidence-based principles that help leaders in government and public health persuade, inform, and ensure the health of a population in a crisis. This interactive course will use a combination of site visits, case studies, and interactive examples to highlight the principles when dealing with uncertainty, communication, building trust and empathy, cross-cultural communication, and leadership ethics. Students will also learn key skills that will give them the tools to apply these principles in the field of public health.

ENHS 6450 Climate Change and Public Health (3)

Future public health professionals should be aware of and understand the impact of climate on the health and well being of populations around the world. In this introductory level course, students will examine what climate change is, the environmental factors it influences, how those environmental factors impact health, who are the most vulnerable, how to deal with climate change from a public health perspective, and how we might answer future questions through evidence-based research. Current literature, reports, and relevant case studies inform class lectures, student-directed dialogue, and final presentations. The course will utilize experts on various topics in addition the primary instructor. This course is an elective for all SPHTM students.

ENHS 6510 Water Quality Management (3)

This is an introductory course in Water Quality Management. Students will explore the link between water quality and public health. Topics cover the foundations of surface water quality, groundwater quality, and stormwater quality. Students will learn the principals of potable water and wastewater treatment permitting and treatment as well as the scientific causes, consequences, and solutions of pollution in lakes, rivers, wetlands, and groundwater. At the completion of this course, students should be able to discuss nonpoint and point source pollution and interpret the physical, chemical, and biological indicators of water quality.

ENHS 6540 Principles of Occupational Health (3)

The course addresses occupational health topics including some of the leading occupational disease hazards, their evaluation and control. Concepts of exposure in the workplace and related health outcomes, toxicological updates on selected chemical and physical agents, as well as exposure evaluation are discussed.

ENHS 6550 Environmental Health Management (3)

This course examines the relevance of sustainable management of natural resources to public health. It explores the science of natural and built environmental stressors and their impacts on human health along with a number of model environmental health and natural resources management best practices from policy and management perspectives. Students learn to develop and apply appropriate natural resources management plans, environmental health plans, and environmental management systems to a number of problem scenarios including disaster scenarios. Topics include key environmental media as well as forests, wetlands, and agricultural land management. Emphasis will be placed on interventions for environmental toxins and vectors of diseases and the impact of global climate change on environmental public health. Students are given case-study based assignments to develop skills in applied environmental health management.

ENHS 6560 Environmental Health Microbiology (3)

This course is designed to provide understanding about microbial pathogens of public health concern and the role of the environment, including water, waste, air and food, in the transmission of infectious diseases. We will explore specific pathogens that cause environmentally transmitted diseases, their detection using both conventional and advanced molecular methods, their prevention and control by technological and other measures, and how the health risks posed by these pathogens are assessed. This course focuses on emerging issues of pathogens in the environment at both local and global levels.

Prerequisite(s): ENHS 6030 or GEHS 6030.

ENHS 6600 Principles of Toxicology (3)

This course presents the fundamental principles of toxicology and the mechanisms by which environmental and occupational chemical agents may alter human health. There are three major themes in this course: 1) General principles: chemical exposure, route, dose response; absorption, distribution, storage, metabolism and excretion; 2) Non-organ toxicology, e.g. epigenetic, mutagenic, carcinogenic, and developmental effects of chemicals. 3) Systemic toxicity of chemicals to liver, kidney, blood, lung, etc.

ENHS 6620 Physical Agents & Ergonomic Hazards in the Workplace (3)

Occupational exposure to temperature extremes, abnormal pressure, noise, mechanical vibration, non-ionizing radiation, and cumulative trauma/ergonomics are discussed in lecture sessions. The fundamental physics, health effects, and occurrence of these agents, along with methods for evaluating the extent of exposure and approaches to controlling them are discussed in lectures and appropriate measurement instrumentation is demonstrated. A laboratory session on noise measurement is included. Applicable exposure standards, regulations, and guidelines are covered in detail.

Prerequisite(s): ENHS 6720 or GEHS 6720.

ENHS 6700 Principles of Safety (3)

This course provides an overview of safety fundamentals in the workplace and focuses on the safety management programs; applicable laws, regulations and standards; hazards and controls; safety training; emergency operations planning; and human performance elements of safety improvement. The student will gain a basic understanding of programmatic safety management as well as applied safety engineering principles related to areas including, but not limited to: electrical safety, fire protection and prevention, heat and cold, transportation safety, noise and vibration, personal protective equipment, etc. Class assignments will focus on application of safety principles in the student's workplace. Students, through individual, collective and peer review contributions, will develop a safety walkthrough checklist linking items important to safety in multiple key technical areas.

ENHS 6720 Principles of Industrial Hygiene (3)

This course is designed to introduce the field of Industrial Hygiene. The objective of the course is to present an overview and historical perspective of Industrial Hygiene, anatomy and physiology of the skin and lungs, occupational diseases, inhalation toxicology, chemical agents, biohazards, ergonomics, noise, thermal stress, indoor air quality, ventilation systems, laboratory safety, radiation safety, personal protective equipment, Hazard Communication and other OSHA standards and community exposures and emergency planning.

ENHS 6910 Environmental Aspects of Disaster Management (3)

Students will gain a cross-disciplinary knowledge of the practical, interrelated aspects of public health preparedness, homeland security and disaster management. Emphasis will be placed on developing an understanding of these fields through the lens of real-world case studies and scenarios. Students should become well prepared for future study in this dynamic and evolving discipline.

ENHS 6920 Environmental, Monitoring, Sampling & Analysis in a Disaster (3)

Utilizing a strong person-in-environment and ecosystems focus, this course addresses the unique dimensions of mental health issues in disaster or complex community emergencies. The course provides instruction in the Incident Command System, including systemic planning, activation, and evaluation of the functions of psychosocial health services when dealing with a disaster. The course integrates interdisciplinary knowledge and skills from micro, mezzo and macro levels for addressing psychosocial reactions and needs prior to and in the wake of a disaster or major crisis. Students experience a variety of learning activities including online FEMA instruction; live lecture with class discussion, case simulations, field visits, exams, reflection, labs and papers focused on response models that integrate the psychosocial dimension.

ENHS 6930 Planning and Implementation in Disaster Management (3)

The United States is among other global communities that attempt to prepare its citizens for potential mass casualty events such as natural disasters, terrorism, or a pandemic flu outbreak. This course introduces disaster theory and overviews the United States' National Response Framework. Core population health issues that present during the management of disasters are examined. Developing preparedness at the local level is emphasized. Fundamental concepts of emergency management and leadership are discussed.

ENHS 6950 Psychosocial Aspects of Disaster (3)

The course covers the theoretical development, history, and empirical studies of the psychosocial dynamics and sequelae of disasters. Characteristics of environmental health disasters, reactions and risk factors, as well as trends in disaster mental health are examined. Emphasis is placed on inclusion of psychosocial considerations in the planning, preparation, and very early intervention phases of a disaster. Vulnerable populations are of particular interest in highly interactive case-based learning through reflection labs for application in situations such as natural disaster, environmental health crises, pandemic illness, or threats to national security. Baseline resilience planning is required of all students planning to work in disaster or emergency response fields.

ENHS 6960 Public Health Law (3)

Public health law speaks to the legal aspects of delivering public health interventions to the society. This course introduces students to the functions and outcomes of public health law from local to global and provides a hands-on legal tool for public health protection and practice. It covers a variety of topics such as civil liberties in matters such as quarantine, isolation and mandated medical testing; access to healthcare and health disparities; incentives to vaccine makers, authorization of drugs in declared public health disaster/emergency situations, international law on controlling spread of infectious diseases, the role of the World Health Organization and other global entities in protecting public health, and public health issues arising from migrants and refugee problems.

ENHS 7110 Industrial Ventilation & Chemical Hazard Control (3)

This course covers the control and management of chemical hazards in the workplace and indoor environments through engineering, administrative change, and personal protective equipment. The selection, use, and limitations of respiratory protective equipment are discussed. Engineering controls covered include product substitution, process isolation, and ventilation. The fundamentals of design and operation of local exhaust and general dilution ventilation systems are covered in detail and include basic air flow, general dilution ventilation, exhaust hood design, duct design, fans, air cleaning and recirculation, system balancing, system evaluation and special ventilation systems. A laboratory session on evaluating ventilation system performance is included.

Prerequisite(s): ENHS 6720 or GEHS 6720.

ENHS 7230 Fundamentals of Project Management for Environmental Sciences (3)

This course focuses on management of environmental health and safety risks, as well as measurement and evaluation of industrial hygiene and safety performance. Specific course topics include environmental and hazardous materials management, emergency planning and response, crisis communication, accident investigation, the development and interpretation of risk assessments, risk perception and communication, economics and risk/benefit analysis, comparative risk assessment, laws and regulations pertaining to risk assessment, and management and the design of risk management plans. Report writing and interpretation are emphasized.

ENHS 7240 Applying Systems Thinking to Environmental Health and Sciences (3)

This course complements and supplements ENHS 7230, Fundamentals of Project Management for EH&S. It is an introduction to methods of systematically integrating health and safety programs into standard management systems used by organizations. Topics emphasized include leadership, strategic planning, project management, management of multidisciplinary teams, regulatory affairs management, voluntary standards systems, professional ethics, labor relations, and "selling" health and safety initiatives to all levels of the organization and the public. Systems thinking is emphasized throughout the course. No prerequisites required.

ENHS 7260 Financial Aspects ES&H (3)

The purpose of this class is to teach students how to use economic and financial analyses to manage EHS programs by developing analytic and inductive reasoning skills that are prerequisites for becoming a successful manager. The course will address some basic financial managing concepts that mid-level EHS managers and professionals will commonly use or be exposed to in a business setting. These concepts include cost behaviors, profit analysis, budgeting, financial ratios, project economics and return investment analysis.

ENHS 7310 Occupational Laws and Compliance (2)

This course helps students understand regulation of workplace safety and health under the Occupational Safety and Health Act of 1970 ("OSH Act") primarily covering employer responsibilities, employee rights, and regulatory compliance efforts. The course provides an overview of the history of occupational safety policies culminating in the creation of the OSH Act. Students learn the roles of the (1) Occupational Safety and Health Administration ("OSHA"), (2) National Institute of Occupational Safety and Health ("NIOSH"), and (3) Occupational Safety and Health Review Commission ("OSHRC"). Important federal statutes, regulations, court decisions and OSHA's rulemaking, standard interpretations, and resources to assure occupational safety compliance are covered.

ENHS 7400 Field/Lab Applications of Environmental Health Practice (3)

This course consists of field and laboratory work dealing with the identification, assessment and isolation of environmental health problems. It is designed to provide the students an opportunity to observe and work with real-life settings of environmental health problems in the field, i.e. food establishments, schools, water, sewage, etc. Students conduct environmental health exercises and make analysis of problems situations on-site. Students collect and analyze environmental samples when possible. Written reports of each exercise are required. All reports will be discussed and methods of remedies for environmental health violation corrections will also be discussed.

ENHS 7500 Air Sampling & Analysis (3)

This course helps students understand regulation of workplace safety and health under the Occupational Safety and Health Act of 1970 ("OSH Act") primarily covering employer. The principles and techniques for measuring and evaluating airborne contaminants in the work and community environments are presented in lectures and practiced in laboratory sessions. Covered topics include air flow measurements, aerosol science, particulate sampling with and without size separation, optical microscopy, active and passive sampling of gases and vapors, direct reading instruments, stack sampling, atmospheric dispersion modeling, and sampling strategy and statistical data analysis.

Prerequisite(s): BIOS 6030*, SPHL 6050* or 6850.

* May be taken concurrently.

ENHS 7510 Emerging Issues in Water Quality (3)

Burgeoning human population and urbanization is creating increased demands on fresh water resources and generating larger and more concentrated waste streams. Droughts throughout many parts of the world also have placed unique challenges on historically abundant river systems. Therefore, many communities are considering the utilization of alternative water resources, including desalination of brackish waters and the reuse of wastewater for potable and non-potable applications. This course will investigate, discuss, and debate major emerging water quality issues which threaten our water sustainability and the regulatory paradigms to address these challenges. Specific issues include emerging opportunistic premise plumbing pathogens, endocrine disrupting chemicals, pharmaceuticals, unregulated disinfection by-products, perfluorinated organic compounds, algal toxins, and others.

Prerequisite(s): ENHS 6030 and 6510.

ENHS 7550 Human Biomonitoring & Health (3)

The environment plays a major role in human health and disease. Exposure to chemicals and other stressors such as lifestyle factors are intrinsically linked with adverse health outcomes. This advanced course discusses the role human biomonitoring (HBM) in epidemiological studies to assess the occurrence, extent of chemical exposures and identify populations at risk of adverse health outcomes by measuring biomarkers in biological samples, such as in urine, blood, and nails. The course introduces HBM concepts and approaches for understanding the myriad ways human interact with the environment, primarily from the perspective of chemical exposures. Students will gain the knowledge needed to design and conduct population-level biomonitoring studies to understand public health risks of chemicals exposure and for better policy makings to protecting health.

Prerequisite(s): ENHS 6030 and 6600.

ENHS 7610 Applied Data Science for Climate and Health (3)

This course is designed to provide students with the knowledge and practical skills to use data science techniques in addressing the complex challenges at the intersection of climate change and health. With a strong focus on practical applications, the course first introduces fundamental concepts in climate change, epidemiology, and biostatistics and follows with data science methods for collecting, analyzing, and interpreting climate and health data, enabling students to identify climate change-related environmental risk factors and to engage in evidence-based decision-making and policy development. Lectures focus on the statistical methods and data science application to evaluate the health impacts of climate change-related exposures such as wildfires, extreme temperature events, tropical cyclones, and drought etc. It is open to MS, MPH, and PhD graduate students at the School of Public Health and Tropical Medicine and other Schools with appropriate permissions.

Prerequisite(s): SPHL 6050 and 6060.

ENHS 7620 Health Risk Assessment (3)

This course develops the qualitative and quantitative skills necessary to evaluate the probability of adverse health effects resulting from exposure to environmental contaminants/chemicals. Basic concepts of qualitative and quantitative risk assessment are demonstrated using practical case studies and review of the primary literature. Emphasis is placed on hazard identification, dose-response evaluation, exposure assessment, and risk characterization. Integration of risk assessment with risk management and communicating risks to the public are discussed. Regulatory aspects of risk assessment in the promulgation of environmental standards are presented. Disaster risk estimation and assessment is not a content area covered in this course (e.g. probability of a catastrophic storm event and flood risks under specific scenarios) nor is microbial risk assessment (e.g. foodborne or waterborne pathogen risk assessment).

Prerequisite(s): ENHS 6600 or GEHS 6600.

ENHS 7750 Environmental Policy (3)

The course introduces students to the concepts of public health policy with an emphasis on environmental health. The course describes the relationship among public science, policy, and practice and demonstrates the application of this relationship through a series of real cases in environmental health laws, policies, regulations and statutes in the context of public health. Through "hands-on" experience, students examine the policy implications of contemporary environmental public health issues.

ENHS 7990 Independent Study (1-3)

Masters students and advisor select a topic for independent study and develop learning objectives and the expected written final product.

ENHS 8100 Advanced Environmental Health (3)

Advanced Environmental Health is a doctoral level course that is restricted to students who are admitted to doctoral programs. The course is taught by the departmental members who have extensive research experience. Students will be challenged with contemporary research problems in the field of environmental health that span topics that include environmental health in disaster situations, identifying effects of environmental chemicals, and biological contaminants in the water supply. The course is designed to provide a unified, broad, and advanced experience in environmental health issues for doctoral students.

ENHS 8200 Environmental Health Methods (3)

Environmental Health Methods is a doctoral level course for students enrolled in doctoral programs. The course is taught by the departmental members with active environmental health research programs. Students select an area for study and work closely with a faculty member to 1) identify an environmental health research question that can be approached within a semester, 2) review the pertinent literature on the topic and form a testable hypothesis, 3) develop and employ the appropriate methodological approaches, 4) prepare and analyze data, 5) identify an appropriate journal or other publication forum, and 6) complete a manuscript or report in the appropriate format.

Prerequisite(s): BIOS 6040, EPID 7120 and ENHS 8100.

ENHS 8990 Doctoral Independent Study (1-3)

Doctoral students and advisor select a topic for independent study and develop learning objectives and the expected final written product.

Disaster Management Certificate (Graduate)

The Graduate Certificate Disaster Management prepares professionals in disaster preparedness, response and management. This is non-degree standalone graduate certificate for students in the distance learning programs. The graduate certificate provides skills for responding to public health aspects of disasters, including crises communication, population issues and psychosocial aspects of disasters. It also addresses the management structure and operational models unique to disasters.

Courses carry graduate degree credit and may be applied toward the MPH degree in disaster management.

Professionals who select the graduate certificate may already have a master's degree and seek a specialization in disaster management. Others seek a credential to work in the disaster management fields.

Backgrounds of professionals in the disaster management certificate have experience in public health, on disaster management teams, occupational or environmental health professionals with disaster management responsibilities and a wide range of other professional experiences.

Faculty Lead: Stephen Murphy, PhD

Program Competencies

At the completion of the Graduate Certificate in Disaster Management, the student will be able to:

- Apply public health, policy, practice and scientific principles to address the health threats resulting from natural and intentional disasters.
- Integrate environmental public health strategies in disaster preparedness, response, containment, and recovery.
- Integrate public health skills in emergency planning and response, crisis communications, protecting vulnerable populations, and managing the psychosocial impact of disasters.

Requirements

The Graduate Certificate in Disaster management requires 15 credits includes:

Course ID	Title	Credits
ENHS 6430	Disaster & Emergency Communication	3
ENHS 6600	Principles of Toxicology	3
ENHS 6910	Environmental Aspects of Disaster Management	3
ENHS 6930	Planning and Implementation in Disaster Management	3
ENHS 6950	Psychosocial Aspects of Disaster	3
Total Credit Hours		15

Apply Graduate Certificate credits toward the MPH in Disaster Management

This graduate certificate may be taken as a standalone graduate certificate for students in the distance learning programs. For those wishing to pursue a MPH in Disaster Management, the course credits obtained in the graduate certificate may be applied to the MPH degree. Students proceeding into the MPH degree complete a total of 42 credits that include the remainder of the required Disaster Management courses and the SPHTM foundational courses. Only the MPH degree in Disaster Management is awarded. Student must have a GPA of 3.0 in coursework and meet the MPH degree admission requirements to transfer to the degree program.

Combined Graduate Certificate in Disaster Management with a MPH degree in another area.

Student in another MPH degree program seeking to add a graduate certificate in Disaster Management may use the elective credits available in the degree program, but not required courses, for the graduate certificate. Required courses cannot be double counted toward both the MPH and a graduate certificate. If there is an overlap in required courses, the student, in consultation with their advisor, selects another disaster management courses to meet the 15 credits. The combined MPH and graduate certificate may take 5 to 6 additional credits beyond the total for the degree alone. If the graduate certificate in disaster management is combined with the MSPH in industrial hygiene, the student will take an additional 14 credits since the industrial hygiene degree does not have electives.

Disaster Management, MPH

The MPH in Disaster Management program prepares professionals to apply scientific principles to prevent, detect, and mitigate environmental public health problems and threats associated with natural and technological disasters- locally to globally. Students gain skills to implement population-based interventions to protect communities, particularly vulnerable populations, from natural, accidental, and intentional disasters. This MPH offering is intended for both pre-professionals and mid-career individuals. Students typically have a background in a life or physical science or engineering. This course is offered by Distance Learning and on campus.

Faculty Lead: Stephen Murphy, PhD

Program Competency

Upon completion of the MPH degree in Disaster Management, graduates will have the following competencies:

- Apply scientific principles to prevent, detect, respond to, and mitigate local and global threats to environmental health that are associated with natural and technological disasters.
- Integrate public health strategies in each core component of disaster management: prevention, preparedness, response, mitigation, and recovery.
- Implement population-based interventions to protect communities and particularly vulnerable populations from natural, accidental, and intentional disasters that affect personal and community health.
- Evaluate the capacity of public health systems to effectively respond to natural and intentional disasters.
- Apply international, federal, and state regulatory policies, guidelines, and authorities to address public health needs during disasters.

Requirements

The MPH Degree in Disaster management requires 45 credits that includes:

SPHTM Foundational Requirements (15 credits)

Course ID	Title	Credits
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Total Credit Hours		15

- **Program Course Requirements (21 credits total)**

Course ID	Title	Credits
ENHS 6030	Survey of Environmental Health	3
ENHS 6600	Principles of Toxicology	3
ENHS 6910	Environmental Aspects of Disaster Management	3
ENHS 6930	Planning and Implementation in Disaster Management	3
ENHS 6950	Psychosocial Aspects of Disaster	3
ENHS 7620	Health Risk Assessment	3
ENHS 7750	Environmental Policy ¹	3
Total Credit Hours		21

¹ Not required for distance learning students

Elective courses (9 credits)

Selected from courses offered within the department, school, or university in consultation with an academic advisor.

Applied Practice Experience (SPHL 9980)

The Applied Practice Experience (APE) (formerly practicum) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience. The APE allows students to demonstrate attainment of at least five competencies, including at least 3 from the foundational competencies (CEPH Criterion D2). The APE is conducted after completion of the foundational courses. After identifying the APE setting and defining the competencies, students enter the information into Terra Dotta. An APE report is required that summarizes the field experiences.

Integrated Learning Experience (SPHL 7950)

All students must complete an Integrated Learning Experience (ILE) (formerly culminating experience) that demonstrates the synthesis of foundational and concentration competencies. Students in the MPH in Disaster Management conduct a public health analysis.

Model Course Schedule
Year 1, Fall Semester

Course ID	Title	Credits
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
ENHS 6910	Environmental Aspects of Disaster Management	3
ENHS 6030	Survey of Environmental Health	3
Total Credit Hours		12

Year 1, Spring Semester

Course ID	Title	Credits
SPHL 6070	Health Systems Policy and Management	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
ENHS 6930	Planning and Implementation in Disaster Management	3
Total Credit Hours		12

Year 1, Summer

Course ID	Title	Credits
SPHL 9980	Applied Practice Experience	0
Total Credit Hours		0

Semester credits: 0 credit with full-time enrollment

Year 2, Fall Semester

Course ID	Title	Credits
SPHL 7950	Integrative Learning Experience	0
ENHS 6950	Psychosocial Aspects of Disaster	3
ENHS 6600	Principles of Toxicology	3
Elective		6
Total Credit Hours		12

Year 2, Spring Semester

Course ID	Title	Credits
ENHS 7620	Health Risk Assessment	3
ENHS 7750	Environmental Policy	3
SPHL 7950	Integrative Learning Experience	0
Electives		3
Total Credit Hours		9

Total degree credits: 45

Environmental Health Sciences, MSPH

The MSPH degree in Global Environmental Health Sciences prepares students to recognize, evaluate and control global environmental health problems, use quantitative and qualitative methods to evaluate environmental data, and to manage delivery of global environmental health services. Beyond the school core requirements, students select elective coursework in consultation with their academic advisor to strengthen their knowledge, skill and competence in specific areas of environmental health. The MSPH degree is designed for both pre- and mid-career professionals.

Program Competencies

Upon completion of the MSPH degree in Global Environmental Health Sciences graduates will have the following competencies:

- Recognize, evaluate, and control global environmental health problems.
- Apply environmental health principles to solve global public health problems.
- Use quantitative and qualitative methods to evaluate environmental and health data.
- Translate research in global environmental health into practice.
- Communicate environmental health information to peer groups, environmental health practitioners, affected communities, and the public.

Requirements

The MSPH Degree in Global Environmental Health Sciences requires 45 credits that include:

Course ID	Title	Credits
SPHTM Foundational Requirements (15 credits)		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements (21 credits total)		
ENHS 6030	Survey of Environmental Health	3
ENHS 6420	Global Food Safety and Public Health	3
ENHS 6510	Water Quality Management	3
ENHS 6560	Environmental Health Microbiology	3
ENHS 6600	Principles of Toxicology	3
ENHS 7500	Air Sampling & Analysis	3
ENHS 7620	Health Risk Assessment	3
Elective Courses ¹		9
SPHL 9980	Applied Practice Experience	0
SPHL 7950	Integrative Learning Experience	0
Total Credit Hours		45

Integrated Learning Experience (SPHL 7950)

All students must complete an Integrated Learning Experience (ILE) (formerly culminating experience) that demonstrates the synthesis of foundational and concentration competencies. Students in the MSPH in Environmental Health Sciences conduct a public health analysis.

Applied Practice Experience (SPHL 9980)

The Applied Practice Experience (APE) (formerly practicum) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience. The APE allows students to demonstrate attainment of at least five competencies, including at least 3 from the foundational competencies (CEPH Criterion D2). The APE is conducted after completion of the foundational courses. After identifying the APE setting and defining the competencies, students enter the information into Terra Dotta. An APE report is required that summarizes the field experiences.

¹ Selected from courses offered within the department, school, or university in consultation with an academic advisor.

Environmental Health Sciences, PhD

The PhD degree in the Environmental Health Sciences Department is an advanced research degree that prepares students to employ laboratory and community approaches to address adverse environmental health impacts. Students use basic and applied research methodologies to examine consequences of chemical and non-chemical stressors and disasters. Graduates of the PhD programs advance to careers at academic institutions, governmental agencies, industry and nonprofit organizations.

Program Competencies:

- Evaluate current challenges to environmental health through an exploration of the current literature and scientific evidence.
- Construct approaches and solutions to environmental health problems.
- Investigate contemporary challenges in environmental health sciences.
- Design teaching and learning experiences grounded in pedagogical best practices in a chosen area of expertise.
- Develop a grant proposal for a public health research study with a compelling scientific narrative, description of investigator capacity, timeline, and budget.

Requirements

Students must complete 48 credit hours of coursework and doctoral studies beyond the baccalaureate, with a minimum of 30 didactic hours at Tulane in the doctoral program. Up to 18 Credits can be transferred from a prior graduate degree.

The PhD must be completed within seven years of matriculation into the doctoral program.

Course ID	Title	Credits
PhD Foundational Courses		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
ENHS 6030	Survey of Environmental Health	3
ENHS 6600	Principles of Toxicology	3
ENHS 7620	Health Risk Assessment	3
PhD Core Courses		
ENHS 8100	Advanced Environmental Health	3
ENHS 8200	Environmental Health Methods	3
BIOS 6040	Intermediate Biostatistics	3
EPID 7120	Epidemiologic Methods II	3
SPHL 8080	Public Health Pedagogy	3
SPHL 7500	Public Health Grant Writing	3
Electives ¹		12
Total Credit Hours		48

¹ Select 12 credits of Environmental Health Sciences and other relevant elective courses at the 6000 or higher level. Students should choose these courses in consultation with their faculty advisor.

Research Ethics

Students are required to take online research ethics training via CITI or another equivalent training program in research ethics. This certification must remain current throughout the program duration.

Teaching Assistant Requirement

All PhD students at SPHTM are required to serve as a teaching assistant (TA) for two SPHTM courses while enrolled in the PhD program. Students should register for Teaching Assistantship Educational Experience (0 credits) during the terms they complete each TA requirement.

Comprehensive Exam

The departmental faculty administer the comprehensive examination. The exam should be taken no later than a year after completing all required coursework. The comprehensive exam is offered in January, August, or by special arrangement. The exam consists of written questions from the faculty that gauge the student's ability to identify, assess, and propose approaches to study environmental health problems.

Students have two attempts to pass the examination; the second attempt must take place within a year of the first.

Doctoral Committee

After successful completion of the comprehensive examination, the student forms a dissertation committee and develops a prospectus. The committee must include a minimum of three members with at least two faculty from the Department of Global Environmental Health Sciences and one external to the school.

Prospectus

Students work with their advisor and doctoral committee to determine a research hypothesis and prepare a prospectus of proposed dissertation research. The research prospectus is presented and defended at least one semester before the dissertation defense. Following the successful defense of the prospectus, students are admitted to PhD candidacy and proceed with dissertation research.

Dissertation

Students must conduct original research and defend a dissertation based on that research. The dissertation research demonstrates scholarly work and is the basis for the dissertation. The student defends the dissertation to their committee; the dissertation committee and SPHTM Executive Faculty approve the dissertation.

Industrial Hygiene Certificate (Graduate)

The online Graduate Certificate in Industrial Hygiene prepares professionals with the basic knowledge of industrial hygiene and toxicology to recognize and control workplace hazards. The Certificate provides 15 industrial hygiene specific credits that prepare students for the Certified Industrial Hygiene (CIH) exam

The Graduate Certificate in Industrial Hygiene is a non-degree program. Courses carry degree credit that may be applied toward the MSPH or MPH degrees. This graduate certificate is offered online, suiting the needs of most mid-career professionals.

Program Competencies

At the completion of the Graduate Certificate in Industrial Hygiene, the student will be able to:

- Recognize hazardous agents and the adverse effects of exposure
- Anticipate and evaluate work place hazards using basic and applied scientific and engineering principles.
- Specify types of personal protective equipment and other controls for work place hazards and exposures.

Requirements

The Graduate Certificate in Industrial Hygiene requires a total of **15 credits** that includes:

Course ID	Title	Credits
Required Courses		
ENHS 6030	Survey of Environmental Health	3
ENHS 6600	Principles of Toxicology	3
ENHS 6720	Principles of Industrial Hygiene	3
Select six credits from the following:		6
ENHS 6300	Radiological Health	
ENHS 6540	Principles of Occupational Health	
ENHS 6620	Physical Agents & Ergonomic Hazards in the Workplace	
ENHS 7110	Industrial Ventilation & Chemical Hazard Control	
ENHS 7500	Air Sampling & Analysis ¹	
Total Credit Hours		15

¹ This course requires a one week on campus laboratory section. Dates for on campus lab posted in calendar.

Apply Graduate Certificate Credits toward the MSPH in Industrial Hygiene

IH course credits taken in the graduate certificate may be applied to the MSPH in industrial hygiene. Students proceeding onto the MSPH degree in IH complete a total of 45 credits that include the remainder of the required IH courses and the SPHTM core. Only the MSPH degree is awarded. Student

must have a GPA of 3.0 in coursework and meet the IH admission requirements to transfer to the degree program. Contact the DL manager prior to completion of the certificate for information.

Combined Graduate Certificate with a MPH Degree in Another Area

Student in another MPH degree program seeking to add a graduate certificate in IH may use the elective credits available in a degree program, but not required courses, for the graduate certificate. Required courses cannot be double counted toward both the MPH and the IH graduate certificate. If there is an overlap in required courses, the student, in consultation with their advisor, selects other industrial hygiene courses to meet the 15 credits for the certificate. The combined MPH and the IH graduate certificate may take 2 to 6 additional credits beyond the total for the MPH degree alone.

Industrial Hygiene, MSPH

Vision Statement: To improve worker and community health by developing the most competent industrial hygienists in the world.

Millions of workers across the globe make our modern lifestyle a reality. Industrial hygiene (IH) is the critical profession that protects the health and wellbeing of these workers and their communities. The Tulane MSPH-IH program prepares students to take on challenging professional careers in exposure science and worker protection in occupational and community settings. Our program is ABET accredited, which allows our graduates to take the Certified Industrial Hygienist (CIH) exam with one less year of professional work experience. Graduates of our program receive the designation of Graduate Safety Professionals (GSP). The program is also a recipient of a National Institute of Occupational Safety and Health (NIOSH) training grant to support students financially. Finally, our extensive alumni network and expert faculty make our program one of the premier graduate industrial hygiene programs nationally and globally.

Our graduate certificate program is designed to prepare CIH candidates for the exam, by providing the 15 industrial hygiene-specific credits required to apply, and by equipping students with knowledge and skills important for the comprehensive practice of industrial hygiene.

Accreditation

The Industrial Health program is accredited through the **Applied Science Accreditation Commission of ABET**, an accrediting agency for programs in applied science, computing, engineering, and engineering technology. Tulane's Industrial Hygiene program has been ABET -accredited since 1996.

Student Enrollment and Graduation Statistics

Academic Year	New Student Enrolled	Total Students Enrolled	Total Students Graduated
2017-18	7	15	6
2018-19	4	13	5
2019-20	5	13	7
2020-21	6	12	4
2021-22	18	23	2
2022-2023	16	29	1
2023-24	9	30	4(anticipated)

Graduates of the MSPH in Industrial Hygiene receive one year of credit towards the experience requirement to sit for the exam to become a board-certified industrial hygienist (CIH, American Board of Industrial Hygiene).

NIOSH Training and Education Grant

The Tulane MSPH program in Industrial Hygiene is supported by a Training and Education grant awarded by the National Institute for Occupational Safety and Health (NIOSH). Students in the MSPH-IH program are eligible to apply for a NIOSH traineeship which may provide partial tuition support and stipend. For further details on the NIOSH training program, contact Program Director Dr. Mark Wilson.

Program Competencies

At the completion of the MSPH degree, the student will be able to:

- Anticipate and identify hazards in the workplace using basic and applied scientific and engineering principles.
- Quantify and evaluate the hazard or risks of occupational health stressors utilizing the methods and techniques of analytical chemistry, other measurement sciences, and statistics.
- Analyze and interpret toxicology and epidemiology data and information on occupational health hazards.
- Design and evaluate engineering and administrative controls for workplace hazards, with emphasis on general and local exhaust ventilation.

- Select and specify appropriate types of personal protective equipment for control of occupational exposures.
- Demonstrate knowledge of the development, management, and evaluation of industrial hygiene programs.
- Communicate verbally and in writing, the nature, risks, and remediation of workplace and environmental hazards.
- Interpret and apply environmental and occupational safety and health regulations and standards.

Requirements

Course ID	Title	Credits
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements (31 credits)		
ENHS 6030	Survey of Environmental Health	3
ENHS 6300	Radiological Health	3
ENHS 6540	Principles of Occupational Health	3
ENHS 6600	Principles of Toxicology	3
ENHS 6620	Physical Agents & Ergonomic Hazards in the Workplace	3
ENHS 6700	Principles of Safety	3
ENHS 6720	Principles of Industrial Hygiene	3
ENHS 7110	Industrial Ventilation & Chemical Hazard Control	3
ENHS 7310	Occupational Laws and Compliance	2
ENHS 7500	Air Sampling & Analysis	3
ENHS 7620	Health Risk Assessment	3
SPHL 9980	Applied Practice Experience	0
SPHL 7950	Integrative Learning Experience	0
Total Credit Hours		47

The MSPH in Industrial Hygiene requires 47 credits. In addition, students must also pass the industrial hygiene comprehensive examination or obtain certification from the American Board of Industrial Hygiene (CIH).

Model Schedule

Course ID	Title	Credits
Year 1, Fall Semester		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
ENHS 6600	Principles of Toxicology	3
ENHS 6720	Principles of Industrial Hygiene	3
Year 1, Spring Semester		
SPHL 6060	Epidemiology for Public Health	3
ENHS 6030	Survey of Environmental Health	3
ENHS 6620	Physical Agents & Ergonomic Hazards in the Workplace	3
ENHS 7500	Air Sampling & Analysis	3
Year 1, Summer Semester		
ENHS 6700	Principles of Safety	3
ENHS 7310	Occupational Laws and Compliance	2
SPHL 9980	Applied Practice Experience	0
Year 2, Fall Semester		
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
ENHS 6540	Principles of Occupational Health	3

ENHS 7110	Industrial Ventilation & Chemical Hazard Control	3
Year 2, Spring Semester		
ENHS 6300	Radiological Health	3
ENHS 7620	Health Risk Assessment	3
SPHL 7950	Integrative Learning Experience	0
Total Credit Hours		47

Industrial hygiene comprehensive examination

Semester subtotal: 6

Total degree credits: 47

Department of Epidemiology

Programs

Interim Chair: Lu Qi, MD, PhD

HCA Regents Distinguished Chair and Professor

Mission

The Department of Epidemiology plays a leading role in the improvement of global public health through epidemiological research, education and professional service at the local, national, and international levels.

About Epidemiology

The faculty investigates the burden and cause of disease in populations and use this knowledge for disease prevention and treatment. Faculty and students work together to discover the role of genomic, behavioral, social, and environmental influences on health.

Our students enjoy a supportive and collaborative environment with accessible faculty, research opportunities, and organized social events. Additionally, experienced faculty play an active role in mentoring students as they explore the wide range of opportunities available for their future careers.

Faculty have substantial research expertise in cardiometabolic diseases, cancer, infectious diseases, reproductive health, environmental health, trans-omics, clinical trials, implementation science, and epidemiologic methodology.

Graduate Degrees

- Clinical Investigation, MS (p. 42)
- Clinical Investigation, PhD (p. 44)
- Epidemiology, MPH (p. 46)
- Epidemiology, MS (p. 47)
- Epidemiology, PhD (p. 49)

Graduate Certificates

- Clinical and Translational Research Certificate (Graduate) (p. 41)
- Epidemiologic Methods Certificate (Graduate) (p. 45)
- Genetic Epidemiology Certificate (Graduate) (p. 50)
- Social Epidemiology, Certificate (Graduate) (p. 51)

Courses

Epidemiology (EPID)

EPID 6090 Epidemiology of Infectious Diseases (3)

This course focuses students on the knowledge needed for the investigation, control, and prevention of a variety of infectious diseases. Students will explore the characteristics of a range of specific disease agents, compare their impact on populations, review approaches used to investigate disease outbreaks, and examine local and global efforts to monitor, control, and eradicate selected infectious diseases. Zoonotic and human-reservoir diseases are included in the course content.

Prerequisite(s): EPID 6030, SPHL 6060 or 6860 and BIOS 6030, SPHL 6050 or 6850.

EPID 6210 Cancer Epidemiology (3)

This course will explore current and historical trends in cancer incidence and mortality and evaluate the current state of the science regarding cancer etiology, detection, and treatment. Students will critically evaluate the methodological tools commonly employed in the practice of cancer epidemiology, and explore current controversies in the field, including the relative contributions of genes and the environment in cancer susceptibility, and the tradeoffs associated with cancer screening decisions. Students will develop an understanding of the known contributors to cancer risk and progression, and will appreciate the barriers to progress in cancer prevention and control.

Prerequisite(s): EPID 6030*, SPHL 6060* or 6860.

* May be taken concurrently.

EPID 6220 Cardiovascular Disease Epidemiology (3)

This is an introductory course designed to provide the student with a summary of the present knowledge of distribution, natural history, and risk factors for major cardiovascular diseases. Also, methodologic issues in epidemiologic studies unique to cardiovascular diseases will be discussed. The course format consists of lecture, discussion of current literature and the epidemiologic constructs as they are applied to population-based research of cardiovascular diseases.

Prerequisite(s): (EPID 6030*, SPHL 6860 or 6060*).

* May be taken concurrently.

EPID 6230 Computer Packages for Epidemiology (3)

This course consists of data management and data analysis using SAS and STATA. The student will learn to browse and create mock data in REDCap. The student will be able to get different formats of data into SAS and STATA, manipulate data, generate figures and tables for reports, run basic analyses, and interpret the result. This course will prepare the student with the technical skills necessary to complete subsequent quantitative course work such as EPID7120, 7130, and 7220.

EPID 6290 Genetic Epidemiology (3)

This introductory course will cover fundamental concepts, terminologies and principles of human population genetics and molecular biology relevant to understanding approaches in genetic epidemiology. Study designs and analytical methods for genetic epidemiological studies of human disease in families and unrelated individuals will be discussed in detail. Issues related to genetic studies, such as genetic heterogeneity, population stratification and multiple testing will also be covered.

Prerequisite(s): EPID 6030*, SPHL 6060* or 6860 and BIOS 6030*, SPHL 6050* or 6850.

* May be taken concurrently.

EPID 6320 Molecular Epidemiology (3)

The course introduces the concepts, principles, and molecular tools used in epidemiologic research to evaluate both genetic susceptibility and the effects of environmental exposures underlying human disease. Class topics include: introduction to biomarkers of exposures, etiology and effect (including those used in infectious diseases) the theoretical advantages and limitations of biomarkers, criteria for evaluating and selection of potential markers, biological sample collection and storage (banking), methods for evaluation of gene-environment interactions, laboratory quality control considerations, issues in epidemiologic study design and analysis, ethical/legal concerns. Current methods and newly emerging technologies ('omics) will also be discussed.

Prerequisite(s): (EPID 6030, SPHL 6860 or 6060).

EPID 6340 Clinical and Translational Research Methods (3)

This course is an introduction to clinical and translational research methods. Emphasis is placed on maximizing study internal and external validity for observational cohort studies, case-control studies and clinical trials. Selected topics covered include study design options, sources of bias, confounding, effect modification, data analysis techniques, measures of disease frequency, association, and causal inference, sampling methods, design, conduct, analyses, and interpretation of clinical trials, preparation and submission of manuscripts, and funding opportunities for support of clinical and translational research.

EPID 6350 Implementation Science in Public Health (3)

Implementation science is a rapidly growing field in public health that is focused on moving scientific findings from controlled settings into clinical practice and community settings. This course will introduce the concepts, theories, frameworks, and methods needed for implementing evidence-based interventions and programs in a variety of settings. Students will learn the role of implementation science from bringing public health research and practice closer together and will gain the skills needed to support implementation across health conditions and various real-world settings. Topics will include implementation strategies, frameworks, study designs, methods, measurements, evaluation, sustainability and the importance of stakeholder partnerships.

Prerequisite(s): (SPHL 6050*, 6850 or BIOS 6030*) and (SPHL 6060*, 6860 or EPID 6030*).

* May be taken concurrently.

EPID 6420 Clinical Epidemiology (3)

This course will help students learn or refine the skills of clinical epidemiology, defined as the study and management of illness in individuals as well as populations using population methods. Individual and group sessions will develop techniques of constructive critical appraisal of the medical literature, illustrated by examples from general health, cardiovascular disease and diabetes. Students will learn how to assess studies of prognosis or outcomes of illness, treatments, diagnostic tests, and screening programs, as well as the basic requirements for randomized clinical trials.

Prerequisite(s): EPID 6030, SPHL 6060 or 6860 and BIOS 6030, SPHL 6050 or 6850.

EPID 6480 Reproductive Epidemiology (3)

This course provides students analytical skills necessary to conduct epidemiological studies in reproductive health in human populations. Reproductive Epidemiology covers broad reproductive health issues from the pre-conception, prenatal, delivery and post-natal periods, and emphasizes health issues affecting both women and infants. Relevant methodological, clinical, policy and programmatic issues will be presented with practical illustrations from domestic and international settings. Students will be able to design a reproductive epidemiology study, discuss relevant methodological issues in reproductive health epidemiology studies, and apply reproductive/perinatal health data to improve reproductive programs and policy.

Prerequisite(s): EPID 6030, SPHL 6060 or 6860 and BIOS 6030, SPHL 6050 or 6850.

EPID 6490 Environmental Epidemiology (3)

Environmental Epidemiology will introduce students to epidemiologic research designs and methods used to study health impacts of environmental exposures. The course will provide an overview of the major study designs used in environmental epidemiology, outcomes related to environmental exposure, challenges related to exposure assessment and policy-related issues.

Prerequisite(s): SPHL 6060.

EPID 6500 Nutritional Epidemiology (3)

Nutritional Epidemiology is a rapidly evolving field of epidemiologic research that utilizes highly specialized epidemiological methods to identify dietary and lifestyle factors that are related to human diseases especially non-communicable, chronic diseases such as obesity, diabetes, cardiovascular disease and cancer. This introductory course will cover fundamental concepts, terminologies and principles in Nutritional Epidemiology and analytical approaches particularly used in studying relations of dietary factors with human health. The lectures include study designs, nutritional assessment, and analytical methods for nutritional epidemiological studies in population-based settings such as case-control studies, cohort studies, and randomized clinical trials (RCTs). The course will also cover new advances in the fields of Nutritional Epidemiology, such as gene-diet interactions, metabolomics, epigenomics, and microbiome research.

Prerequisite(s): EPID 6030*, SPHL 6060* or 6860.

* May be taken concurrently.

EPID 6600 Social Epidemiology: Mechanisms of Disparities (3)

This course will examine the major patterning of health related to social factors, including race, gender, and socioeconomic status. Effects from the microsystem (individual experience, family) to the macrosystem (neighborhood, community, nation) will be examined. Upon completion of the course, students will be familiar with how these factors affect health and the mechanisms by which health inequities are created.

Prerequisite(s): (SPHL 6050 or 6850 and SPHL 6060 or 6860) or (EPID 6030 and BIOS 6030).

EPID 6750 Outbreak Epidemiology (3)

This course is designed to provide students with the knowledge and skills required for the investigation, control and prevention of disease outbreaks in a variety of settings and due to a variety of infectious agents. Students will explore and practice the approaches used to investigate disease outbreaks, and examine local and global efforts to monitor, control and mitigate the effects of infectious disease outbreaks.

Prerequisite(s): (EPID 6030, SPHL 6860 or 6060) and (BIOS 6030, SPHL 6850 or 6050).

EPID 7000 Departmental Seminar (0-1)

The Epidemiology Seminar Series provides a forum in which faculty, guest faculty, and doctoral students present their research on topics relevant to epidemiologic principles, methods, and applications. Students who take this course for one credit will need to write a review article on one of the research topics presented during the semester. The review article should follow a scientific journal format (abstract, introduction, methods, results, discussion, tables, figures, and references). Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

EPID 7110 Spatial Epidemiology (3)

This course introduces students to a range of spatial techniques in social epidemiology, including geospatial approaches to exposure and outcome measurement as well as analyses and integration between Geographical Information System (GIS) and traditional software packages. Students will apply problem solving abilities, critical thinking skills, and creative thinking to diverse examples of social and spatial epidemiology. Content will build upon existing GIS courses and will focus on teaching methods and interpretation of spatial analyses for research and programming, including emerging areas such as working with global positioning system (GPS) data or geotagged social media data. Non-content objectives are for students to develop a critical and creative approach to questions in public health which can benefit from spatial epidemiology.

Prerequisite(s): (EPID 6030, SPHL 6860 or 6060) and (BIOS 6030, SPHL 6850 or 6050).

EPID 7120 Epidemiologic Methods II (3)

This course is intended to enhance student understanding of observational epidemiologic research methods. The course emphasizes critical thinking and approaches to design, analysis and interpretation of observational studies. Emphasis is placed on maximizing study internal validity. Selected topics covered include measures of disease frequency, association, and impact; study design options, sources of bias, and data analysis techniques.

Prerequisite(s): (EPID 6030, SPHL 6860 or 6060) and (BIOS 6030, SPHL 6850 or 6050) and (EPID 6230, BIOS 6290 or SPHU 4160).

EPID 7130 Observational Epidemiology (3)

The goal of this course is to present the conceptual basis for the design, conduct, and analysis of cohort and case-control studies. The course will review the application of case-control and cohort studies in the context of epidemiological research and public health. Students will gain hands-on experience in designing and analyzing observational studies through classroom sessions and homework assignments. By the completion of the course, each student will have the skills to design, develop data collection methods for, and analyze data from case-control and cohort studies.

Prerequisite(s): (EPID 6030, SPHL 6860 or 6060) and (BIOS 6030, SPHL 6850 or 6050) and (EPID 6230, BIOS 6290 or SPHU 4160) and EPID 7120 and BIOS 6040.

EPID 7160 Survey Methodology (3)

This course is designed to prepare the student to undertake survey research addressing a wide variety of public health topics in national and international settings. Focus is on the collection of information from primary sources such as individuals or groups. Survey approaches include questionnaires for mail or group administration and personal interviews in institutional and household settings. Although attention is given to principles of overall research design, the major emphasis is on principles and techniques of data collection procedures including instrument design and preparation for analysis.

Prerequisite(s): EPID 6030, SPHL 6060 or 6860 and BIOS 6030, SPHL 6050 or 6850.

EPID 7170 Clinical Trials: Design, Conduct & Interpretation (3)

This course covers various topics in the design, conduct, analysis and interpretation of clinical trials and uses published and on-going studies to illustrate these issues. Topics include the definition and history of clinical trials; trial designs, including phase I-IV, parallel, crossover, factorial, and large multicenter trials; internal and external validity; selection of intervention, control, and study population; randomization and masking; selection of trial outcome variables; data collection and quality control; ethical issues; data analysis principles; and issues related to publication and dissemination.

Prerequisite(s): (BIOS 6030, SPHL 6050 or 6850 and SPHL 6060, 6860 or EPID 6030).

EPID 7210 Epidemiology of Sexual Health (3)

This course is designed to provide students with the skills to conduct epidemiologic research in HIV and other sexually acquired infections. This course will cover the biology of these infections, methodological issues of surveillance, clinical and behavioral research and ethical aspects of the epidemiology of HIV/STI. Students meet experts in the field and learn of the most up-to-date issues and state-of-the-art epidemiologic methods surrounding HIV and other STIs.

Prerequisite(s): EPID 6030, SPHL 6060 or 6860 and BIOS 6030, SPHL 6050 or 6850.

EPID 7220 Analytic Epidemiology (3)

This course is designed for doctoral students and advanced master students to help them develop data analysis, interpretation, and presentation skills. The course covers common statistical models for continuous, categorical and count data from both cross-sectional and longitudinal studies. Both parametric and semi-parametric models are covered. The statistical models are illustrated by case studies throughout the class. During this course, students will analyze data from several different studies and discuss advanced epidemiologic methods issues that one may encounter during data analysis with guidance from the professor. After successfully completing the course, students are expected to be able to conduct statistical analysis independently based on the type of outcome and study design, and interpret the results and present the findings.

Prerequisite(s): (EPID 6030, SPHL 6060 or 6860 and SPHL 6050, 6850 or BIOS 6030 and BIOS 6040, EPID 6230, 7120 and 7130).

EPID 7310 Meta-Analysis (3)

This course is designed to provide students with qualitative and quantitative skills to conduct meta-analysis. The course covers the formulation of study hypothesis, literature search, evaluation of study quality, and statistical methods for meta-analysis. In addition, the potential problems and biases in meta-analysis will be addressed.

Prerequisite(s): EPID 7120* and BIOS 6030 or SPHL 6050 or 6850 and EPID 6030, SPHL 6060 or 6860.

* May be taken concurrently.

EPID 7410 Pharmacoepidemiology (2)

This course provides an introduction to the concepts and methods of Pharmacoepidemiology through 30 in-class credit hours (including lecture, case studies, computer laboratory, group project and final exam). It begins with an overview of how epidemiology is applied to study the safety of drugs, medical devices and vaccines in academia, industry and regulatory agencies. Epidemiologic study designs, methodologies and techniques for pharmacoepidemiologic research, including commonly used data sources, are then discussed. Lastly, common biases and methodological challenges encountered in pharmacoepidemiology and approaches for addressing these are illustrated through case studies and computer laboratories.

Prerequisite(s): (EPID 6030 or SPHL 6060) and (BIOS 6030 or SPHL 6050) and EPID 7120.

EPID 7810 Human Molecular Genetics (3)

This course is designed to prepare students for the study of human health in the post-genome era. The goal of the course is to provide students the fundamental skills and knowledge on the molecular aspects of human genetics, the most current technologies, experimental design, interpretation of genetic data and the use of genomic information for the study of human disease. The information will be integrated into a big picture of how each component relates to human health both individually (precision medicine) and in a population perspective, relating genetic instability to genetic variation and disease risk. Cancer, gene therapy and stem cell research will be used as an example of disease-related questions.

Prerequisite(s): EPID 6030, SPHL 6060 or 6860.

EPID 7990 Master's Independent Studies (1-3)

Masters students and advisor select a topic for independent study and develop learning objectives and the expected written final product.

EPID 8000 Doctoral Journal Club (0)

This course is required for all doctoral students in the Department of Epidemiology until successful completion of the comprehensive exam and optional for the duration of their tenure as doctoral candidates. It is intended to increase students' knowledge in design, conduct, analysis, interpretation, and dissemination of epidemiologic studies. In journal club, students develop critical evaluation and discussion skills as they become familiar with epidemiologic literature. These discussions are a great way of preparing students for their comprehensive exam and to create an active research environment.

Maximum Hours: 99

EPID 8300 Advanced Epidemiologic Methods (3)

This course covers a wide variety of topics in epidemiological methodology. Topics will include concepts of epidemiological study design, causality in biomedical research, bias, confounding, interaction, and statistical modeling of epidemiology data. In addition, students will learn how to develop and critically review a research proposal and scientific articles.

Prerequisite(s): (EPID 6030, SPHL 6060 or 6860 and EPID 7120 and 7130).

EPID 8990 Doctoral Independent Study (1-3)

Doctoral students and advisor select a topic for independent study and develop learning objectives and the expected final written product.

EPID 9910 Epidemiology Research Experience (0)

MS students engaging in epidemiology research experience.

EPID 9980 MS Thesis Research (0)

MS Students engaging in thesis research. Course may be repeated up to unlimited credit hours.

Course Limit: 99

Clinical and Translational Research Certificate (Graduate)

Overview

This certificate program will provide students with an in-depth exploration of epidemiologic methods within the context of clinical research. Students will learn clinical research methods, clinical trials, and meta-analysis. The program will be useful both to those with a clinical background and to those without prior clinical training. Students will learn to refine their critical thinking skills and apply epidemiologic methods to clinical research.

Offered by: Department of Epidemiology

Faculty Lead: Lydia Bazzano, MD, PhD (<https://sph.tulane.edu/epid/lydia-bazzano/>)

Purpose

This certificate is designed to prepare master's level students (including MD/MPH students) for research readiness in conducting clinical and translational research. This certificate will also prepare students to be collaborators on clinical research projects and apply research skills in clinical practice.

Eligible Students

This certificate program is designed for advanced students currently in an MPH/MSPH/MPH&TM/MHA program. Students must have a background in epidemiology and biostatistics. Pre-requisites: SPHL 6050 Biostatistics for Public Health, SPHL 6060 Epidemiology for Public Health and EPID 7120 Epidemiologic Methods II.

Certificate Competencies

Students who earn the Certificate in Clinical & Translational Research will be able to:

- Critically assess medical literature;
- Describe issues related to clinical research design, including statistical power calculations; and
- Evaluate methodological issues in clinical research, clinical trials, and meta-analysis

Number of Credits Required for Completion: 14

Requirements

Certificate in Clinical and Translational Research

Course ID	Title	Credits
EPID 6340	Clinical and Translational Research Methods	3
EPID 6420	Clinical Epidemiology	3
EPID 7170	Clinical Trials: Design, Conduct & Interpretation	3
EPID 7310	Meta-Analysis	3
EPID 7410	Pharmacoepidemiology	2

Pre-requisite coursework is: SPHL 6050 Biostatistics for Public Health, SPHL 6060 Epidemiology for Public Health and EPID 7120 Epidemiologic Methods II.

Clinical Investigation, MS

The Master of Science in Clinical Investigation provides training in the methods and conduct of clinical investigation for future leaders in patient-oriented research. In addition to traditional instruction in biostatistics, epidemiology and study design, this program will provide students with a strong foundation in ethics and professionalism, while developing skills in critical thinking, communication of scientific findings, leadership, and management of research studies.

Program Competencies

- Problem formulation: Define focused research questions and testable hypotheses
- Methodology: Compare and select study designs for addressing clinical or translational research questions; identify a target population with consideration of socioeconomic, ethnic and cultural diversity; identify measures to be utilized while addressing reliability and validity, data quality, and cultural diversity
- Data management and security: Manage data using computer technology; define strategies to ensure data security and protection of privacy are maintained
- Data analysis and interpretation: Generate statistics that fit the study design chosen and answer research questions; identify risk/preventive factors that may contribute to outcomes and incorporate them into a research study; interpret computer output containing results of statistical procedures and graphics
- Scientific communication: Compile statistical output into tables and figures suitable for publication; prepare and communicate research findings to different groups of individuals through oral presentations and research papers; critically appraise the existing literature

- Ethics and professionalism: Describe the fundamental principles of the protection of human subjects and voluntary informed consent; describe the authority for and professional standards for the responsible conduct of research; explain the concept of good clinical practice; explain conflict of interest management in research
- Teamwork and leadership: Demonstrate group decision-making techniques; manage conflict; lead and manage team-based and individual projects; foster innovation and creativity

Requirements

The MS in Clinical Investigation Degree in Epidemiology requires 36 credits that includes:

Course ID	Title	Credits
Epidemiology Course Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6060	Epidemiology for Public Health	3
EPID 6230	Computer Packages for Epidemiology	3
EPID 6340	Clinical and Translational Research Methods	3
EPID 6420	Clinical Epidemiology	3
EPID 7120	Epidemiologic Methods II	3
EPID 7130	Observational Epidemiology	3
EPID 7170	Clinical Trials: Design, Conduct & Interpretation	3
EPID 7310	Meta-Analysis	3
INTD 6010 or EPID 7990	Responsible Conduct of Research Master's Independent Studies	0
Biostatistics Course Requirements		
SPHL 6050	Biostatistics for Public Health	3
BIOS 6040	Intermediate Biostatistics	3
Elective		3
Thesis		
EPID 9980	MS Thesis Research	0
Total Credit Hours		36

Academic Standards

In addition to the SPHTM academic standards, students in the MS in Clinical Investigation and those taking advanced epidemiology courses must demonstrate the following standards:

- All students must complete and earn a "B" or better in the prerequisite foundational course, SPHL 6060 Epidemiology for Public Health (3 c.h.), before advancing to EPID 7120 Epidemiologic Methods II (3 c.h.) or other advanced epidemiology courses.

Thesis

Students must successfully complete a thesis (<https://tulane.app.box.com/v/thesis-guidelines/>). The thesis is based on a supervised research project demonstrating scholarship in the area of clinical research. The results will be presented orally and in writing and reviewed by two faculty members. The master's thesis must be completed within a year of completion of the required courses. It should be an academic investigation suitable for publishing.

Model Course Schedule

Course ID	Title	Credits
Year 1, Summer		
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
EPID 6230	Computer Packages for Epidemiology	3
SPHL 6020	Foundations in Public Health	3
Year 1, Fall		
BIOS 6040	Intermediate Biostatistics	3
EPID 7120	Epidemiologic Methods II	3

EPID 6340	Clinical and Translational Research Methods	3
EPID 7310	Meta-Analysis	3
EPID 7990	Master's Independent Studies	1-3
Year 1, Spring		
EPID 6420	Clinical Epidemiology	3
EPID 7130	Observational Epidemiology	3
EPID 7170	Clinical Trials: Design, Conduct & Interpretation	3
Elective		3
EPID 9980	MS Thesis Research	0
Total Credit Hours		36

Clinical Investigation, PhD

Overview

The PhD in Clinical Investigation program is to train clinicians for careers as leaders in academic medical research in a way that advances our understanding of the diagnosis, screening, treatment and prognosis of clinical conditions and promotes evidence-based changes to clinical practice.

Through this program, graduates will learn to effectively and efficiently design, implement, analyze, and interpret clinical research to improve human health and improve clinical practice.

Program Competencies

Upon completion of the program, the graduate should be able to:

1. Appraise the rigor and reproducibility of clinical research in public health and clinical medicine.
2. Compose impactful and innovative clinical research questions that are informed by existing literature and a comprehensive conceptual framework.
3. Design high-quality epidemiologic and/or translational studies.
4. Manage a clinical research study in line with ethical and regulatory standards.
5. Perform statistical analysis of data from clinical research studies.
6. Effectively communicate scientific findings from clinical research studies to professionals and the lay public.
7. Develop a grant proposal for the conduct of a clinical research study.

Requirements

The PhD in Clinical Investigation requires 48-49 credits that include:

Course ID	Title	Credits
PhD Foundational Courses		
SPHL 6020	Foundations in Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6050	Biostatistics for Public Health	3
EPID 6230	Computer Packages for Epidemiology	3
EPID 6420	Clinical Epidemiology	3
EPID 6340	Clinical and Translational Research Methods	3
INTD 6010 or BMSP 7990	Responsible Conduct of Research Independent Study	0-1
PhD Core Courses		
EPID 7120	Epidemiologic Methods II	3
EPID 7130	Observational Epidemiology	3
BIOS 6040	Intermediate Biostatistics	3
BIOS 7060	Regression Analysis	3
BIOS 8350	Clustered and Longitudinal Data Analysis	3
EPID 6350	Implementation Science in Public Health	3
EPID 7170	Clinical Trials: Design, Conduct & Interpretation	3
MSCR 7090	Grant Writing	3

EPID 8990	Doctoral Independent Study	3
Elective		3
Thesis		
Total Credit Hours		48-49

Epidemiologic Methods Certificate (Graduate)

The Certificate in Epidemiologic Methods provides in-depth training in epidemiologic methods for non-majors, grounding them in the basic approaches that can benefit their future endeavors in addressing public health issues. The program exposes students to the core epidemiologic methods courses. It is ideal for students who want to strengthen their ability to conduct research, which will benefit them in their future careers, whether that's in a research setting, in academia, or in the community.

This graduate certificate serves as a second area of study for SPHTM student in the MPH, MSPH or MPHTM degrees and not majoring in Epidemiology.

Offered by: Department of Epidemiology (<https://sph.tulane.edu/epid/home/>)

Faculty Lead: Jeanette Gustat, PhD (<https://sph.tulane.edu/epid/jeanette-gustat/>)

Epidemiologic Methods Certificate Enrollment Form (<https://tulane.box.com/v/epid-methods-certificate-enrol/>)

Purpose

Students will acquire training in observational epidemiology and clinical trials. At the conclusion of the program, students will be able to design and implement studies, conduct basic data analysis, and interpret study findings.

Eligible Students

SPHTM students enrolled in a MPH, MSPH, or MPH&TM degree program at Tulane SPHTM and not majoring in Epidemiology.

Certificate Competencies

Students who earn the Certificate in Epidemiologic Methods will be able to:

- Develop the appropriate research questions for biomedical and public health issues;
- Apply the best study design to answer important study questions; and
- Analyze and interpret study findings and critically review epidemiological literature

Number of Credits Required for Completion: 15

Requirements

Prerequisite Courses

Course ID	Title	Credits
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
EPID 6230 or SPHU 4160	Computer Packages for Epidemiology Introduction to Statistical Packages	3

Required Courses

Course ID	Title	Credits
BIOS 6040	Intermediate Biostatistics	3
EPID 7120	Epidemiologic Methods II	3
EPID 7130	Observational Epidemiology	3
EPID 7160	Survey Methodology	3
EPID 7170	Clinical Trials: Design, Conduct & Interpretation	3

*For programs requiring BIOS 6040, the student may substitute: BIOS 7060 Regression Analysis (3) or BIOS 7150 Categorical Data Analysis (3). For students pursuing the master's degree in biostatistics, substitute with BIOS 7220 Nonparametric Statistics (3) or BIOS 7250 Principles of Sampling.

Students should consult with their academic advisor to determine which certificate best fits their professional and academic goals and how best to plan their graduate course schedule.

Epidemiology, MPH

The MPH in Epidemiology is a professional degree that prepares students to serve as epidemiologists in mid-level positions in public health research or practice settings. The program appeals to professionals currently employed in the health field and as well as those without previous training or experience in public health.

The MPH in epidemiology is highly analytical and methods-based. Students learn to apply conceptual methodology to the study of public health problems and health disparities as a means of understanding how to prevent or address them. As an MPH student in epidemiology, the knowledge base and research skills are applied within a chosen content area of current importance in the field, such as chronic or infectious disease; environmental, reproductive, molecular/cancer, or genetic epidemiology. Through coursework and other learning experiences, students gain a thorough knowledge of the sources of health data, how to collect data from original sources, how to process, analyze and effectively report findings from epidemiologic studies.

Graduates can design and carry out studies in which epidemiologic information is needed for making sound health policy decisions or for the management of research projects in both public and private agencies and institutions.

Program Competencies

1. Communicate characteristics and threats to validity of major study designs used in epidemiologic research.
2. Summarize the strengths and weaknesses of an epidemiologic study
3. Write a study protocol for a specific research question.
4. Differentiate the major measures of disease frequency and association used in epidemiologic research
5. Analyze public health data using appropriate statistical techniques and software

Requirements

The MPH Degree in Epidemiology requires 45 credits.

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
EPID 6230	Computer Packages for Epidemiology	3
BIOS 6040	Intermediate Biostatistics	3
EPID 7120	Epidemiologic Methods II	3
EPID 7130	Observational Epidemiology	3
EPID 7160	Survey Methodology	3
Electives		15
Additional coursework:		
SPHL 9980	Applied Practice Experience	0
SPHL 7950	Integrative Learning Experience	0
Total Credit Hours		45

Academic Standards

In addition to the SPHTM academic standards, students in the MPH in Epidemiology program and those taking advanced epidemiology courses must demonstrate the following standards:

- All students must complete and earn a "B" or better in the prerequisite foundational course, SPHL 6060 Epidemiology for Public Health, before advancing to EPID 7120 Epidemiologic Methods II or other advanced epidemiology courses.

MPH in Epidemiology Model Course Schedule

Course ID	Title	Credits
Year 1 Fall		
EPID 6230	Computer Packages for Epidemiology	3
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
Year 1 Spring		
EPID 7120	Epidemiologic Methods II	3
BIOS 6040	Intermediate Biostatistics	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Year 1 Summer		
SPHL 9980	Applied Practice Experience	0
Electives		3
Year 2 Fall		
EPID 7130	Observational Epidemiology	3
EPID 7160	Survey Methodology	3
Electives		6
Year 2 Spring		
SPHL 7950	Integrative Learning Experience	0
Electives		6
Total Credits		45

Epidemiology, MS

The MS in Epidemiology is an academic degree that prepares students for careers in research. It serves students new to public health as well as those currently working in the field who wish to gain the quantitative skills necessary to conduct population based research. The curriculum focuses on understanding theoretical issues and applying disciplinary methods to the study of public health problems. Coursework includes learning experiences in epidemiologic methods, biostatistics, data management, analysis and interpretation of findings in content areas such as chronic or infectious disease, reproductive, molecular, or genetic epidemiology. Students learn the design, conduct, analysis and interpretation of epidemiological studies, and implementation, from developing protocols and instruments, to the selection and recruitment of subjects, data collection and quality control. These skills prepare graduates for engaging roles in research activities that impact public health planning, control and global disparities.

Program Competencies

- Define the concepts and contents of epidemiology.
- Formulate a research hypothesis.
- Determine study aim, objectives and appropriate study design to address the hypothesis.
- Identify risk and/or preventive factors that may contribute to outcomes and incorporate them into a research study.
- Use computers to collect, manage and analyze data for evaluation of hypotheses.
- Evaluate the use of questionnaires and measurement instruments in collection of data to maintain internal validity.
- Use existing databases to provide background or supportive data to address research questions.
- Analyze data, interpret the findings and prepare a report of study result.
- Perform ethical research.

Requirements

The MS Degree in Epidemiology requires 43 credits that includes:

Course ID	Title	Credits
Epidemiology Course Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6060	Epidemiology for Public Health	3

EPID 6230	Computer Packages for Epidemiology	3
EPID 7000	Departmental Seminar	1
EPID 7120	Epidemiologic Methods II	3
EPID 7130	Observational Epidemiology	3
EPID 7220	Analytic Epidemiology	3
Epidemiologic Methods Course Requirements		
Select two of the following:		6
EPID 6290	Genetic Epidemiology	
EPID 6340	Clinical and Translational Research Methods	
EPID 6350	Implementation Science in Public Health	
EPID 6420	Clinical Epidemiology	
EPID 6500	Nutritional Epidemiology	
EPID 6750	Outbreak Epidemiology	
EPID 7110	Spatial Epidemiology	
EPID 7160	Survey Methodology	
EPID 7170	Clinical Trials: Design, Conduct & Interpretation	
EPID 7310	Meta-Analysis	
Descriptive Epidemiology Course Requirements		
Select two of the following:		6
EPID 6090	Epidemiology of Infectious Diseases	
EPID 6210	Cancer Epidemiology	
EPID 6220	Cardiovascular Disease Epidemiology	
EPID 6320	Molecular Epidemiology	
EPID 6480	Reproductive Epidemiology	
EPID 6490	Environmental Epidemiology	
EPID 6600	Social Epidemiology: Mechanisms of Disparities	
EPID 7210	Epidemiology of Sexual Health	
EPID 7810	Human Molecular Genetics	
Biostatistics Course Requirements		
SPHL 6050	Biostatistics for Public Health	3
BIOS 6040	Intermediate Biostatistics	3
Electives		6
Total Credit Hours		43

Academic Standards

In addition to the SPHTM academic standards, students in the MS in Epidemiology program and those taking advanced epidemiology courses must demonstrate the following standards:

- All students must complete and earn a "B" or better in the prerequisite foundational course, SPHL 6060 Epidemiology for Public Health, before advancing to EPID 7120 Epidemiologic Methods II or other advanced epidemiology courses.

Thesis

Students must successfully complete a thesis. The thesis is based on a supervised research project demonstrating scholarship in the area of epidemiology. The results will be presented orally and in writing and reviewed by two faculty members. The master's thesis must be completed within a year of completion of the required courses. It should be an academic investigation suitable for publishing.

MS in Epidemiology Model Course Schedule

Year 1		Credit Hours
Fall		
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3

SPHL 6020	Foundations in Public Health	3
EPID 6230	Computer Packages for Epidemiology	3
EPID 7000	Departmental Seminar	1
Credit Hours		13
Spring		
BIOS 6040	Intermediate Biostatistics	3
EPID 7120	Epidemiologic Methods II	3
Descriptive Epidemiology Courses or Electives		6
Credit Hours		12
Summer Session		
EPID 9910	Epidemiology Research Experience	0
Credit Hours		0
Year 2		
Fall		
EPID 7130	Observational Epidemiology	3
EPID 7220	Analytic Epidemiology	3
Descriptive Epidemiology Courses or Electives		6
EPID 9980	MS Thesis Research	0
Credit Hours		12
Spring		
Electives		6
EPID 9980	MS Thesis Research	0
Credit Hours		6
Total Credit Hours		43

Epidemiology, PhD

The PhD degree program prepares students for careers in epidemiologic research and teaching, usually in an academic setting. The PhD graduate is expected to have knowledge across a wide range of epidemiologic theory and methods as well as sustained experience in the conduct of research in one

or more content areas. The PhD program has a strong theoretical base and is focused on research. The PhD is the terminal degree in Epidemiology.

Program Competencies

1. Critique the scientific literature to assess the current state of knowledge and identify research questions for future investigation.
2. Construct an epidemiologic study to advance the field of epidemiology and public health.
3. Formulate an epidemiologic analysis plan using advanced methods to answer research questions.
4. Design teaching and learning experiences grounded in pedagogical best practices in a chosen area of expertise.
5. Develop a grant proposal for a public health research study with a compelling scientific narrative, description of investigator capacity, timeline, and budget.

Requirements

Course ID	Title	Credits
PhD Foundational Courses		
SPHL 6020	Foundations in Public Health (or equivalent)	3
BIOS 6040	Intermediate Biostatistics (or equivalent)	3
EPID 7120	Epidemiologic Methods II (or equivalent)	3
EPID 7130	Observational Epidemiology	3
EPID 7160	Survey Methodology	3
PhD Core Courses		
BIOS 7060	Regression Analysis	3
EPID 8300	Advanced Epidemiologic Methods	3

SPHL 8080	Public Health Pedagogy	3
SPHL 7500	Public Health Grant Writing	3
EPID 7000	Departmental Seminar	0
EPID 8000	Doctoral Journal Club	0
EPID 7170	Clinical Trials: Design, Conduct & Interpretation	3
EPID 7220	Analytic Epidemiology	3
BIOS 7150	Categorical Data Analysis	3
BIOS 7300	Survival Data Analysis	3
BIOS 8350	Clustered and Longitudinal Data Analysis	3
Electives		6
Total Credit Hours		48

Elective Courses

Selected from courses offered within the department, school, or university in consultation with a faculty advisor.

Research Ethics

Students are required to take online research ethics training via CITI or another equivalent training program in research ethics. This certification must remain current throughout the program duration.

Teaching Assistantship Requirement

All PhD students at SPHTM are required to serve as a teaching assistant (TA) for two SPHTM courses while enrolled in the PhD program. Students should register for SPHL 8070 Teaching Assistantship Educational Experience (0 credits) during the terms they complete each TA requirement.

Comprehensive Exam

Students are required to pass a written comprehensive examination demonstrating general knowledge of epidemiologic and biostatistical methods and knowledge of the epidemiology in at least one content area. The exam will include sections on higher level epidemiologic methods, a content area and study design.

Prospectus

Students must prepare and defend a prospectus of proposed research.

Dissertation

Students must conduct original research and defend a dissertation based on that research.

Genetic Epidemiology Certificate (Graduate)

Overview

The Certificate in Genetic Epidemiology is for students with previous training in molecular biology and/or genetics. The program will provide in-depth training in genetic epidemiology. Students will learn human genetics, genetic epidemiology, genetic statistics, and bioinformatics.

Offered by: Department of Epidemiology

Faculty Lead: Changwei Li, PhD

Purpose

This certificate program provides students with skills in genetic epidemiology research.

Eligible Students

This certificate program is designed for advanced students currently in an MPH/MSPH/MPH&TM/MHA program. Students must have a background in molecular biology or molecular genetics.

Certificate Competencies

Students who earn the Certificate in Genetic Epidemiology will be able to:

- Describe the genetic and molecular basis for human diseases;
- Select the best genetic and molecular epidemiology study design to answer important clinical and public health questions;
- Analyze and interpret genetic study data and critically review genetic literature

Number of Credits Required for Completion: 15

Requirements

Course ID	Title	Credits
EPID 6290	Genetic Epidemiology	3
EPID 6320	Molecular Epidemiology	3
EPID 7810	Human Molecular Genetics	3
Two additional genetic epidemiology related courses		6

The Certificate in Genetic Epidemiology requires 15 credits.

Pre-requisite courses are SPHL 6060, SPHL 6050, BIOS 6040 and BIOS 7060 or BIOS 7080.

Social Epidemiology, Certificate (Graduate)

Overview

This concentrated training in social and spatial epidemiology is aimed at improving our capacity to monitor, research, and address social determinants of health and health inequities. Courses in this certificate program combine theory from the social sciences with rigorous epidemiological and social science methods utilized to understand and to address the connections between social factors and health.

Purpose

Our purpose is to train scholars and practitioners in the conduct of rigorous research and evaluation methods aimed at understanding and addressing social determinants of health, to improve population health and reduce health inequalities locally, nationally, and internationally. The certificate is aimed at master's students who want training in social epidemiologic methods, specifically, preparing them for an ever-increasing workforce aimed at tackling these fundamental causes of health and reducing health disparities. Students will be prepared to work in a variety of settings, both research and practice, and at multiple levels, but also in other non-public health and interdisciplinary settings.

Competencies

1. Apply epidemiological methods to social and population health problems.
2. Describe the different study designs and data collection tools utilized in social epidemiology
3. Demonstrate proficiency in data management, collection, and analysis of social epidemiologic and spatial data.
4. Succinctly describe and interpret data from a social epidemiologic inquiry.

Requirements

Course ID	Title	Credits
Prerequisite		
SPHL 6060	Epidemiology for Public Health	3
Course ID		
Title		
Credits		
Required Courses		
EPID 6600	Social Epidemiology: Mechanisms of Disparities	3
SBPS 7280	Qualitative Methods I: Basic Foundations	3
or SBPS 7290	Qualitative Methods II: Theory and Methods	
SPHL 6110	Introduction to GIS for Public Health	3
or BIOS 6800	Public Health GIS II	
or EPID 7110	Spatial Epidemiology	
Any two of the following (6 credits), chosen due to their focus on social theory and/or methodologies		6
SBPS 6030	Social and Behavioral Aspects of Health	
SBPS 6700	Social Innovation Tools	

SBPS 7010	Health Communication Theory and Practice
SBPS 7220	Community Organization: Community Work for Social Justice
SBPS 7250	Evidence-Based Research Methods in Social and Behavioral Sciences
SBPS 7510	Maternal Child Health: The Life Course Perspective
EPID 7120	Epidemiologic Methods II
IHSD 7070	The Social Determinants of HIV/AIDS

Total Credit Hours
15

Department of Health Policy and Management

Programs

Chair: Arthur Mora, PhD, MHA (<https://sph.tulane.edu/hpam/arthur-mora/>)
Professor

Mission

The mission of the Department of Health Policy and Management is to conduct health management and policy research and to prepare a diverse group of future managers and leaders to improve health care delivery services, increase access to health care, reduce health disparities, and advance health care policy worldwide.

About HPM

Faculty in the Department of Health Policy and Management investigate the impact of financing models, organizational structures, processes, and social determinants on quality, cost, and access to healthcare to improve population health in both domestic and international settings.

This department prepares students to meet the ever-changing demands of the health care, public health, and health policy environments using financial models, organizational structures, and social determinants to improve quality, contain costs, improve access to health care, and address health disparities for all populations. We envision a future where our graduates enhance quality of life by improving public health and healthcare delivery systems worldwide.

Areas of faculty expertise include health policy, organizational theory and behavior, management, economics, medicine, law, sociology, political science, and statistics. Faculty have experience in leadership and policy in healthcare organizations, national nonprofits, and international agencies and health care systems.

Graduate Degrees

- Health Administration, MHA (p. 58)
- Health Policy and Management, PhD (p. 59)
- Health Policy, MPH (p. 61)
- Health Systems Management, MPH (p. 62)

Courses

Health Policy & Management (HPAM)

HPAM 6050 Health Systems Concepts (3)

This course introduces students to the historical development, current structure, operation, and future direction of the U.S. health care system. The primary topics include public health activity and health care delivery systems, the factors that determine allocation of health care resources, and the relationship of health care costs to benefits. Students learn to assess organized efforts to influence health delivery and policy formulation, the impact of these efforts on leaders of health care organizations, and the role of societal values and individual behaviors on health system performance, reform efforts, and the health status of our population. Class time is devoted to open discussion of these complex and value-laden issues.

HPAM 6140 Leadership for Clinical Improvement (3)

The course offers students the knowledge, skills, and personal mastery tools that are a prerequisite to assuming leadership positions in the delivery of health services that improve the health status of the individuals and populations. Building on the perspective of clinical education and practice, the student begins his or her leadership journey, integrating and implementing the key structures and processes leading to clinical process improvement and the improvement of health outcomes. By grounding fundamental principles of organizational learning in experimental activities, this course enhances the student's mastery of the core competencies: setting direction, enrolling participation, quality measurement and improvement, personal and team learning, effective health care design, clinical change and organizational design.

HPAM 6170 Quality Management in Health Care (3)

This course introduces students to the concept of continuous process improvement and to the discipline of healthcare quality management. This practical course also introduces the tools to examine, evaluate, and implement the key structures and processes of quality management programs in health care organizations. An integrative approach to improvement and organizational learning is taken, combining topics and methods from diverse improvement approaches in the development of an organization-wide commitment to continuous improvement. Through case analysis and experiential learning, the course emphasizes practical applications that prepare the participants to use the theory and techniques of quality management in situations with complex clinical and managerial implications. Course topics include measurement systems, quality improvement tools, and the design of programs for change management.

HPAM 6200 Intro to Healthcare Analytics (3)

Vast amounts of diagnostic, procedural, pharmacy, administrative and financial data are collated and generated within the health care system. To support the financial health, operational efficiency and quality of care, stakeholders must transform this data into actionable information to support decision-making. Students in this introductory graduate-level course will utilize industry standard analytical tools, particularly Microsoft Excel® to analyze large institutional data commonly found in health care.

HPAM 6210 Health Law and Regulation (3)

This course is a graduate-level course that introduces students to a wide range of topics in the area of health law and regulation including a number of relevant statutes. Students learn to recognize potential legal problems in various health care settings, identify the issues and rights that are implicated, and propose solutions or plans of action. They also learn to differentiate between legal problems and problems which can more appropriately be solved in other ways. There is an emphasis on formulating analyses clearly, both orally and in writing.

HPAM 6300 Data Visualization and Communication (3)

Health organizations increasingly rely on data-driven decisions, requiring students to analyze and communicate pertinent information to inform stakeholders. HPAM 6300 is an applied analytics course that focuses on data-centered communication by emphasizing best practices in data visualization and storytelling. Students will build on the analytical skills developed in HPAM 6200 by creating key performance indicators and generating dashboards to monitor performance. Students will apply these skills by using cases and data visualization software, particularly Microsoft Excel and Tableau.

Prerequisite(s): HPAM 6200.

HPAM 6320 Managerial Communications (3)

The purpose of HPAM 6320 – Managerial Communications is to develop the written and oral communication skills that students will need as leaders to accomplish organizational objectives. To function effectively in complex professional environments, leaders must understand and use different communication behaviors and strategies. Students will strengthen interpersonal communication skills by sharing and receiving feedback and learn how to navigate conflict and other difficult conversations. This course will provide both underlying concepts and skill-building exercises to allow students to develop, improve, and perfect their communication skills

HPAM 6380 Organizational Behavior (3)

This offering provides theoretical and practical content for managers of health care organizations. The course allows students to learn organizational theory and then to apply it to organizational settings. Broad topical areas include psychological and cultural processes affecting recruitment and selection, factors influencing training and development, the scientific method as applied to health care organizations, theories and practices influencing employee performance, effective management theory and practice, engaging and involving employees in organizational processes, employee well-being, and managing change.

HPAM 6450 Health Economics (3)

This course introduces basic economic concepts and analytical tools used to address questions concerning the efficient and effective production of health and health services in the context of a market economy. The course emphasizes the application of economic tools of analysis to the management of health-related organizations and to health policy development. Students will study current research on the health care industry and the ways in which economic analysis is employed in the development of public policy on issues related to population health and healthcare.

HPAM 6500 Intro to Health Care Fiscal Management (3)

This course is an introduction to the principles that have evolved governing how private-sector health care organizations report standardized financial information to persons external to the organization (though obviously also available to internal parties as well). The course will emphasize reporting of (a) organizational fiscal posture, (b) organizational activity and performance, and (c) basic interpretation and analysis of the fiscal information reported. The course assumes students have no prior study of or experience in accounting or finance.

Prerequisite(s): HPAM 6540.

HPAM 6540 Managerial Accounting for Health Care Managers (3)

The main purpose of the Managerial Accounting course is to expose health management students to managerial accounting concepts within healthcare organizations. Mastering the fundamentals of fixed and variable costs, cost allocation, price setting strategies, budgeting, revenue cycle management and supply chain management will provide students with a foundational knowledge of the business side of healthcare allowing for improved decision making and outcomes. This foundational knowledge of said topics will be achieved through lectures, assigned readings, case studies, group projects and examinations.

HPAM 6550 Dynamics of Payment systems - Policy & Function (3)

This course introduces students to the ways providers of health care services have been, are, and will be paid for the services by private-sector payers and public-sector programs. Knowledge of economic concepts and of financial/managerial accounting will be used to analyze public policy issues as well as implementation and reporting issues. Topics include (1) the macro-economic environment within which current payment systems have evolved and continue to evolve; (2) payment mechanisms for institutionally based care, both acute and sub-acute, and for ambulatory care over a range of settings; (3) regulatory processes determining payment for services in entitlement programs; (4) the policy objectives furthered or impeded by public-sector and private-sector payment mechanisms; and (5) analysis of provider responses to payment systems incentives.

HPAM 6710 Quantitative Decision Models (3)

This course encompasses a body of knowledge, a set of quantitative skills, and an orientation towards managerial situations which provide managers greater insight and analytic opportunities for improving the managerial process. Focuses on the systematic planning, direction, and control of the organizational processes that turn resources such as labor, equipment, and materials into services and the quantitative analysis that supports these decisions. In this environment, the processes involve allocation, scheduling, and procedural decisions that result in the effective and efficient utilization of resources for the delivery of health care services.

HPAM 6890 Health Mkt Analysis (3)

Health Market Analysis introduces students to the concepts of market analysis, marketing, strategic planning, and research presentation management; all of which are vital to successful health care organizations. This course integrates knowledge of marketing, statistics and planning. The course also incorporates understanding of the health care environment in the United States and its effect on the development, presentation and use of a strategic plan. This integration is accomplished through the use of cases and the performance of a strategic assessment and plan for a health care delivery organization.

HPAM 6910 Leadership & Ethics (3)

HPAM 6910 introduces students to leadership and ethics with an emphasis on the managerial application in the healthcare environment. Activities include assessing personal values and biases, examining relationships to personal and professional integrity, and critiquing classic and contemporary leadership theories. Students will generate a leadership platform that will serve as a basis to examine ethical challenges faced in contemporary health care environments. Students will analyze ethical duties owed to patients and stakeholders, social responsibility, and organizational culture and their influence on ethical behavior in organizations. This class will use case analyses and class discussion to expose students to diverse perspectives, challenges, and application of best practices.

HPAM 6920 Leadership, Improvement, and Innovation (3)

Within the context that the healthcare ecosystem is undergoing a profound transformation towards a new consumer-driven market, often with increasingly constrained resources, this course offers students an open learning and design space to foster positive healthcare businesses through human-centered design of the work of care, while improving patient experience, health outcomes, workforce engagement, and revenue. This leadership focus is on successfully reaching key performance metrics and goals through innovation and improvement, while restoring humanity to healthcare.

HPAM 6930 Leadership and Innovation (3)

This course is designed to provide current and emerging physician leaders the knowledge, skills, abilities, and personal mastery tools, which are requisite to assuming leadership roles in the delivery of health services in the consumer-driven healthcare market. By grounding fundamental principles of individual, team, and organizational learning in experiential activities, simulations, and hands-on learn-by-doing exercises, this course will enhance the student's mastery of the core competencies: assessment of current reality, creation of shared vision and purpose, understanding systems and complexity, teaching and learning, design thinking, dialogue, authenticity and personal mastery, positive-relationships and culture, innovation, and organizational transformation.

HPAM 6940 Business Trends, Models & Payment Systems (3)

This course offers physician leaders an introduction to strategic thinking within a business planning framework using a case-based and experience based analysis of environmental trends, business models and payment systems. The course helps the student understand and prepare for the continuously changing health care business environment in the US and prepares the student for future strategic planning responsibilities.

HPAM 6950 Relational Communication and Professionalism (3)

This course provides current and emerging healthcare leaders the knowledge, skills, and personal mastery of tools necessary for using human conversation and connection to navigate and positively impact complex systems, structures, and cultures of healthcare organizations. Students in this course will continue their leadership development journey by enhancing skills that allow for stronger relationships with all people present in health and healthcare organizations in order to create and sustain a positive, high-performance culture. By grounding fundamental principles of individual, team, and organizational conversation in experiential activities, simulations, and real-time feedback, this course will enhance each student's mastery of core competencies in relational communication and professionalism—habits for fostering positive human connection, inquiry, skillful discussion, shared sense-making, empathy, and cultural transformation.

HPAM 6960 Accounting and Financial Management (3)

This course explores selected principles of financial accounting, managerial accounting and applied micro-economics (managerial finance) in nonprofit health care delivery organizations. The course focuses on learning and applying key tools and concepts to problems faced by clinicians and administrators. Topics include, but are not limited to: financial statement structure and analysis, cost concepts used in budgeting, approaches to resource allocation including incremental/marginal analysis, assessing economic viability using cost of capital concepts and adjusting for project risk.

Prerequisite(s): HPAM 6940.

HPAM 6970 Leading and Designing Innovative Learning Organizations (3)

This course leverages the organizational mission, vision, values, through student leadership activities to support those who want to bring their core purpose and values into their organizations and communities. The course helps build capacity for sustainable cultural and operational change through the activation of curiosity, the deployment of new design tools and skills, positive-change initiatives through the application of appreciative business practices to real-world challenges, and by assisting in the spread throughout the student's organizations. The course focuses on four key design areas: patient-centered interprofessional collaborative care, humanization of acute/complex/specialty care, consumer-driven digitally supported primary care, and workforce wellbeing and positive culture transformation.

Prerequisite(s): HPAM 6050 and 6910.

HPAM 6980 Health System of China: An Applied Perspective (3)

This course introduces students to various aspects (epidemiology, social, economic, cultural) of China's healthcare system. The course will be delivered in China so that the materials learned in the classroom can be observed in the real world through field visits and field observations. Health reform strategies of China in recent years will be critically examined through directed readings, seminar lectures, and a number of sites including primary care centers, tertiary hospitals, public health entities, and research organizations. Financing of health care and system for paying the providers will also be evaluated and analyzed.

HPAM 7100 Population Health Analytics (3)

There is a wealth of publicly available healthcare, public health, and census data in the United States that can be used for strategic planning, policy research, and advocacy. This intermediate course will teach students to analyze, synthesize, manage, interpret, and communicate these data for decision-making. Students will use publicly available data to evaluate current needs of a patient population and inform decisions on current and future policies and services. The focus will go beyond data from electronic health records and use population level data to analyze social, environmental, and economic issues that impact access to and outcomes of health care. At the completion of this course, students will be expected to produce a high-quality empirical paper that can be submitted for publication or presentation at a conference.

HPAM 7170 Strategic Management of Healthcare Organizations (3)

Strategic Management of Health Care Organizations will introduce you to strategic thinking, strategic planning and strategic management, which are vital to successful health care organizations. This course integrates students' knowledge of management, marketing, organizational behavior, human resources, finance, accounting, health policy, and economics. The course also incorporates your grasp of the health care environment in the United States and its effects on the development of a strategic plan. Integration is accomplished through the use of cases and the performance of a strategic assessment and plan for a health care related organization.

Prerequisite(s): HPAM 6050 and 6500.

HPAM 7200 Behavioral Economics, Health Law, and Policy (3)

Healthcare leaders in the new consumer-driven environment require a conversant understanding of macro, micro, and behavioral economics for successful innovations and positive-change. This course content will offer the applicable concepts of economic analysis that applies psychological insights into human behavior to explain economic decision making, including utility, engagement, and direct and indirect economic impact of behavioral interventions. Within this framework, key legal and policy implications will be reviewed with a focused on intrapreneurial or entrepreneurial change initiatives. In addition, the underlying relationships of current economic incentives, required transparencies, intellectual properties, compliance, and controls, as well as future economic and social trends will be reviewed.

Prerequisite(s): HPAM 6940.

HPAM 7210 Quality Outcome Analytics and Business Statistics (3)

The healthcare industry now recognizes the key quality outcomes aims – the Quadruple Aim of enhancing patient experiences and engagement, improving the health of the population, reducing costs while offering value and creating the conditions for the workforce to find joy and meaning in their work. This measurement environment requires leaders to evaluate data sets of market-referenced utilization, cost, satisfaction, and quality outcomes. Within the new consumer-driven environment, positive change metrics must be defined, measured, and included in the leaders' new balanced scorecard. This course offers the necessary analytic methodology supported by business statistics for accountable care, utilizing quantitative tools for causality, pay for performance, quality improvement, and measures of success for innovation initiatives.

Prerequisite(s): HPAM 6930, 6940, 6950 and 6960.

HPAM 7220 Positive Organization Design and Development (3)

Healthcare delivery organizations are complex and often defy reductionistic models offered by much of management theory. While leadership and management training often focuses on enabling better performance through structural alignment, process control, and workforce compliance, human behaviors are the fundamental ingredient enabling positive organizational culture and outstanding performance. This course builds upon individual and team-based skills introduced in Relational Communication and Professionalism (HPAM 6950), and focuses on broader questions of organizational design through the lens of human behavior, narrative, and culture, with an emphasis on creating enabling factors (trust, distributed responsibility, shared mental models, and leverage points for systemic change). Participants will engage with new ways of seeing common systems within their own organizations and will work to redesign them.

Prerequisite(s): HPAM 6930, 6940, 6950 and 6960.

HPAM 7230 Decision Models, Informatics, and Market Analysis (3)

Critical thinking skills and data-driven decisions and planning capacities are essential in the complex consumer-driven health care ecosystem. This course supports the leader's development of decision models to predict future trends and demands, including the application of simulations determining the probability of success, as well as an analytical framework for building innovative business plans. This course has three foci. First, this course will improve physician leader's ability to analyze complex and sophisticated decision problems and to design models of individual choice behavior, probability, and statistical decision theory. Second, this course will introduce the concepts of market analysis with emphasis on population health management. Third, this course integrates knowledge of data analytics, including statistics and epidemiology.

Prerequisite(s): HPAM 6930, 6940, 6950 and 6960.

HPAM 7240 Strategy and Transformational Change (3)

Students will use a suite of tools based on positive psychology, business models innovation, design thinking, high-performing teams, consumer-driven networks, and the creation and deployment of the organizational learning spiral to develop an organizational strategy plan. By introducing students to a variety of strategy and change theories and practices, with a focus on matching practice to organizational characteristics, the course builds flexibility and agility to ensure solutions are appropriate to the challenge addressed. Examining one approach more deeply, while surfacing commonalities with other models, the course provides a different lens through which to consider strategic options. The course continues to build capacity within four key design areas: consumer-driven care, inter-professional teaming, workforce wellbeing and humanizing care and services.

Prerequisite(s): HPAM 6930, 6940, 6950 and 6960.

HPAM 7250 Masters of Medical Management Capstone (3)

With the guidance and mentorship of program faculty, building on student course assignments throughout the Masters of Medical Management program, this culminating experience is based on a completed three-part management application paper, which details a proposed innovation and the creation of a positive-change intrapreneurial or entrepreneurial business plan for the prototype. This business plan includes a defined business model, applicable enabling social-change technology, plans for creation of a value network, identified consumer markets, the required inter-professional and inter-organizational collaboration, with deployment plans for iteration, ramp and scale deployment, and potential return on investment. The fully implementable business plan will be presented in an innovation competition to appropriate leaders, stakeholder and prospective investors.

Prerequisite(s): (SPHL 6020 or minimum score of PASS in 'SPHL 6020 Exemption') and HPAM 6930, 6940, 6950, 6960, 6970, 7200, 7210, 7220, 7230 and 7240.

HPAM 7330 Negotiation Analysis (2)

Strategic Management of Health Care Organizations will introduce you to strategic thinking, strategic planning and strategic management, which are vital to successful health care organizations. This course integrates students' knowledge of management.

HPAM 7460 Managerial Economics for Public Health Leaders (3)

This managerial economics course bridges and integrates basic economic and financial management concepts with practical application to improve problem-solving skills and inform effective leadership decision-making in dynamic public health and healthcare organizations. Students apply financial management analysis tools and techniques (e.g., forecasting, budgeting, time value analysis, risk analysis) through the lens of common economic principles, including scarcity and choice, risk and uncertainty, demand and supply, and incentives. The emphasis within a market-based economy considers stakeholders (e.g., public, patients, providers, policymakers) and market imperfections, such as third-party payers, regulation, principal-agent relationship, and externalities in a global context.

HPAM 7580 Financial Management (3)

This is a course on financial management focused on making good decisions at the institutional level about investments/divestments (primarily real assets) and about the financing choices (raising and servicing capital).

Prerequisite(s): HPAM 6500, 6540 and 6450.

HPAM 7660 Health Policy Analysis (3)

The primary aim of this elective course is to present an overview of health policy in American government, its scope, dynamics, and conceptual and practical dilemmas. It is designed to acquaint students with major issues involved in formulating, implementing, and assessing patterns of decisions established by government. Because the study of policy is essentially interdisciplinary, readings for the course have been drawn from several fields, including sociology, political science, and economics. Specific areas of consideration will be addressed during the seminar through analysis and discussion of the functions of state and local government and various stakeholder groups that attempt to influence governmental action.

HPAM 7740 Economic Evaluation & Modeling (3)

This course introduces economics concepts and modeling tools applied to economic evaluation in health care. Topics include: cost analysis, effectiveness measures, cost-effectiveness, cost-utility analysis, and cost-benefit analysis. The course will use case studies to illustrate the use of economic evaluation. Students will develop skills in software to build decision tree models, and Markov models for economic evaluation. There are no prerequisites but the students should be familiar with basic geometry, algebra and statistics.

HPAM 7800 Health Policy Capstone (3)

In the Health Policy Capstone students identify a health issue with a potential policy solution and then research and advocate for a health policy that addresses that issue. Students will gather research on impacts of potential solutions, develop criteria for judging among the solutions, assess the relative merits of policies, and then advocate for their chosen health policy. In class activities include breaking down the steps of policy analysis in response to selection of health policy applications. In addition to these aspects of the course, students in the Health Policy MPH program will complete the Integrated Learning Experience (ILE) by selecting competencies, developing objectives, and writing the ILE paper during this course.

Prerequisite(s): HPAM 6210*, 6450*, 7100*, 7660* and 7740*.

* May be taken concurrently.

HPAM 7990 Master's Independent Study (0-3)

Masters students and advisor select a topic for independent study and develop learning objectives and the expected written final product.

HPAM 8310 Organizational Theory And Assessment (3)

HPAM 8310 is a required course for doctoral students in the Health Policy and Management PhD program. The purpose of this course is to develop the ability to conduct theory-based research on health care organizations. To foster this development, we will examine theoretical literature along with contemporary empirical studies of health care organizations. Special focus is placed on exploring in depth the link between theory and research exhibited in this empirical work to enable students to develop the capability of using theory to guide their own research.

HPAM 8350 Policy Analysis with Natural Experiments and Panel Data (3)

This course is intended for doctoral students interested in policy analysis. It will focus on when to apply the various econometric methods to panel data. Discussion will focus on how each technique is applied in practice. Techniques will include differences-in-differences, synthetic controls, regression discontinuity, and quantile regression.

Prerequisite(s): (IHSD 8250 or ECON 7170).

HPAM 8410 Cost Benefit and Cost Effective Analysis (3)

The purpose of the course is to introduce techniques of economic evaluation applied to health interventions and clinical decision making. Topics covered include: cost analysis, effectiveness measures, cost-effectiveness, utility measures and cost-utility analysis, benefits of health interventions and cost-benefit analysis. The course will discuss a number of case studies in clinical health economics to illustrate the use of economic evaluation techniques in the health sector. There are no prerequisites for the course but the student should be familiar with basic geometry, algebra and statistics.

HPAM 8770 Health Services Research Methods (3)

This course develops theoretical knowledge and applied skills in designing and conducting research in health systems. You will utilize and build upon knowledge gained in prerequisite courses as you learn to carry out each step of the research process. You will study textbooks, and articles, present reports to the class in a seminar setting, and complete a number of assignments with contribute to the experience of research design and analysis. You will develop and understanding of factors which, unless planned and accounted for, sometimes result in serious flaws in the research project.

HPAM 8990 Doctoral Independent Study (1-3)

Doctoral students and advisor select a topic for independent study and develop learning objectives and the expected final product.

Health Administration, MHA

The Master of Health Administration (MHA) program prepares students with a foundation in health care leadership and applied analytical skills to promote data-driven decision making. Graduates can address the unique challenges presented in this complex industry, including ensuring equitable opportunity to health and optimal well-being.

The 54-credit program provides study in leadership of health care organizations, applied analytics, health care economics, financial management, population health, communications, and strategy in 22 months. Students complete a residency in health care organizations to gain practical experience, develop professionalism, and apply management skills.

Anticipated growth in health care positions continues to outpace all other occupations. The MHA opens a path to leadership positions and opportunities for advancement in diverse settings across the industry.

The MHA program at Tulane is accredited by the Commission for Accreditation of Healthcare Management Education (CAHME).

Program Competencies

At the completion of the MHA degree, the student will be able to:

- Speak and write in a clear, concise and logical manner in formal and informal situations within healthcare settings to convey cogent business presentations and to facilitate a group. (Effective Communication)
- Demonstrate attributes necessary to influence others to achieve high performance in a healthcare setting. (Leadership)
- Continuously strive to improve oneself and to act with respect and sensitivity for others. (Professionalism)
- Consider the business, demographic, ethno-cultural, political, and regulatory factors in developing strategies that continually improve the long-term success and viability of healthcare organizations. (Strategic Management)
- Utilize data to effectively organize and coordinate the performance and activities of a healthcare organization in order to achieve defined objectives. (Management)
- Deconstruct complex problems into smaller elements and synthesizing that with other data to derive recommendations. (Critical Thinking and Analysis)
- Use financial and accounting information to assess the financial health of an organization, to inform short-term operational decisions and to assess long-term resource allocation opportunities. (Financial Skills)

Requirements

The MHA requires a total of 54 credits total that includes:

Course ID	Title	Credits
Program Course Requirements		
SPHL 6020	Foundations in Public Health	3
HPAM 6050	Health Systems Concepts	3
HPAM 6170	Quality Management in Health Care	3
HPAM 6200	Intro to Healthcare Analytics	3
HPAM 6210	Health Law and Regulation	3
HPAM 6300	Data Visualization and Communication	3
HPAM 6320	Managerial Communications	3
HPAM 6450	Health Economics	3
HPAM 6500	Intro to Health Care Fiscal Management	3
HPAM 6540	Managerial Accounting for Health Care Managers	3
HPAM 6550	Dynamics of Payment systems - Policy & Function	3
HPAM 6710	Quantitative Decision Models	3
HPAM 6890	Health Mkt Analysis	3
HPAM 6910	Leadership & Ethics	3
HPAM 6950	Relational Communication and Professionalism	3
HPAM 6970	Leading and Designing Innovative Learning Organizations	3
HPAM 7170	Strategic Management of Healthcare Organizations	3
HPAM 7100	Population Health Analytics	3
SPHL 9980	Applied Practice Experience	0 to 1

MHA students may select other departmental courses or other graduate-level courses with advisor approval.

Administrative Residency

MHA students conduct an administrative residency that fulfills provides practical experience in the field. See MHA guidance for more information about the residency requirement.

MHA Model Course Schedule

Course ID	Title	Credits
Year 1, Fall		
HPAM 6050	Health Systems Concepts	3
HPAM 6200	Intro to Healthcare Analytics	3
HPAM 6320	Managerial Communications	3
HPAM 6450	Health Economics	3
HPAM 6540	Managerial Accounting for Health Care Managers	3
Total Credits:		15
Year 1, Spring		
HPAM 6300	Data Visualization and Communication	3
HPAM 6500	Intro to Health Care Fiscal Management	3
HPAM 6550	Dynamics of Payment systems - Policy & Function	3
HPAM 6710	Quantitative Decision Models	3
HPAM 6910	Leadership & Ethics	3
Total Credits:		15
Year 1, Summer		
SPHL 9980	Applied Practice Experience	0
Year 2, Fall		
HPAM 6170	Quality Management in Health Care	3
HPAM 6210	Health Law and Regulation	3
HPAM 6950	Relational Communication and Professionalism	3
HPAM 6890	Health Mkt Analysis	3
Total Credits:		12
Year 2, Spring		
HPAM 6970	Leading and Designing Innovative Learning Organizations	3
HPAM 7100	Population Health Analytics	3
HPAM 7170	Strategic Management of Healthcare Organizations	3
SPHL 6020	Foundations in Public Health	3
Total Credits:		12
Total Degree Credits:		54

Health Policy and Management, PhD

The program trains students for a Doctor of Philosophy (PhD) in Health Policy and Management (HPAM). It aims to develop researchers, educators and policymakers who can contribute to improving health of populations around the world. The program will prepare the student to conduct original scholarly research, publish in peer-reviewed journals, write competitive research grant proposals, and teach in university settings. Students' area specializations reflect the major strengths of the HPAM faculty which include public health insurance design (e.g., Medicare and Medicaid benefits), vaccine policy, health equity, big data analytics, diabetes care, hospital financing, and information technology.

PhD Program Competencies

- Create conceptual models based on existing theoretical frameworks that can be applied to public health policy and management research questions.
- Design a testable health policy and management research question with a suitable theoretical framework and study design.
- Estimate impacts of health policies or management practices using appropriate research methods and statistical analyses.
- Design teaching and learning experiences grounded in pedagogical best practices in a chosen area of expertise.

- Develop a grant proposal for a public health research study with a compelling scientific narrative, description of investigator capacity, timeline, and budget.

Requirements

Students must complete 48 credit hours of coursework and doctoral studies beyond the baccalaureate, with a minimum of 30 didactic hours at Tulane in the doctoral program. Up to 18 Credits can be transferred from previous graduate coursework.

Course ID	Title	Credits
PhD Foundational Courses		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
HPAM 6450	Health Economics	3
HPAM 7660	Health Policy Analysis	3
PhD Core Courses		
SBPS 8760 or EPID 7120	Social Epidemiology/Social Determinants of Health II Epidemiologic Methods II	3
IHSD 8250	Advanced Research Methods in Global Health	3
SPHL 7500	Public Health Grant Writing	3
SPHL 8080	Public Health Pedagogy	3
HPAM 8310	Organizational Theory And Assessment	3
HPAM 8410	Cost Benefit and Cost Effective Analysis	3
HPAM 8770	Health Services Research Methods	3
HPAM 8350	Policy Analysis with Natural Experiments and Panel Data	3
Electives		6
Total Credit Hours		48

Research Ethics

All doctoral students are required to complete CITI trainings as they join research studies.

Teaching Assistant Requirement

All PhD students at SPHMT are required to serve as a teaching assistant (TA) for two SPHMT courses while enrolled in the PhD program. The courses for which the student will serve as a TA must be approved by the PhD program director.

Comprehensive Exam

On completion of doctoral coursework, students will be required to pass a comprehensive exam to demonstrate global health management and policy PhD program competencies. Comprehensive exams are administered in the spring of the fourth semester. They consist of take-home exams that cover three core areas (theory, design, and methods) as well as a subject matter exam that is individualized to each particular student's interest. Each portion of the exam is graded by two graders. If students fail any particular question from either grader they must retake the entire area.

Doctoral Committee

After successful completion of the comprehensive examination, the student forms a dissertation committee and develops a prospectus. The committee must include a minimum of three members with at least two faculty from the Department of Global Health Management and Policy and one external to the school.

Prospectus

Students work with their advisor and doctoral committee to determine a research hypothesis and prepare a prospectus of proposed dissertation research. The research prospectus is presented and defended at least one semester before the dissertation defense. Following the successful defense of the prospectus, students are admitted to PhD candidacy and proceed with dissertation research.

Dissertation

Students must conduct original scholarly research and defend a dissertation based on that research. The dissertation research demonstrates scholarly work and is the basis for the dissertation. Many graduates of HPAM follow the three-paper model as this delivers publishable units closer to what is demanded by the types of jobs graduates of this program pursue. The student must defend the dissertation in an oral exam. This process must be completed within seven years of matriculation into the PhD program.

Model Schedule (not including PhD Foundational Courses)

The model schedule represents an overall plan for completing degree requirements. Students should consult an advisor to plan their actual schedule in terms of total credits per semester and course sequencing.

Course ID	Title	Credits
Year 1, Fall Semester		
HPAM 8310	Organizational Theory And Assessment	3
EPID 7120	Epidemiologic Methods II	3
or SBPS 8760	Social Epidemiology/Social Determinants of Health II	
SPHL 8080	Public Health Pedagogy	3
Elective		3
Year 2, Spring Semester		
IHSD 8250	Advanced Research Methods in Global Health	3
SBPS 8760	Social Epidemiology/Social Determinants of Health II	3
or EPID 7120	Epidemiologic Methods II	
HPAM 8770	Health Services Research Methods	3
Year 2, Fall Semester		
SPHL 7500	Public Health Grant Writing	3
HPAM 8350	Policy Analysis with Natural Experiments and Panel Data	3
HPAM 8410	Cost Benefit and Cost Effective Analysis	3
Elective		3
Year 2, Spring Semester		

Health Policy, MPH

The MPH in Health Policy provides students with a foundation in health policy processes, concepts, and issues as well as strong analytical skills to help develop and evaluate health policies. The Health Policy MPH degree offers students' opportunities to tailor their studies in domestic and international health policy, with courses focused on foundations, methods, and a topical area of expertise.

Graduates of the program work in leadership and research in the public or private sector, domestically or internationally. Employment settings include institutions involved in developing policy, evaluating of health programs and projects, or providing goods and services in support of health sector program implementation or development. The MPH in Health Policy can also serve as a strong academic foundation for students who may wish to pursue a doctoral degree in health policy or management.

Program Competencies

At the completion of the MPH degree, the student will be able to:

- Apply economic and legal concepts and theories to the analysis of healthcare policy and management issues.
- Evaluate health policies for impacts and unintended consequences using fundamental research and analytic methods.
- Critique the health policy literature on how robustly the evidence base supports a particular policy.
- Communicate health policy issues written and orally.

Requirements

Course ID	Title	Credits
SPHTM Foundational Requirement (15 Credits)		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements (18Credits)		
HPAM 6210	Health Law and Regulation	3
HPAM 6450	Health Economics	3
HPAM 7100	Population Health Analytics	3
HPAM 7660	Health Policy Analysis	3

HPAM 7740	Economic Evaluation & Modeling	3
HPAM 7800	Health Policy Capstone	3
Electives		12
SPHL 7950	Integrative Learning Experience	0
SPHL 9980	Applied Practice Experience	0
Total Credit Hours		45

Applied Practice Experience

The Applied Practice Experience (APE) (formerly practicum) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience. The APE allows students to demonstrate attainment of at least five competencies, including at least 3 from the foundational competencies (CEPH Criterion D2). The APE is conducted after completion of the foundational courses. After identifying the APE setting and defining the competencies, students enter the information into Terra Dotta. An APE report is required that summarizes the field experiences.

All students in the MPH in Health Policy complete a 250-hour applied practice experience under the supervision of a qualified professional in public health.

Integrated Learned Experience

The MPH in Health Policy MPH degree requires a capstone course that includes the ILE requirement including the ILE written report. Rubrics for the ILE final paper are included in the capstone course syllabus. Student in capstone course synthesize the three competencies from the program by evaluating the policies, critiquing the literature, and communicating the issues.

Model Course Schedule

Course ID	Title	Credits
Year 1, Fall Semester		
SPHL 6020	Foundations in Public Health	3
SPHL 6070	Health Systems Policy and Management	3
HPAM 6210	Health Law and Regulation	3
HPAM 6450	Health Economics	3
Year 1, Spring Semester		
SPHL 6050	Biostatistics for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
HPAM 7100	Population Health Analytics	3
HPAM 7660	Health Policy Analysis	3
Year 1 Summer Semester		
SPHL 9980	Applied Practice Experience	0
Year 2, Fall Semester		
HPAM 7740	Economic Evaluation & Modeling	3
SPHL 6060	Epidemiology for Public Health	3
Electives		6
Year 2, Spring		
HPAM 7800	Health Policy Capstone	3
Electives		6

Health Systems Management, MPH

The Health Systems Management program prepares future managers and leaders who will improve the healthcare delivery services in diverse organizational settings worldwide. Students learn the fundamental areas of management of health services through coursework and practicum experience, preparing them for entry-level managerial roles in healthcare settings. Taking a systems approach, courses emphasize active management in planning, financing, implementing, evaluating, and maintaining complex systems.

Program Competencies

At the completion of the MPH degree, the student will be able to:

- Apply population-based and public health findings and principles in assessing individuals and groups at risk of disease and injury and making recommendations for improved health in clinical practice settings.
- Identify the theoretical and applied bases of economics in health care, including delivery of care to populations, access to care for populations, and organization of medical service delivery organizations.
- Explain and analyze the issues of quality, access, and efficiency of healthcare service delivery.
- Identify and describe the main components of the organization, financing, and delivery of health services and public health systems in the U.S. and other contexts.
- Describe frameworks for understanding and assessing health systems performance.
- Apply “systems thinking” approaches to viewing complex situations, defining problems, and formulating solutions.
- Apply basic managerial concepts and tools to program planning, budgeting, monitoring, and evaluation of organizational and community-based initiatives.
- Incorporate knowledge of the public health core areas of epidemiology, biostatistics, environmental health, health systems management, and the biological, behavioral, social, and cultural aspects of health and disease in addressing and solving problems.

Requirements

The MPH Degree in Health Systems Management requires 45 credits that includes:

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
HPAM 6140	Leadership for Clinical Improvement	3
HPAM 6170	Quality Management in Health Care	3
HPAM 6380	Organizational Behavior	3
HPAM 6450	Health Economics	3
HPAM 6540	Managerial Accounting for Health Care Managers	3
Additional Coursework		
SPHL 9980	Applied Practice Experience ¹	0
SPHL 7950	Integrative Learning Experience ²	0
Elective Courses ³		15
Total Credit Hours		45

¹ The Practicum or Applied Practice Experience (APE) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience. The Practicum allows students to demonstrate attainment of at least five competencies, including at least 3 from the foundational competencies (CEPH Criterion D2). The Practicum is conducted after completion of the foundational courses. After identifying the Practicum setting and defining the competencies, students enter the information into Terra Dotta. A Practicum report is required that summarizes the field experiences.

² All students must complete an Integrated Learning Experience (ILE) (formerly culminating experience) that demonstrates the synthesis of foundational and concentration competencies. Students in the MPH in Epidemiology conduct a public health analysis.

³ Students take 15 credits of electives selected from courses offered within the department, school, or university in consultation with their Faculty Advisor.

Model Course Schedule

Year 1		Credit Hours
Fall		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6070	Health Systems Policy and Management	3

HPAM 6380	Organizational Behavior	3
Credit Hours		12
Spring		
SPHL 6060	Epidemiology for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
HPAM 6170	Quality Management in Health Care	3
HPAM 6540	Managerial Accounting for Health Care Managers	3
Credit Hours		12
Summer Session		
SPHL 9980	Applied Practice Experience	0
Credit Hours		0
Year 2		
Fall		
SPHL 7950	Integrative Learning Experience (Public Health Analysis)	0
HPAM 6140	Leadership for Clinical Improvement	3
HPAM 6450	Health Economics	3
Electives		6
Credit Hours		12
Spring		
Electives		9
Credit Hours		9
Total Credit Hours		45

Department of International Health & Sustainable Development Programs

Chair: David Hotchkiss, PhD (<https://sph.tulane.edu/ihsd/david-hotchkiss/>)

Vice Chair: Mai Do, MD, DrPH (<https://sph.tulane.edu/ihsd/mai-do/>)

Mission

The mission of the Department of International Health & Sustainable Development is to improve the health and wellbeing of vulnerable populations around the world by eliminating health inequities and promoting human rights and social justice for all persons.

The department aims to achieve this mission by being a global leader and partner in:

- **Capacity Strengthening:** educate and train the next generation of public health professionals, and strengthen the capacity of institutions, at home and abroad, through innovative education and technical assistance programs, in order to improve the effectiveness and sustainability of health programs and policies.
- **Research:** expand knowledge and understanding of the complex causes of health inequities, vulnerability, and resilience and provide evidence that can be used to improve the design, implementation, and evaluation of effective and sustainable programs and policies.
- **Service:** mobilize our expertise and engage with communities and institutions at home and abroad to advance the goals of our professions and institutions towards health equity and social justice.
- **Advocacy:** advocate for evidence-based policies to accelerate progress towards health equity, promote social justice, and support the sustainable development of communities around the world.

About International Health and Sustainable Development (IHSD)

Since the 1970s the Department of International Health and Sustainable Development, along with its predecessor departments, has been integral in establishing Tulane University as a leader in global health. The department's degree programs draw on its extensive experience in research, technical assistance, and capacity building in low- and middle-income countries. The curriculum emphasizes the importance of cultural, social, and behavioral factors that influence health, with a focus on developing skills in program design and implementation, assessment, and analytical methods. Graduates are well-prepared for careers in global health, including roles in international non-governmental organizations, public-private partnerships, government agencies, consultancy firms, and academia.

The faculty members of the department have expertise in program monitoring and evaluation, health systems strengthening, social and behavior change, food security and resilience, sexual and reproductive health, adolescent health, and infectious diseases. They bring a wealth of knowledge and expertise to the classroom, ensuring that students receive a well-rounded education that prepares them for the challenges of working in the field of global health.

Graduate Degrees

- International Health & Sustainable Development, MPH (p. 68)
- International Health & Sustainable Development, PhD (p. 69)

Courses

International Health & Sustainable Development (IHSD)

IHSD 6010 Comparative Health Systems (3)

Health systems around the world face the challenge of ensuring continued improvement in population health with a limited availability of resources. Despite their common challenges, no two health systems are identical. This course introduces comparative analysis of health system design and performance, both at the population level and through an equity lens. The course consists of 30 sessions. Readings, videos, and activities will be assigned to add to the student's knowledge and facilitate discussions. Students will be assessed through exams and reflection papers, and a group health system analysis which they will present verbally and in a report. There are no prerequisites for this course. This course is required for the Master's in Public Health sustainability track in the Department of International Health and Sustainable Development.

IHSD 6130 Health Economics for Developing Countries (3)

This course provides students with the background and tools to understand, analyze, and evaluate economic aspects of health systems problems of low- and middle-income countries. The course covers the following topics: health and economic development, micro-economic aspects of health care services, health care financing, and economic evaluation. Most examples used in the class will pertain to health system interventions that aim to improve the availability and quality of health services. Lectures will be combined with problem sets, class discussions, and group presentations that focus on issues affecting the demand for and supply of health care services as well as financial and payment interventions that aim to improve the performance of health systems.

IHSD 6200 Evaluation of Program Interventions in Global Health (3)

This course provides in-depth training in basic concepts, principles, and practices for impact evaluation of public health interventions in international settings. Examples focus on sexual and reproductive health interventions (including HIV-prevention), but the skills learned apply to all health areas. A team-based project allows students to apply impact evaluation skills (e.g., identification of study designs, indicators, data, analytical approach) to real-life settings. The course provides grounding in evaluation study designs, develops skills in designing evaluation plans, and is a basis for specialized courses on data analysis, sampling, and advanced evaluation research. This course is designed for students interested in program monitoring and evaluation jobs in global contexts and should be taken in lieu of SBPS-6340 and TRMD-6200.

Prerequisite(s): SPHL 6080 or 6880.

IHSD 6240 Health Problems of Developing Societies (3)

Health Problems of Developing Societies is tailored to and intended for students entering the MPH program in International Health and Sustainable Development at Tulane University's School of Public Health and Tropical Medicine. The course provides an overview of the major health problems facing low-and-middle income countries (LMIC); the divergent historical patterns of public health in economically rich versus poor societies; the links among public health, development, and culture; and strategies for improving public health in LMIC. There is no prerequisite for the course.

IHSD 6300 Monitoring of Global Health Programs (3)

This course equips students with program monitoring principles and skills for tracking the performance and results in public health programs. The course will focus on programs and interventions in global settings, although the skills can also be applicable in the domestic context. Students will learn to develop frameworks and models for program monitoring and evaluation, develop appropriate indicators and plans to measure program implementation and results, and apply them to actual programs. This course is required for MPH students in IHSD and to be followed by a course on program evaluation. It is designed for students who are interested in program monitoring and evaluation jobs in global contexts, and should be taken in lieu of SBPS 6340.

Prerequisite(s): SPHL 6080 or 6880.

IHSD 6331 Public Health and Nutrition in Complex Emergencies (3)

The goal of this course is to familiarize students with the approaches, field methods, and selected technical knowledge required to mitigate the nutritional and public health effects of complex humanitarian emergencies and disasters. Lectures and discussions will be provided by experienced faculty from university partners, government officials, and field-based practitioners with experience working in emergency contexts. Because of the unique opportunity to access guest speakers and materials from the Epidemiologic Intelligence Service at CDC and the applied nature of this course, it is offered in intensive format.

IHSD 6760 International Family Planning: Policies and Programs (3)

This course is designed to equip students with a knowledge and skills to work in international family planning, one of the most successful initiatives to date in the field of international development. Organized around the six pillars of the WHO framework, it covers the fundamentals of family planning programming through the lens of health systems strengthening. It reviews the landmark events in the history of family planning that shape policy today. Students will develop presentation skills and will learn to use “tools of the trade” in this field (reference materials, software tools). They will analyze the family planning situation and make recommendations for improvements in a country of their choice. Recommended for those intending to work in reproductive health.

IHSD 6790 Food Security and Resilience (3)

Students will examine the impacts of rapidly globalizing food systems on food and nutrition security at local, household, and intra-household levels in this course. This topic is especially relevant now because of the increased policy attention and resources for programming that are focused on promoting improved food security, nutrition and sustainability. This course will provide students with the analytical skills for identifying the elements of resilient food systems and the outcomes of food and nutrition security, access to organizations prominent in international food security policy discussions, and a background in readings relative to this debate.

IHSD 6830 International Health Policy (3)

The primary aim of this course is to present an overview of health policy issues in low- and middle-income countries and to provide skills in analyzing the health policy process. In addition to providing an overview of policies at the country level to improve health systems performance, the course also looks at the role governments, the private sector, and international health partners play within national health policy frameworks. Factors such as power, context, and governance are analyzed with both the practical and the ethical considerations of how the policy process operates in different cultures. This course helps students develop their own capacities to analyze, criticize, evaluate, and construct policy-oriented arguments.

IHSD 6860 Public Health in Cuba (3)

The course addresses how the Cuban government has prioritized the development of universal health care in the last five decades, with a special emphasis on the efforts to strengthen primary health care (PHC) and to articulate PHC with more complex levels of care. The course contextualizes and analyzes the programs to prevent infant mortality and to prevent and control infectious diseases such as polio, malaria, tuberculosis, dengue, and HIV, as well as the economic and political context in which these public health initiatives developed. The course takes place in Havana in partnership with the National School of Public Health of Cuba. It includes site visits to health facilities and community-based organizations.

IHSD 6870 Adolescent Health Policies and Programs (3)

This course serves to: (1) increase knowledge and awareness of the context, design, and effectiveness of interventions to prevent and respond to adolescent health risk taking; and (2) develop professional skills in the use of quantitative methodologies to determine the health needs/problems of adolescents and in the formulation of workable strategies to respond to identified needs. The course includes discussion of major policy issues and controversies surrounding specific adolescent health program approaches. Students will compare interventions for addressing common health problems in adolescence and meeting the needs of special youth populations in low- and middle-income countries with similar interventions in developed countries. The key components of successful and unsuccessful programs in specific health areas will be addressed.

IHSD 7020 Communication Research for HIV/AIDS and Reproductive Health (3)

This course constitutes a practical introduction to the research methodologies used in planning a communication program for promoting desirable health behaviors, designing appropriate messages, pre-testing communications and evaluating program effectiveness for changing behaviors. Most examples and datasets will pertain to international reproductive health or HIV/STI prevention, but skills learned will be applicable to other areas of public health. Lectures will be combined with exercises in which students carry out communication pre-testing, conduct qualitative research (focus group discussions or in-depth interviews) and analyze the results, and conduct secondary analyses of existing survey data using statistical software. These skills are basic to the systematic approach in designing, implementing and evaluating a health communication program aimed at changing health behaviors.

IHSD 7070 The Social Determinants of HIV/AIDS (3)

HIV/AIDS is the fifth leading cause of disease burden and the sixth leading cause of death globally. Patterns of infection serve as a vehicle for understanding social disparities. The goal of this course is to provide students with the skills to critically assess the social determinants of HIV and public health strategies to mitigate their effect on the epidemic. Students will participate in group work and individual assignments that apply concepts discussed in class and challenge students to map causal mechanisms to interventions. The course format combines readings, presentations, group activities, mini-assignments and a final paper. By completion of the course, students will gain the knowledge, skills and agency to become active participants in the global response.

IHSD 7140 Monitoring and Evaluation of HIV/AIDS Programs (3)

This course serves to: (1) increase knowledge and awareness of the context, design, and effectiveness of HIV/AIDS prevention, care and treatment programs; (2) strengthen skills in the application of methods and tools for global- and national-level monitoring and evaluation of the HIV epidemic and response. The course focuses on low and middle-income countries and addresses monitoring and evaluation (M&E) approaches for specific HIV/AIDS programmatic areas. These programmatic areas may include: HIV prevention; HIV treatment; social and behavioral change communication; community mobilization; and tuberculosis/HIV integration. Students will develop professional skills in M&E of programs to address the needs of key populations and in utilization of M&E results to prioritize options for improving the HIV/AIDS response.

Prerequisite(s): SPHL 6050*.

* May be taken concurrently.

IHSD 7200 Sustainable Human Development: Theory and Practice (3)

The purpose of this course is to gain an in-depth understanding of the origins, evolution, and characteristics of Sustainable Human Development (SHD) both in terms of formulation and implementation. SHD is a holistic approach to development, encompassing economic, political, social, and environmental issues that are interdependent and complementary. We will first present an introduction to the notion and history of global development and examine different theories and strategies that have dominated the field since the 1950s, with a particular emphasis on SHD. We will then address various thematic issues and goals of development, such as understanding multifaceted poverty, improving health and education outcomes, striving for social inclusion, addressing the many consequences of climate change, and managing today's migrations.

IHSD 7210 Survey Data Analysis in Family Planning/Reproductive Health Research (3)

This course is intended for doctoral and advanced Masters students. The course will introduce students to key concepts and measures used in the monitoring and evaluation of family planning and reproductive health (FP/RH) programs. Students will gain an understanding of reproductive health and health service indicators, data sources and their strengths and limitations. This course also provides basic hands-on quantitative skills that are essential in conducting monitoring and evaluation exercises in FP/RH programs. Students will learn how to use the Stata statistical software package to manage and analyze survey data and to construct reproductive health indicators. Students will also learn to interpret and present quantitative data, using graphs and tables, in ways that are suitable for scientific manuscripts.

Prerequisite(s): (SPHL 6050 or 6850) and (SPHL 6060 or 6860).

IHSD 7300 Implementation Practice (3)

Public health programs continually implement new interventions to improve health outcomes and achieve sustainable change. This course focuses on what, why, and how interventions work in real world settings. The course builds students' knowledge of key steps and tasks needed for moving through the program implementation process: from problem exploration and root-cause analysis through intervention selection, adaptation, piloting, and testing, to using the findings to adapt the program, and developing a scale-up strategy. Students will: (a) apply a step-by-step approach to implementation research; (b) analyze factors influencing the successful adoption of health interventions; (c) describe how to carry out each phase of the implementation process; (d) analyze indicators of implementation success; and (d) propose approaches for developing a scale-up strategy.

IHSD 7340 Population Mobility and Health (3)

This course introduces students to the relationships between population mobility and health. It spans various mobile populations, including refugees, immigrants, those displaced due to conflict, climate change, and human trafficking, as well as individuals experiencing homelessness. Beyond examining the impact of political, economic, and cultural factors on mobility and health at global and local levels, each student will develop a policy brief addressing critical health challenges faced by a group experiencing displacement or some other form of mobility. The course is organized around three themes: 1) current patterns and trends in population mobility; 2) theoretical models linking different types of mobility with associated health outcomes; and 3) public health challenges to meeting routine and exceptional health needs of mobile populations. Previously listed as SBPS 7340.

IHSD 7440 Household Sampling Applications in Resource-poor Settings (3)

The course focuses on a wide variety of public health applications and is applicable to virtually all academic and professional settings where mapping is used. Each lecture begins with a PowerPoint presentation to introduce fundamental mapping concepts and is followed with in-class exercises to reinforce hands-on application. Two in-class, paper-based exams are given to monitor and assess students' understanding of the course concepts.

Prerequisite(s): (SPHL 6060* or 6860) and (SPHL 6050* or 6850).

* May be taken concurrently.

IHSD 7990 Independent Study (1-3)
IHSD 8250 Advanced Research Methods in Global Health (3)

This course is intended for upper-level masters students interested in applied research methods and doctoral students working towards their dissertations. The focus is on providing skills for conducting program, impact or other forms of evaluation using econometric methods to analyze health, population, and nutrition data. Of particular focus will be analyses of population-based household surveys using the Stata 16.0 statistical software package. Key topics that will be covered are: research methods and designs, linear regression models with their assumptions and limitations, limited dependent variable models (logit, probit tobit, multinomial logit), instrumental variables and two-stage least squares, sample selection and censored regression models, multilevel models, propensity score matching, applications of program evaluations, and time series analysis with pooled and longitudinal data.

Prerequisite(s): (SPHL 6050, 6850 or BIOS 6030) and BIOS 6040 and (SPHL 6060, 6860 or EPID 6030).

IHSD 8990 Independent Study (1-3)

International Health & Sustainable Development, MPH

The International Health and Sustainable Development (IHSD) Program at Tulane provides professional public health training in 1) the major health problems facing vulnerable populations globally and their underlying causes; 2) how to assess the prevalence and consequences of these problems; 3) how to mitigate these problems through programs, policy, and research; and 4) how to evaluate the effectiveness of program and policy efforts. The curriculum and applied learning opportunities draw upon Tulane's extensive overseas research, technical assistance work, and nearly four decades of experience in providing leadership training in international health to students from around the world. Coursework and learning opportunities are designed to emphasize the importance of cultural, social, and behavioral factors influencing health.

Program Competencies

- Analyze key global public health problems linked to development.
- Examine the roles and relationships of organizations influencing global health, and key sources of funding for global health programs.
- Develop a theory-based public health intervention or program.
- Apply public health assessment and analytical methods to address global health problems, policies, and programs in low-and-middle income countries.
- Analyze health disparities across population sub-groups and potential interventions at the intersection of health and social structures, culture, gender, poverty, place, and power.

Requirements

The MPH Degree in International Health and Sustainable Development requires a total of 45 credits that include:

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
SBPS 6030	Social and Behavioral Aspects of Health	3
IHSD 6200 or TRMD 6200	Evaluation of Program Interventions in Global Health Impact Evaluation in Global Health	3
IHSD 6240	Health Problems of Developing Societies	3
IHSD 6300	Monitoring of Global Health Programs	3
Electives (Chosen with Advisor) ¹		18
Additional Coursework		
SPHL 9980	Applied Practice Experience	0
SPHL 7950	Integrative Learning Experience	0
Total Credit Hours		45

¹ Students take 18 credits of electives selected from courses offered within the department, school, or university, in consultation with a faculty advisor.

Applied Practice Experience

- The Applied Practice Experience (APE) is a supervised practice experience conducted in an agency or organization external to the University.
- The APE is an opportunity for students to apply the knowledge and skills learned in the classroom to gain hands-on experience.
- Students will demonstrate their attainment of at least five competencies, including at least three from the foundational competencies.

Integrative Learning Experience

- All students must complete an Integrative Learning Experience (ILE) to demonstrate their mastery of foundational and program competencies

Model Course Schedule

Course ID	Title	Credits
Year 1, Fall		
SPHL 6080	Design Strategies in Public Health Programs	3
SPHL 6050	Biostatistics for Public Health	3
SBPS 6030	Social and Behavioral Aspects of Health	3
IHSD 6240	Health Problems of Developing Societies	3
Year 1, Spring		
SPHL 6060	Epidemiology for Public Health	3
SPHL 6020	Foundations in Public Health	3
IHSD 6200	Evaluation of Program Interventions in Global Health	3
IHSD 6300	Monitoring of Global Health Programs	3
Summer Session		
SPHL 9980	Applied Practice Experience	0
Year 2, Fall		
SPHL 6070	Health Systems Policy and Management	3
SPHL 7950	Integrative Learning Experience	0
Elective(s)		9
Year 2, Spring		
Elective(s)		9

International Health & Sustainable Development, PhD

Overview

The PhD program in International Health and Sustainable Development (IHSD) prepares the next generation of global public health researchers to conduct state-of-the-art research on global health and development issues, to reduce inequities, and to shape a sustainable future for the planet. The PhD program provides students with the skills to identify, assess, and apply scientific theories and research methodologies; to conduct original scientific research studies in resource-constrained settings; to leverage research findings towards best practice and strategic planning for global health programs; and to teach, mentor and advise students, programs, development officials, and governments. Students will develop understanding of relevant theories, the capacity to employ interdisciplinary and mixed-method research approaches, cultural competency, and the skills for ethical conduct of research.

Program Competencies

- Critique empirical and theoretical knowledge relevant to health and development issues and factors associated with inequities in resource poor settings.
- Formulate evocative, relevant, and clear research questions addressing global health and development issues.
- Generate applied qualitative and quantitative field research, including working with local partners, maintaining appropriate cultural sensitivities, addressing ethical issues, and managing and analyzing primary and secondary data.

- Explain research methodologies, scientific findings, and programmatic and policy implications of research findings to the scientific community and program implementers.
- Teach in an area of specialization, whether substantive, regional/geographic, and/or methodological.

Requirements

Course ID	Title	Credits
PhD Foundational Courses		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
BIOS 6040	Intermediate Biostatistics	3
IHSD 6300	Monitoring of Global Health Programs	3
PhD Core Courses		
SBPS 8760 or EPID 7120	Social Epidemiology/Social Determinants of Health II Epidemiologic Methods II	3
SPHL 8080	Public Health Pedagogy	3
SPHL 7500	Public Health Grant Writing	3
IHSD 8250	Advanced Research Methods in Global Health	3
SBPS 8750	Social Determinants of Health I: Theory	3
SBPS 7280	Qualitative Methods I: Basic Foundations	3
SBPS 8800	Senior Graduate Research Seminar I	0
SBPS 8830	Senior Graduate Research Seminar II	1
IHSD 7200	Sustainable Human Development: Theory and Practice	3
Electives (Choose Three)		9
Total Credit Hours		49

Research ethics

IHSD doctoral candidates will complete the CITI ethics training course (or equivalent) no later than the end of the second year of their program and will remain certified for the duration of the academic program.

Teaching Assistant Requirement

All PhD students at SPHTM are required to serve as a teaching assistant (TA) for two SPHTM graduate courses while enrolled in the PhD program.

Students should register for Teaching Assistantship Educational Experience (0 credits) during the terms they complete each TA requirement. The courses for which the student will serve as a TA must be approved by the faculty advisor.

Comprehensive Examination

Upon completion of required coursework listed above students will be required to pass a comprehensive examination to demonstrate knowledge of, and competency with, the PhD core coursework, and concentration-specific coursework, as well as their specialty area. The exam will be administered by the concentration PhD program director and two additional faculty members in the department.

Prospectus

After passing the comprehensive exam a student must defend their prospectus. Upon agreement of all committee members, a student will defend the prospectus in an oral exam which is open to the school. Students need to follow all deadlines and submit all forms as specified in the school PhD handbook.

Dissertation

Students must complete a dissertation representing applied public health research that meets the school requirements for a PhD dissertation. Upon agreement of all committee members, a student will defend the dissertation in an oral exam which is open to the school. Students need to follow all deadlines and submit all forms as specified in the school PhD handbook.

Model Schedule (not including Foundational Courses)

The model schedule represents an overall plan for completing degree requirements. Students should consult their academic advisor to plan their actual schedule in terms of total credits per semester and course sequencing.

Year 1		Credit Hours
Fall		
IHSD 7200	Sustainable Human Development: Theory and Practice	3
SBPS 8750	Social Determinants of Health I: Theory	3
SBPS 7280	Qualitative Methods I: Basic Foundations	3
SBPS 8800	Senior Graduate Research Seminar I	0
Credit Hours		9
Spring		
SBPS 8760 or EPID 7120	Social Epidemiology/Social Determinants of Health II or Epidemiologic Methods II	3
IHSD 8250	Advanced Research Methods in Global Health	3
SBPS 8830	Senior Graduate Research Seminar II	1
Elective		3
Credit Hours		10
Summer Session		
Elective		3
Credit Hours		3
Year 2		
Fall		
SPHL 7500	Public Health Grant Writing	3
SPHL 8080	Public Health Pedagogy	3
Elective		3
Credit Hours		9
Spring		
SPHL 9990	Dissertation	0
Credit Hours		0
Summer Session		
SPHL 9990	Dissertation	0
Credit Hours		0
Year 3		
Fall		
SPHL 9990	Dissertation	0
Credit Hours		0
Spring		
SPHL 9990	Dissertation	0
Credit Hours		0
Summer Session		
SPHL 9990	Dissertation	0
Credit Hours		0
Year 4		
Fall		
SPHL 9990	Dissertation	0
Credit Hours		0
Spring		
SPHL 9990	Dissertation	0
Credit Hours		0
Total Credit Hours		31

Department of Social, Behavioral, and Population Sciences

Programs

Chair: Akilah Dulin, PhD

Mission

The mission of the Department of Social, Behavioral, and Population Sciences (SBPS) is to prepare future generations of highly skilled, socially conscious, and culturally sensitive public health professionals for careers in research, program development, evaluation, and community-based health with the goal of advancing health equity. The department is comprised of a broad mix of public health social scientists working in New Orleans and around the world to provide our diverse students rigorous grounding in social, behavioral, and population science methods as applied to health interventions at the individual, community, and societal levels. Our work elucidates and addresses the behavioral, social, and structural bases of health inequities related to decision-making; economic, social, and cultural stratification; and power, place, and history.

About SBPS

The Department of Social, Behavioral, and Population Sciences addresses the fundamental sources of disease burden for rich and poor countries alike. Many of the leading causes of early death either have direct links with behavior and related fundamental social causes. Social science always has been, and always will be, central to public health. From understanding and addressing behaviors substance use to more systemic issues like racism or income inequality, social and behavioral sciences are key to public health.

Social, Behavioral, and Population Sciences works to define and address the behavioral, social, and structural bases of health inequities related to decision-making; economic, social, and cultural stratification; and power, place, and history to reduce health disparities and inequities.

Students obtain strong skills for the planning, design, implementation, communication, and evaluation of preventive strategies and interventions at the community and societal levels. Students also obtain skills aimed at understanding the impact of social and behavioral factors, including structural and systemic factors, on health and the distribution of health across populations and in communities globally.

Graduate Degree Programs

- Community Health Sciences, MPH (p. 77)
- Health Communication and Education, MPH (p. 79)
- Leadership, Advocacy, and Equity, DrPH (p. 99)
- Maternal and Child Health, MPH (p. 82)
- Nutrition, MPH (p. 84)
- Nutrition, MSPH (p. 86)
- Social, Behavioral, and Population Sciences, MPH (p. 87)
- Social, Behavioral, and Population Sciences, PhD (p. 89)

The MPH in Community Health Sciences is only offered online.

Graduate Certificates

- Health Education and Communication Certificate (Graduate) (p. 81)
- Maternal and Child Health Certificate (Graduate) (p. 81)
- Violence Prevention Certificate (Graduate) (<https://catalog.tulane.edu/public-health-tropical-medicine/social-behavioral-and-population-sciences/violence-prevention-certificate/>)

Graduate Internships

- Dietetic Internship (p. 79)

Courses

Social, Behavioral, and Population Sciences (SBPS)

SBPS 6030 Social and Behavioral Aspects of Health (3)

This course covers the behavioral, social, and cultural aspects of health and disease. Students identify how behavioral and social theories across levels of the social ecological model are relevant to social and behavioral health issues and interventions. Central to the learning experience is a comprehensive course project, where students conduct an evidence-based literature review, and apply theory to inform interventions to improve health.

SBPS 6140 Development of Leadership and Communication Skills in Public Health (3)

This course combines practical, skills-based exercises with strategic thinking approaches to aid the student to master several of the public health cross-cutting competencies objectives related to leadership, communication and professionalism. It has been tailored to focus on personal leadership and communication skill development and is thus of interest to all public health students. Its goals are to clarify each student's intended professional path; enhance his/her ability to utilize a strategic approach for personal and professional leadership development; and to increase each student's self-efficacy in utilizing communication, oral and written, to achieve organizational leadership.

SBPS 6150 Taiwan Strategies to Community Health Practices (3)

This course provides a field study opportunity in Taiwan for the aim of learning global public health practices, cross-culture communication and interaction, and alternative community health strategies. 10 – 12 students from partner Universities in Taiwan (Asia University and China Medical University) are paired with 10-12 students from Tulane University to form cross-cultural teams to research and develop a plan to address community health concerns at the national, provincial, city, provincial and/or community levels. Lectures and discussions will be provided by experienced faculty from university partners, government officials, and field-based practitioners in Taiwan. The cross-cultural student teams are required to make a power point presentation on their identified community health concerns and submit a written field report.

SBPS 6260 Violence Prevention Studio Seminar (1)

This course is designed to create an interactive and unique learning environment for students, community partners, and Violence Prevention Institute faculty through strengthening the partnerships between academic institutions and community organizations focused on preventing violence as well as mitigating the negative effects of various forms of violence. Seminars will include presentations by community partners and faculty from the Violence Prevention Institute. Community partners will speak about the violence prevention programs and strategies utilized by their organizations. Seminars will also include presentations by Violence Prevention Institute faculty focused on empirical approaches and competencies necessary for effective academic and community partnerships seeking to address the complex issues related to violence.

SBPS 6340 Monitoring and Evaluation of Health Programs (3)

This course provides students with an introduction to monitoring and evaluation, a widely valued set of skills in both the domestic and international contexts. The course content includes rationales for evaluation; the political, organizational, theoretical aspects of evaluation; and methods for implementing a sound evaluation. Students will gain practical experience in translating concepts into the development of an evaluation plan for actual programs. To avoid course material redundancy, students attending this course should not enroll in IHSD 6300.

SBPS 6360 Sexual Health - A Public Health Perspective (3)

Sexual health is a growing component of public health outreach. The goal of this course is to provide students with a foundational understanding of sexual health from a public health perspective. Students will (1) critically examine and discuss common sexual health issues addressed by public health practitioners, their epidemiology, and their underlying social determinants, (2) learn to recognize and understand key methodological considerations in the measurement of sexual behavior and sexual health outcomes, and (3) gain knowledge about key theoretical foundations of sexual health promotion and their application to sexual health behavior change. Content topics include HIV/STIs; interpersonal violence; pregnancy; pornography, sex work, and erotic behaviors; adolescent reproductive health; and sexual function, pleasure, and satisfaction.

SBPS 6460 Child Health and Development in Public Health (3)

This course covers child health and development addressing important health issues in each stage of childhood including the biologic, genetic, psychosocial, and environmental influences upon those issues, the medical aspects of their management and most importantly, fundamental public health interventions to address them. Population based approaches working to address disparities in the maintenance of health and access to primary and secondary care of children will be presented with a focus on children with special health care needs, children within immigrant families, children with developmental and psycho-social challenges, and other groups of children who carry a disproportionate burden of disease.

SBPS 6490 Key Policies and Programs in Maternal and Child Health (3)

This course examines maternal and child health policy and programs in the U.S. with a focus on the history, organization, delivery, and financing of maternal and child health, and related public health and social services at the national, state, and local levels. The course emphasizes the evolving Maternal and Child Health (MCH) -Title V Block Grant program legislative mandates and federal policies; the national, state, and local structures and roles in delivering MCH services; and how MCH fits into the overall U.S. public and private health systems.

SBPS 6500 Violence as a Public Health Problem (3)

This introductory elective course is designed to give an overview of the problem of violence as viewed from a public health perspective. We will look at the epidemiology of violence (scope, causes, risk factors, and consequences) alongside public health approaches to the problem. The course aims to balance a review of the problem with ideas and evidence for solutions. Local academic and community members in the field will lend their expertise to help students understand and address violence as a public health problem. Students will have opportunities to build skills through violence prevention training, critical analysis of media and film, and final course projects analyzing major violence-related topics.

SBPS 6510 Essential Issues in Maternal and Child Health (3)

This course explores evidence-based issues and trends in maternal and child health offering an introduction to MCH-related issues from a public health perspective with an emphasis on the social determinants of health. The purpose of the course is to identify the individual, social, economic and environmental issues currently affecting women, men and families, as well as infants and children using a life course approach. Students will develop written and oral presentations addressing scientific, clinical, social and political aspects of MCH issues.

SBPS 6610 Local Food Systems & Nutrition (2)

This course examines community influences on food habits, dietary behaviors, and nutritional outcomes. Socioeconomic and racial/ethnic inequities in access to healthy food are described as are cultural influences on food choice. Examples of applied interventions to address nutrition problems are examined throughout the local food system. New Orleans, with its rich culinary history and active engagement in food and nutrition programming serves as the backdrop for the study of these issues. The course includes field visits to local community organizations working on food and nutrition programming.

SBPS 6690 Essentials of Public Health Nutrition (3)

This graduate-level course is designed to provide an overview of the foundational elements of public health nutrition. This will include a focus on three essential components: (1) principles of human nutrition, (2) biological mechanisms influencing nutrition in health and disease, and (3) major public health nutrition programs and emerging issues. Specific topics will include essential nutrients with emphasis on their sources, function, and metabolism in the human body; nutrition needs throughout the life course; nutrition in chronic disease; national and global public health nutrition initiatives; current challenges and innovations. An emphasis will be placed on the major nutrition-related problems in the world today and evidence-based strategies to address them.

SBPS 6700 Social Innovation Tools (3)

This course offers students a toolkit of skills for complex systems thinking, systems-led leadership, and human-centered design (HCD) to prepare graduates to address complex societal problems such as climate change, violence, and poor access to health. Students learn how to map systems, identify entry-points, reframe messy problems into smaller "challenges", and address them in human-centered, creative, collaborative ways with stakeholders. Training in design thinking is offered via hands-on workshops, complemented by a theoretical framing of design for public good. Examples are drawn from public health, education, and sustainability; they span domestic, international, and global contexts. Students must participate in the Fast 48 workshop at an additional fee.

SBPS 6750 Population Nutrition Assessment (3)

This course offers a thorough review of the tools used for the assessment of nutritional status of populations. Topics include anthropometric, biochemical, and socioeconomic indicators of nutritional status; methods for the collection, analysis, and interpretation of dietary data; measurement of household food security; and the use of data from nutrition monitoring and surveillance sources. Students will get exposure to major nutrition problems and their causes in variety of country contexts. They will also develop their abilities "to tell a story with numbers." Analyzing data, interpreting the results, and communicating about these results verbally is a necessary part of the planning and programming of nutrition and health interventions.

SBPS 6770 Food and Nutrition Policy (3)

This course surveys domestic policies and programs that affect nutrition at the population level. Subjects include: dietary policy, including the politics of the food guide pyramid; food labeling policy; food access policy, including the U.S. food assistance programs; food safety and food supplies policy; the obesity epidemic, including the role of the food industry; environmental determinants of nutrition outcomes and efforts to improve them; actors and agencies involved in making policy; and nutrition advocacy.

SBPS 6780 Nutrition in Low- and Middle-Income Countries (3)

The purpose of the course is to familiarize students with the current public health nutrition-related issues affecting low- and middle-income countries (LMICs), including the co-existence of under and over nutrition (i.e., double burden of malnutrition), issues with infant feeding behaviors, iron-deficiency anemia and other relevant micronutrient deficiencies, food insecurity and the impact of climate change on diets. Students will learn about the biological, social, and environmental factors influencing these issues as well as the nutrition-specific and nutrition-sensitive policies designed to address them.

SBPS 6800 Community Training Methodologies (2)

This course introduces students to concepts and methods which will enable them to effectively train adults to perform health care functions in the community. Knowledge about adult learning is coupled with exercises designed to help develop a positive attitude toward participatory learning. Students learn how to "train trainers" in the community to help improve community health outcomes. Emphasis will be placed upon developing a positive attitude toward interactive learning and combining this with a variety of training methodologies which will together help to create an atmosphere where communities are empowered to improve their health.

SBPS 7010 Health Communication Theory and Practice (3)

This course is designed to examine research and practice in health communication, with a special focus on how health media campaigns are planned and executed in order to stimulate change in knowledge, attitudes, behavior and subsequent health outcomes. This examination will include the review of the history of health communication campaigns, the theoretical foundation for the design and implementation of campaigns, and selected case studies of campaigns. Practical aspects of designing campaigns and media messages will be covered.

Prerequisite(s): (SBPS 6030* or GCHB 6030*) and (SPHL 6080* or 6880).

* May be taken concurrently.

SBPS 7100 Public Health Policy & Practice (3)

This course is designed to deepen the students' understanding of public health practice and use of policy to improve population health. There is a strong focus on governmental public health services delivered by federal, state, and local government, along with the services and organization of non-profits that are involved in the delivery of public health services. Students will actively engage in simulations of those roles through real world case studies, team projects, scenarios, and exposure to prominent individuals working and practicing in the field of public health and policy. Students will develop skills related to policy development and advocacy and integration of public health practice, policy development and integration with the clinical sector.

SBPS 7160 HIV Surveillance in Hard to Reach Populations (2)

In the context of health sciences, sex workers, people who inject drugs, men who have sex with men, transgender persons, migrants, homeless persons, youth living on the streets and other stigmatized and vulnerable populations, are at higher risk for HIV, TB, hepatitis, and other infections. Measuring the behavioral and biological risks affecting these populations is essential to creating effective prevention programs, allocating funding and modeling future epidemic scenarios. Respondent driven sampling (RDS) is a highly robust and effective method to recruit samples of 'hard-to-reach' populations that are connected through social networks. This course will provide participants with practical and relevant up-to-date information about the methodological and theoretical issues and analytical concerns from one of RDS's world-leading practitioner. It will draw on a variety of lectures, presentations of actual field research, hands-on analysis and practical experience in designing surveys using RDS.

SBPS 7200 Development Issues, Theory, & Measurement (3)

This seminar reviews major theories and debates about social, human, and economic development in the developing world, especially Africa, Latin America, and South Asia. These concepts are useful to social health researchers and practitioners aiming to advance human well-being. The first 3 weeks cover economic growth, modernization, neoliberalism, sustainable development, human development/the capabilities approach, human rights, and Marxian theory/dependency schools. The second 3 weeks review critical perspectives: post-structuralism, post-colonialism, feminist theories, complexity and dynamic systems, and social innovation. Ethnographic case studies of development and global health projects reveals how assumptions and practices translate into real-life "development" projects that can fail to address key issues and cause unintended outcomes that have effects. The readings invite us to think differently about knowledge, evidence, culture, participation, globalization, and sustainability; we consider the role of foreign aid and relevant development actors.

SBPS 7220 Community Organization: Community Work for Social Justice (3)

This course focuses on community work as a major approach to social change and highlights community participation as a means to address social determinants of health. The course explores concepts relevant to community engagement and examines how gender, race, ethnicity, power, and structural racism inform community work. The roles of community members, institutions, public health practitioners and others in improving or hindering community work is also examined. The course stresses critical thinking and application of community work skills with an emphasis on participatory approaches, empowerment, intersectionality, community assessment, group process for partnership development, and evaluation of community-level programs. Common strategies for community-level change will be discussed in the context of case study reviews.

SBPS 7250 Evidence-Based Research Methods in Social and Behavioral Sciences (3)

Research methods are at the center of our approach to knowledge and understanding in public health. Theories are supported by empirical evidence. This class provides an introduction to this way of thinking, i.e., into methodology or the "science of finding out." The purpose of this course is to train students in how to collect and analyze data on social and behavioral phenomena in a rigorous and scientific manner. This knowledge requires an understanding of three different components: 1) inquiry and research design, 2) data collection, and 3) data analysis.

Prerequisite(s): (SPHL 6050 or 6850) and (SPHL 6060 or 6860).

SBPS 7260 Social Marketing (3)

This skills-based course examines the application of marketing principles to social and public health problems. Basic and advanced social marketing principles and methods are explored, and a framework for carrying out social marketing is provided. The course covers the features, components, process and methodology of social marketing, and has a focus on real world applications. Skills building exercises are incorporated as both in-class and outside homework assignments. Exam(s) assess student knowledge and application of social marketing principles and elements. Students are required to prepare brief presentations throughout the semester that demonstrate understanding and application of course material. A final project is designed to apply and integrate material from the entire class.

Prerequisite(s): SPHL 6080* or 6880.

* May be taken concurrently.

SBPS 7280 Qualitative Methods I: Basic Foundations (3)

Qualitative methods can be highly useful in the conduct of community-based population health research and evaluation. Students will receive foundational training in the design, implementation, analysis, and synthesis of qualitative methods. Emphasis will be given to the appropriate uses of commonly used methods and analytic procedures in community-based health research and evaluation. This course is for graduate students in SPHTM.

SBPS 7290 Qualitative Methods II: Theory and Methods (3)

This course – the second in a two-part sequence – builds on Qualitative Methods I (SBPS 7280) to provide students hands-on experience analyzing, interpreting, and writing up the results of qualitative research. The goal of this course is to provide students with skills in qualitative data analysis, interpretation, and writing. In SBPS 7280, students were trained in NVivo. In SBPS 7290, students will apply these skills to a dataset provided in the course to explore different analytical approaches and develop analyses.

Prerequisite(s): SBPS 7280.

SBPS 7510 Maternal Child Health: The Life Course Perspective (3)

In this course students are taught to use a life course perspective to approach important issues of public health. As Neil Halfon put it, “the life course perspective seeks to address the causes of poor health trajectories [which] require addressing the nested social ecology of health development.” Over the semester, basic principles of human development, from preconception to end of life, are explored and examined through the conceptual framework provided by life course theory. Particularly, students will learn about the mechanisms, timing and dynamics of health as a developmental process, which can inform development of early interventions. The course will build upon Ecological and Transactional models of Life Span Development and introduce the rapidly expanding evidence base for life course theory. In addition to providing a conceptual framework for understanding public health issues, the course will illustrate the application of this framework to gain practical insight into maternal and child health.

Prerequisite(s): SBPS 6030 and 6510.

SBPS 7950 Dietetic Internship I (6)

Supervised practice for dietetic intern students with DPD Verification statements. Experiences are provided in food service management, medical nutrition therapy, and community nutrition at various facilities in southeast Louisiana.

SBPS 7960 Dietetic Internship II (6)

Supervised practice for dietetic intern students with DPD Verification statements. Experiences are provided in food service management, medical nutrition therapy, and community nutrition at various facilities in Southeast Louisiana.

Prerequisite(s): SBPS 7950.

Course Limit: 2

SBPS 7980 Professional Practice Seminar (1)

This is a capstone course, all elements of which are designed to integrate and synthesize competencies in nutrition. As such, this course and its final report satisfies the Integrative Learning Experience for students in the MPH Nutrition Program. Specifically, it will enhance Nutrition Program or Foundational competencies, such as those in programming, evaluation, policy advocacy, communication, team building, ethics, cultural-competence, leadership, and professional development that students have developed throughout the program. Students will describe the challenges they face in the workplace either in their Applied Practice Experience or in another professional setting. They will develop solutions to these challenges in a team-building environment. Students will also learn about professional employment, continuing education, professional associations, and employment resources throughout the field of public health nutrition

SBPS 7990 Independent Study (1-3)**SBPS 8200 Evaluation Theory (3)**

Evaluation theory provides the conceptual framework for assessing the effectiveness of evaluation practice. This course presents theories of evaluation, and the theoretical assumptions that underlie evaluation organized around the five components that Shadish, Cook, and Leviton consider to be important to evaluation theory: theories of knowledge, value, use, social programming and practice. While the course begins with a review of evaluation methods and data sources, the seminar focuses on the key figures in the field and exemplary evaluation designs and uses. This is an active learning course applying evaluation principles. Students will be required to participate actively through preparing seminar papers and participating in class discussions.

Prerequisite(s): SPHL 6080 and SBPS 6340.

SBPS 8220 Community Organizing for Social Change (3)

This advanced course is intended for DrPH students to develop a scholar-activist approach to public health practice. We will focus on community organizing as a social change strategy, looking to historical and contemporary examples of social movements. Students will read and synthesize literature across disciplines to gain an understanding of community organizing frameworks and strategies. Students will apply the toolkits of leading community organizers such as the Midwest Academy to gain experience in community analysis and planning.

SBPS 8700 Maternal and Child Health Advanced Methods Seminar (1)

The Maternal and Child Health Advanced Methods Seminar will provide a weekly series of presentations that allow students to deepen their understanding of contemporary challenges in empirical, applied and translational maternal and child health research and practice. Broadly, topics will include innovative research areas, emerging methodologies, and effective solutions for advancing maternal and child population health equity. The seminar series is intended to complement and expand knowledge and skill-building in the areas of life course theory, maternal and child population health sciences, and reproductive epidemiology. The goal of the seminar is to assist participants in integration of learning across program curricula.

SBPS 8750 Social Determinants of Health I: Theory (3)

This course delves into the broad area of social determinants of health from a theoretical perspective. It is geared towards doctoral students, with an emphasis on preparing students to conduct theory-driven research in the social determinants of health. The two overarching goals for the course are for students (1) to develop knowledge about the etiology and theoretical underpinnings of social determinants of health, and (2) to develop skills in crafting a compelling, theory-based rationale for a proposed research study on one social determinant of health. These goals are accomplished through readings, class discussion, two presentations, and a culminating paper. Individual mentorship is also provided to students as they develop their ideas.

SBPS 8760 Social Epidemiology/Social Determinants of Health II (3)

The goal of this course is to prepare students for practical applied research on the social determinants of health. The first half of the course will focus on: 1) measurement of key constructs such as inequality and racism and 2) common study designs such as multilevel and natural experiments. The second half of the course will focus on: 1) common biases and limitations to social determinants research and methods used to address limitations, and 2) analytic strategies and interpretation, including linear and non-linear multilevel regression. By the completion of the course, the student will have the skills necessary to design, analyze and present data from a range of studies that consider social determinants of health.

Prerequisite(s): (SPHL 6050 or 6850) and (SPHL 6060 or 6860) and (EPID 7120 or IHSD 8250).

SBPS 8770 Social Determinants of Health in Public Health Practice (3)

This advanced doctoral level course is designed for students to display competence in the application of social epidemiological methods to analyze and address the relations between social factors and health and health disparities. Practical tools and skills will be introduced to conduct health equity research and translate evidence-based strategies into practice. Students will demonstrate an understanding of the strengths and limitations of various study designs and analyses used in social epidemiology. Experience analyzing and interpreting data surrounding various public health issues from a social epidemiological framework will be provided through classroom sessions and homework assignments. Students will also review and critique empirical applications in the public health field.

Prerequisite(s): SPHL 6060 or 6860.

SBPS 8800 Senior Graduate Research Seminar I (0)

This course is required for all doctoral students in the SBPS department for the duration of their tenure as doctoral students. It is intended to increase student's proficiency in 1) analyzing and interpreting current public health research, as represented in peer review journals; 2) determining how to apply research findings to the practice of public health, especially by developing community-based programs for disease prevention; and 3) presenting and discussing research-related topics. These objectives will be attained through a variety of activities, including faculty-and student-led discussions of required readings; faculty and student oral presentations of ongoing research projects (including the prospectus and dissertation research), and small group projects. All doctoral students will be expected to make a research-related oral presentation at least once.

SBPS 8830 Senior Graduate Research Seminar II (1)

The Doctoral Seminar is conceptualized as a series of content modules that provide a breadth of foundational exposure and training to departmental doctoral students over their doctoral tenure. These modules are intended to complement and expand knowledge in areas of public health and professional development that students might not receive in their current course curricula. The doctoral seminar is required of all students during their program tenure. The Doctoral Seminar serves as a forum where students and faculty can meet regularly to exchange ideas, and discuss foundational areas of public health from multiple perspectives, including empirical, programmatic, systemic, and policy. 2-3 foundational content modules are covered each semester and include 3-5 related seminars offering multiple perspectives on the topic. At the end of the module, there is a session devoted to critical reflection on, and discussion of, the various seminars within the module. Students are required to write a 2-3 page reflection about what they learned across the seminars in the module, and thoughts that it triggered for them. These reflections are shared and discussed. The seminar will consist of several types of presentations: 1) faculty presentations on current research, 2) guest presentations on community-based, governmental, policy-driven, and/or systemic initiatives, 3) student presentations on literature supporting their research project, 4) student presentations on current research in progress, and (5) professional development seminars.

SBPS 8990 Independent Study (1-3)

Community Health Sciences, MPH

The Master's of Public Health Degree in Community Health Sciences focuses on developing knowledge and skills to work with communities in order to address health disparities and improve quality of life for its members. Using a social and behavioral lens, this unique program teaches students how to plan, design, implement, and evaluate community-based interventions to promote health and well-being. Effective translation of scientific evidence and active engagement within the community will inform this community health approach.

Program Competencies

Students who graduate from this degree program can expect to develop the following competencies as they successfully meet and complete the program degree requirements.

- Analyze public health issues within the context of a specific community and environment, generate solutions, and apply solutions with communities.
- Design theoretically informed and culturally appropriate interventions by applying public health theory and principles to a diverse set of problems at the community level.
- Develop an effective plan to monitor and evaluate a community-based public health intervention or program based on translation of scientific evidence.
- Collaborate effectively with members of a community through engagement in the process of public health programming.
- Effectively communicate in both oral and written forms to a variety of audiences and purposes related to community health.

This program only accepts online students.

Requirements

The MPH degree in Community Health Sciences requires a total of 45 credits that include:

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
SBPS 6030	Social and Behavioral Aspects of Health	3
SPHL 6100	Health Equity	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 6700	Social Innovation Tools	3
SBPS 7010	Health Communication Theory and Practice	3
Elective Courses		15
SPHL 9980	Applied Practice Experience	0
SPHL 7950	Integrative Learning Experience	0
Total Credit Hours		45

Model Course Schedule

This is an example of a course schedule. Students work with their faculty and staff advisors to create a course schedule to meet their individual needs.

Year 1		Credit Hours
Fall		
SPHL 6020	Foundations in Public Health	3
SBPS 6030	Social and Behavioral Aspects of Health	3
SPHL 6050	Biostatistics for Public Health	3
Credit Hours		9
Spring		
SPHL 6060	Epidemiology for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
SPHL 6100	Health Equity	3
Elective		3
Credit Hours		12
Summer Session		
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 7010	Health Communication Theory and Practice	3
SPHL 9980	Applied Practice Experience	0

Elective		3
Credit Hours		9
Year 2		
Fall		
SPHL 6070	Health Systems Policy and Management	3
SBPS 6700	Social Innovation Tools	3
Elective		3
Credit Hours		9
Spring		
SPHL 7950	Integrative Learning Experience	0
Electives		6
Credit Hours		6
Total Credit Hours		45

Dietetic Internship

Overview

The Tulane Dietetic Internship Program is a graduate-level supervised practice program for students who would like to become Registered Dietitians. It is a full-time non-degree program with a community emphasis. The dietetic internship at Tulane University School of Public Health is currently granted accreditation by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, 120 South Riverside Drive, Suite 2190, Chicago, IL 60606. 800/877-1600, ext 5400.

The mission of the Tulane Dietetic Internship is to prepare entry-level Registered Dietitians for leadership in community health practices through education, research and practice directed at health promotion and disease prevention among individuals and their communities. The Dietetic Internship program will give the students the opportunity to apply clinically the nutrition and food management knowledge that they have learned in their Didactic Program in Dietetics (DPD).

The purpose of the Tulane Dietetic Internship is to provide a comprehensive and intensive supervised practice experience, with the opportunities to acquire the competencies necessary to function as an entry-level practitioner and to make the student registration eligible (to be qualified to register for the Registered Dietitian [RD] Exam).

Requirements

The Tulane Dietetic Internship lasts 10 months and provides practical training and field experience in various community, clinical, and food service and management settings in the greater New Orleans area. The program accepts 20 interns per year. All Interns must have a master's degree in any subject to be eligible for a DI verification statement. 12 hours from the Tulane DI may be substituted for 12 hours of the Tulane Nutrition master's program. The internship begins in the Fall semester and is completed in June. Interns must successfully complete all rotations and exams to receive a verification statement and be eligible to take the CDR Registration Examination in Dietetics. Interns must follow the policies/procedures required by the rotation facilities. Interns must remove facial jewelry and tattoos must be covered with clothing while at internship rotation sites.

For more information, contact the Tulane Dietetic Internship Director Marsha Piacun at di@tulane.edu.

Health Communication and Education, MPH

The MPH in Health Education and Communication prepares graduates to work in the areas of health promotion and disease prevention in order to decrease health disparities and advance health equity. Students' training will focus on effective methods to support behavior change at the individual and community levels. Students will gain a comprehensive skillset in intervention design, evaluation, community engagement and organization, health communication, and qualitative and quantitative community-based participatory research methodologies that can be applied to any public health issue and setting. This MPH program also prepares students to successfully take the Certified Health Education Specialist (CHES) exam.

Program Competencies

Students who graduate from this degree program can expect to develop the following competencies as they successfully meet and complete the program degree requirements.

- Assess individual and community needs for health education/communication.
- Design a theory-based public health intervention or program.
- Apply health education and communication strategies to interventions and programs.

- Develop a plan to evaluate a public health intervention or program, based on a theory of change.
- Identify health education and communication resources.
- Explain how to promote health education through advocacy campaigns and policies.

The MPH in Health Communication and Education is no longer accepting applications.

Requirements

The MPH Degree in Health Education and Communication requires a total of 45 credits that includes:

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
SBPS 6030	Social and Behavioral Aspects of Health	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 7010	Health Communication Theory and Practice	3
SBPS 7220	Community Organization: Community Work for Social Justice	3
SBPS 7260	Social Marketing	3
SBPS 7100	Public Health Policy & Practice	3
or SBPS 7250	Evidence-Based Research Methods in Social and Behavioral Sciences	
Electives		
SPHL 9980	Applied Practice Experience ¹	0
SPHL 7950	Integrative Learning Experience ²	0
Total Credit Hours		45

¹ The Applied Practice Experience (APE) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience. The APE allows students to demonstrate attainment of at least five competencies, including at least 3 from the foundational competencies (CEPH Criterion D2 (<https://sph.tulane.edu/ceph-d2-mph-foundational-competencies/>)). The APE is conducted after completion of the foundational courses. An APE report summarizing the field experiences is required.

² All students must complete an Integrative Learning Experience (ILE) that demonstrates the synthesis of foundational and concentration competencies.

Model Course Schedule

Course ID	Title	Credits
Year 1, Fall Semester		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
SBPS 6030	Social and Behavioral Aspects of Health	3
Year 1, Spring Semester		
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 7260	Social Marketing	3
Year 1, Summer Semester		
SPHL 9980	Applied Practice Experience	0
Year 2, Fall Semester		
SBPS 7010	Health Communication Theory and Practice	3

SBPS 7100	Public Health Policy & Practice	3
SBPS 7220	Community Organization: Community Work for Social Justice	3
Elective		3
SPHL 7950	Integrative Learning Experience	0
Year 2, Spring Semester		
Electives		9
Total Credit Hours		45

Health Education and Communication Certificate (Graduate)

Overview

The Health Education and Communication (HEDC) certificate prepares students to work in the areas of health promotion and disease prevention in order to decrease health disparities and advance health equity. Students' training will focus on effective methods to support behavior change at the individual and community levels. Students will gain a comprehensive skillset in intervention design and evaluation, community engagement and organization, health communication, and social marketing that can be applied to any public health issue and setting. The HEDC certificate includes 12 semester credits for process courses in partial fulfillment of the required 25 hours of coursework to qualify to sit for the CHES exam.

Requirements

Year 1		Credit Hours
Fall		
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 7010	Health Communication Theory and Practice	3
SBPS 7220	Community Organization: Community Work for Social Justice	3
SBPS 7260	Social Marketing	3
Credit Hours		12
Total Credit Hours		12

* Additionally, the two required foundational MPH courses (SPHL 6020 Foundations in Public Health (3 c.h.) and SPHL 6080 Design Strategies in Public Health Programs (3 c.h.)) will also contribute to the student's preparation to take the CHES exam. However, they are not part of the required HEDC certificate courses.

This graduate certificate is not eligible for federal financial aid.

Maternal and Child Health Certificate (Graduate)

The Certificate in Maternal and Child Health (MCH) provides the knowledge and skills that will prepare students to contribute to community programs, research, and other interventions aimed at improving the health and well-being of vulnerable and underserved women, children, and families. Students will gain knowledge about emerging issues in MCH, MCH policy and governmental services, evidence-based programming and the MCH population from a life course perspective. All of the relevant courses are in SBPS. The MCH certificate courses pair well with other public health degree courses.

This graduate certificate serves as a secondary area of study for SPHTM students enrolled in the MPH, MSPH or MPHTM degrees.

Offered by: Department of Social, Behavioral, and Populations Sciences

Faculty Lead: Shokufeh Ramirez, PhD

Certificate Purpose

The courses required for the certificate provide students with a background in the biologic, sociocultural, behavioral, and policy issues that impact the health of the MCH population. The certificate is conceptualized with a sensitivity to cultural diversity within a global context. Students will be able to undertake the process of planning and evaluating community programs with a special emphasis on women and children.

Eligible Students

This certificate program is designed for current MPH, MSPH, MPH&TM, and MHA students who are not pursuing the Master of Public Health in Maternal and Child Health (MCH). Only 3 credit hours can be counted toward both the degree and certificate. The certificate is a complement to degrees in other areas.

Certificate Competencies

Students who earn the Certificate in Maternal and Child Health will be able to:

- Recognize the different strengths, needs, values and practices of diverse cultural, racial, ethnic, and socioeconomic groups and determine how these factors affect health status, health behaviors, and program design;
- Describe the historical development, scientific basis, financing and structural organization of MCH public policies and practices in the United States for federal, state, and local agencies and programs serving MCH populations;
- Evaluate and use theories and principles of individual and family growth and development from an intergenerational and lifespan perspective;
- Evaluate evidence-based methods that contribute to the translation of research into programming and practice.

Number of Credits Required for Completion: 15

Requirements

Course ID	Title	Credits
SBPS 6460	Child Health and Development in Public Health	3
SBPS 6490	Key Policies and Programs in Maternal and Child Health	3
SBPS 6510	Essential Issues in Maternal and Child Health	3
SBPS 7510	Maternal Child Health: The Life Course Perspective	3
SBPS 7250	Evidence-Based Research Methods in Social and Behavioral Sciences	3
Total Credit Hours		15

Students should consult with their academic advisor to determine if the MCH certificate fits their professional and academic goals and how best to plan their graduate course schedule.

Maternal and Child Health, MPH

The Maternal and Child Health (MCH) Program provides public health education in:

- The biologic, sociocultural, behavioral, and policy issues that impact the health of the MCH population.
- A well-grounded historical context for and current federal, state and local governmental policies and services in the MCH arena.
- Underlying causes of major health problems and disparities facing the MCH population.
- Approaches to properly address these problems and the professional skills required for an MCH career whether nationally or internationally.

Students will gain the skills needed to develop, implement, and evaluate interventions with a special emphasis on women, children, and families over the lifespan. The MCH concentration is conceptualized with sensitivity to cultural diversity within a global context.

Program Competencies

Students who graduate from this degree program can expect to develop the following competencies as they successfully meet and complete the program degree requirements.

- Describe the historical development, scientific basis, financing and structural organization of MCH public policies and practices in the United States for federal, state, and local agencies and programs serving MCH populations.
- Determine how different strengths, needs, values and practices of diverse cultural, racial, ethnic and socioeconomic groups affect health status, health behaviors and program design.
- Evaluate theories and principles of individual and family growth and development from an intergenerational and lifespan perspective.
- Apply appropriate research methods to the evaluation of MCH program and practices.
- Evaluate evidence-based methods that contribute to the translation of research into programming and practice.
- Recognize principles of ethical conduct in program management, research and data collection and storage.
- Identify, assess and prioritize health problems at the level of the community
- Develop a plan to monitor and evaluate a public health intervention or program, based on a theory of change.

Requirements

The MPH degree in Maternal and Child Health requires a total of **45 credits** that includes:

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
SBPS 6030	Social and Behavioral Aspects of Health	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 6490	Key Policies and Programs in Maternal and Child Health	3
SBPS 6510	Essential Issues in Maternal and Child Health	3
SBPS 7250	Evidence-Based Research Methods in Social and Behavioral Sciences	3
SBPS 7510	Maternal Child Health: The Life Course Perspective	3
Elective Courses		12
SPHL 9980	Applied Practice Experience ¹	0
SPHL 7950	Integrative Learning Experience ²	0
Total Credit Hours		45

¹ The Applied Practice Experience (APE) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience. An APE report summarizing the field experiences is required.

² All students must complete an Integrative Learning Experience (ILE) that demonstrates the synthesis of foundational and concentration competencies.

Model Course Schedule

Year 1		Credit Hours
Fall		
SBPS 6030	Social and Behavioral Aspects of Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
SBPS 6510	Essential Issues in Maternal and Child Health	3
Credit Hours		12
Spring		
SPHL 6020	Foundations in Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 6490	Key Policies and Programs in Maternal and Child Health	3
Organize the Practicum		
Credit Hours		12
Summer Session		
SPHL 6070	Health Systems Policy and Management	3
SPHL 9980	Applied Practice Experience	0
Credit Hours		3
Year 2		
Fall		
SBPS 7250	Evidence-Based Research Methods in Social and Behavioral Sciences	3
Electives		6
Credit Hours		9
Spring		
SBPS 7510	Maternal Child Health: The Life Course Perspective	3
Electives		6

SPHL 7950	Integrative Learning Experience	0
Credit Hours		9
Total Credit Hours		45

Nutrition, MPH

The MPH in Nutrition program emphasizes the social and environmental determinants of nutrition and food security and how to solve them through nutritional assessment of populations, community nutrition actions, health promotion programs, and food and nutrition policies. The program trains future public health nutritionists to manage programs and shape policies that improve the nutritional health and food security of populations. A full spectrum of contexts is addressed, including: humanitarian crises in low-income countries; sustainable development in low- and middle-income countries; and the dual burden problems of under- and over-nutrition common to middle and high-income countries.

The mission of the MPH Nutrition Program is to train future public health leaders to shape policies, administer programs, and to communicate to the public to improve nutritional health and food security of population groups across a full spectrum of economic context.

This program is a member of the Association of Graduate Programs in Public Health Nutrition (AGPPHN). (<https://www.aspph.org/>)

Program Competencies

Students who graduate from this degree program can expect to develop the following competencies as they successfully meet and complete the program degree requirements.

- Identify the major types of food and nutrition related health problems in domestic and international settings and the factors that cause them.
- Apply various methods in order to assess the food security and nutritional status of populations, including anthropometric, biochemical, clinical, dietary, and ecological methods.
- Describe and design a theory-based public health intervention or program.
- Develop a plan to monitor and evaluate a public health intervention or program, based on a theory of change.
- Conduct analysis of nutrition and food security data using statistical software, including the interpretation and communication of results.
- Describe major policies and programs that affect food, nutrition, and health and explain the logic of their impacts.
- Demonstrate proficiency in applying the concepts of public health programming and evaluation to food, nutrition, and health problems.

Prerequisites for admission into the MPH in Nutrition program include a basic nutrition course and a basic biological basis of health and disease course.

This program is no longer accepting new students. Check out the MSPH in Nutrition.

Requirements

The MPH Degree in Nutrition requires a total of **45 credits** that includes:

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
SBPS 6030	Social and Behavioral Aspects of Health	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 6750	Population Nutrition Assessment	3
SBPS 6770	Food and Nutrition Policy	3
SBPS 6780	Nutrition in Low- and Middle-Income Countries	3
Elective Courses ¹		15
SPHL 9980	Applied Practice Experience ²	0
SBPS 7980	Professional Practice Seminar ³	1
or SPHL 7950	Integrative Learning Experience	

- ¹ For Public Health Nutrition students, the nutrition faculty suggest the following electives:
- SBPS 6610 - Local Food Systems and Nutrition;
 - IHSD 6331 – Public Health and Nutrition in Complex Emergencies
 - IHSD 6790 - Food Security and Resilience

For students accepted into the HRSA funded MCH Nutrition Leadership Training Program, students, the nutrition faculty suggests selecting two of the following electives:

- SBPS 6140 – Developing Leadership and Communication Skills
- SBPS 6490 - Key Policy and Programs in Maternal and Child Health;
- SBPS 6510 - Essential Issues in Maternal and Child Health;
- SBPS 7510 - Maternal and Child Health: Lifecourse Perspective

Those who are eligible for the Tulane Dietetic Internship can fulfill these elective credits through the 12 internship course credits during year 2.

- ² The Applied Practice Experience (APE) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience.

- ³ All students must complete an Integrative Learning Experience (ILE) that demonstrates the synthesis of foundational and concentration competencies. The ILE for students in the MPH in Nutrition may be either the Public Health Analysis or the Capstone Course - SBPS 7980 Practice Seminar in Nutrition.

Model Course Schedule

Year 1		Credit Hours
Fall		
SPHL 6020	Foundations in Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
SBPS 6750	Population Nutrition Assessment	3
Credit Hours		12
Spring		
SPHL 6050	Biostatistics for Public Health	3
SBPS 6030	Social and Behavioral Aspects of Health	3
SBPS 6610	Local Food Systems & Nutrition	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
Credit Hours		12
Summer Session		
SPHL 9980	Applied Practice Experience	0
Credit Hours		0
Year 2		
Fall		
SPHL 6070	Health Systems Policy and Management	3
SBPS 6770	Food and Nutrition Policy	3
Electives		6
Credit Hours		12
Spring		
SBPS 6780	Nutrition in Low- and Middle-Income Countries	3
SPHL 7950 or SBPS 7980	Integrative Learning Experience or Professional Practice Seminar	0
Electives		6
Credit Hours		9
Total Credit Hours		45

Nutrition, MSPH

Overview

The MSPH Nutrition Program emphasizes the social and environmental determinants of nutrition problems and how to solve them through nutritional assessment of populations, community nutrition actions, health promotion programs, and food and nutrition policies. The program trains future public health nutritionists to manage programs and shape policies that improve the nutritional health and food security of populations. A full spectrum of contexts is addressed, including problems of sustainable development in low- and middle-income countries, and dual burden problems (under- and over-nutrition) common to middle- and high-income countries. Students who have previously completed an accredited didactic program in dietetics have the option to complete a Dietetic Internship jointly with the MSPH program.

Program Competencies

1. Identify the major types of food and nutrition-related health problems in domestic and international settings and the factors that cause them.
2. Apply various methods to assess the food security and nutritional status of populations, including anthropometric, biochemical, clinical, dietary, and ecological methods.
3. Develop a theory-based public health intervention or program
4. Develop a plan to monitor and evaluate a public health intervention or program, based on a theory of change.
5. Conduct analysis of nutrition and food security data using statistical software, including the interpretation and communication of results.
6. Examine the rationale of major policies and programs that affect food, nutrition, and health.
7. Apply the concept of public health programming and evaluation to food, nutrition, and health problems.

Requirements

The MSPH in Nutrition requires 45-46 credits that include:

Course ID	Title	Credits
SPHTM Foundational Requirements (15 credits)		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements (15-22 credits)		
SBPS 6030	Social and Behavioral Aspects of Health	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 6750	Population Nutrition Assessment	3
SBPS 6770	Food and Nutrition Policy	3
SBPS 6610	Local Food Systems & Nutrition	3
SBPS 6690	Essentials of Public Health Nutrition *	3
SBPS 6780	Nutrition in Low- and Middle-Income Countries *	3
SPHL 7950	Integrative Learning Experience (or SBPS 7980 **)	0-1
SPHL 9980	Applied Practice Experience	0
Electives (9-15 credits)		
Total Credit Hours		45-46

* Students with an undergraduate degree in nutrition or dietetics or equivalent coursework can waive these courses and take extra electives.

**This course meets the requirement for an Integrated Learning Experience.

Applied Practice Experience (SPHL 9980)

All students in the MSPH in Nutrition will complete an applied practice experience under the supervision of a qualified professional in public health. This part of the curriculum usually occurs after foundational courses are complete.

Integrated Learning Experience (SPHL 7950 or SBPS 7980)

To complete their Integrated Learning Experience, students in the MSPH Nutrition Program will enroll in a 1-credit capstone course (SBPS 7980 Professional Practice Seminar in Nutrition). As an alternative, students can enroll in a 0-credit (SPHL 7950) option to complete a thesis-like Public Health Analysis with a professor in the program.

Model Course Schedule

		Credit Hours
Year 1		
Fall		
SPHL 6020	Foundations in Public Health	3
SPHL 6080	Design Strategies in Public Health Programs	3
SBPS 6030	Social and Behavioral Aspects of Health	3
SBPS 6690	Essentials of Public Health Nutrition	3
Credit Hours		12
Spring		
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
SBPS 6610	Local Food Systems & Nutrition	3
Credit Hours		12
Summer Session		
SPHL 9980	Applied Practice Experience	0
SPHL 6050	Biostatistics for Public Health	3
Credit Hours		3
Year 2		
Fall		
SBPS 6750	Population Nutrition Assessment	3
SBPS 6770	Food and Nutrition Policy	3
Elective		3
Elective		3
Credit Hours		12
Spring		
SBPS 6780	Nutrition in Low- and Middle-Income Countries	3
SPHL 7950	Integrative Learning Experience (or SBPS 7980 **)	0-1
Elective		3
Credit Hours		6-7
Total Credit Hours		45-46

Students completing the MSPH in Nutrition with a Dietetic Internship begin courses in the summer semester and complete the Dietetic Internship in year 2.

Social, Behavioral, and Population Sciences, MPH

Overview

The MPH program in the Department of Social, Behavioral, and Population Sciences provides advanced training and field applications in basic and applied public health program development, evaluation, and research to promote health equity. Our mission is to define and address the societal and structural bases of health inequities. The program has a strong emphasis on social determinants of health and theoretically based multi-level models of health promotion. The program prepares individuals for further graduate training or professional practice where graduates progress to careers in national and international government agencies (i.e., the Centers for Disease Control and state health departments), global nonprofit organizations, public health institutes, and academia. Graduates are expected to have responsibilities that include program leadership, planning and evaluation, and applied research.

MPH in Social, Behavioral and Population Health Competencies:

- Construct multilevel models of health behaviors for health promotion interventions and research based on individual, community, and population level theories.
- Plan research and evaluation strategies to answer key social behavioral science research questions and evaluate programming, with a community-informed lens.
- Apply appropriate data management and analysis methods for social behavioral science research in the social determinants of health, health systems, and health policy to promote health equities and reduce health disparities.
- Formulate implications for research, policy, and practice from an interpretation of the results of social behavioral science research at the individual, community, and societal levels.
- Assess health inequities in the U.S. and globally through applying a social justice framework.
- Appraise one's own implicit biases and make a plan for minimizing their potential impact on personal and professional interactions.

Requirements

The MPH in Social, Behavioral and Population Sciences requires 45 credits that include:

MPH in Social, Behavioral and Population Sciences Requirements

Course ID	Title	Credits
SPHTM Foundational Requirements		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Course Requirements		
SBPS 6030	Social and Behavioral Aspects of Health	3
SBPS 7250	Evidence-Based Research Methods in Social and Behavioral Sciences	3
SPHL 6100	Health Equity	3
Two of the following courses:		6
SBPS 6340	Monitoring and Evaluation of Health Programs	
SBPS 6700	Social Innovation Tools	
SBPS 7100	Public Health Policy & Practice	
SBPS 7280	Qualitative Methods I: Basic Foundations	
SBPS 7290	Qualitative Methods II: Theory and Methods	
Electives		15
SPHL 9980	Applied Practice Experience	0
SPHL 7950	Integrative Learning Experience	0

Integrative Learning Experience

All students must complete an Integrative Learning Experience (ILE) that demonstrates the synthesis of foundational and concentration competencies.

Applied Practice Experience

The Applied Practice Experience (APE) is a supervised practice experience conducted in an agency or organization external to the university to gain practical experience.

Model Schedule

Year 1		Credit Hours
Fall		
SBPS 6030	Social and Behavioral Aspects of Health	3
SPHL 6100	Health Equity	3
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
Credit Hours		12
Spring		
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3

SPHL 6080	Design Strategies in Public Health Programs	3
SBPS 7250	Evidence-Based Research Methods in Social and Behavioral Sciences	3
Credit Hours		12
Summer Session		
SPHL 9980	Applied Practice Experience	0
Credit Hours		0
Year 2		
Fall		
SBPS 6340	Monitoring and Evaluation of Health Programs (or other methods option)	3
Electives		9
Credit Hours		12
Spring		
SBPS 6700	Social Innovation Tools (or other methods course)	3
Electives		6
SPHL 7950	Integrative Learning Experience	0
Credit Hours		9
Total Credit Hours		45

Social, Behavioral, and Population Sciences, PhD

The purpose of the PhD program in Social, Behavioral, and Population Sciences is to train experts who will advance the field of social, behavioral, and population sciences through research, development and application of theory, and teaching. The PhD is a highly specialized training program, integrating theory and research in a focused substantive area of global importance. Graduates will have in-depth expertise necessary for a research career, and are expected to develop careers in universities, medical schools, and other higher institutions of learning as faculty members or in research organizations globally.

Program Competencies

Upon completion of the program, the graduate should be able to:

1. Evaluate social and behavioral sciences theoretical approaches for guiding population health research.
2. Evaluate significant research questions in social, behavioral, and population sciences using qualitative and quantitative research methods.
3. Design independent research to investigate social or structural causes of population health inequities.
4. Create compelling written and oral presentations of social, behavioral and population science research results.
5. Design teaching and learning experiences grounded in pedagogical best practices in a chosen area of expertise.
6. Develop a grant proposal for a public health research study with a compelling scientific narrative, description of investigator capacity, timeline, and budget

The PhD in Social, Behavioral, and Population Sciences follows the SPHTM guidelines for all PhD degrees.

For further details on the PhD please see the Tulane University School of Public Health and Tropical Medicine

"Policies and Procedures for Doctoral Programs (

Requirements

The PhD degree in Social, Behavioral, and Population Sciences requires a total of 49 post-baccalaureate degree credits with at least 30 credits of doctoral study at Tulane SPHTM. Up to 18 credits may be applied from the MPH or equivalent master's degree.

Course ID	Title	Credits
PhD Foundational Courses		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SBPS 6340	Monitoring and Evaluation of Health Programs	3
BIOS 6290	Data Management and Statistical Computing	3

SPHL 6060	Epidemiology for Public Health	3
SBPS 7280	Qualitative Methods I: Basic Foundations	3

Total Credit Hours **18**

Course ID	Title	Credits
PhD Core Courses		
BIOS 6040	Intermediate Biostatistics	3
HPAM 8770	Health Services Research Methods	3
SPHL 8080	Public Health Pedagogy	3
SPHL 7500	Public Health Grant Writing	3

Total Credit Hours **12**

Course ID	Title	Credits
SBPS PhD Required Courses		
SBPS 8750	Social Determinants of Health I: Theory	3
SBPS 8760	Social Epidemiology/Social Determinants of Health II	3
SBPS 7290	Qualitative Methods II: Theory and Methods	3
SBPS 8800	Senior Graduate Research Seminar I (Fall)	0
SBPS 8830	Senior Graduate Research Seminar II (Spring)	1

Total Credit Hours **10**

Course ID	Title	Credits
Suggested Electives		
BIOS 8350	Clustered and Longitudinal Data Analysis	3
BIOS 8820	Multivariate Methods	3
HPAM 7100	Population Health Analytics	3
EPID 7120	Epidemiologic Methods II	3
EPID 7130	Observational Epidemiology	3
EPID 7160	Survey Methodology	3

Research Ethics

Students are required to take online research ethics training via CITI or another equivalent training program in research ethics. This certification must remain current throughout the program duration.

TA Requirement

All PhD students at SPHTM are required to serve as a teaching assistant (TA) for two SPHTM courses while enrolled in the PhD program. The courses for which the student will serve as a TA must be approved by the PhD advisor.

Comprehensive Exams

On completion of the coursework listed above, students will be required to pass a comprehensive examination (<https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Ftulane.app.box.com%2Fv%2Fgchb-comprehensive-july2018&data=04%7C01%7Cnicole%40tulane.edu%7C3ddfd5c5e5604acd18e108da1651a8f2%7C9de9818325d94b139fc34de5489c1f3b%7C0%7C0%7C637846837230678917%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C3000&sdata=KwTHIbAELH88s18qMXmOCahoLgQiqXr9y%2F7ov66hwl8%3D&reserved=0>) to demonstrate doctoral program competencies as well as knowledge related to their content area of expertise.

Prospectus

After passing the comprehensive exam a student must defend their prospectus. Upon agreement of all committee members, a student will defend the prospectus in an oral exam which is open to the school. Students need to follow all deadlines and submit all forms as specified in the school PhD handbook.

Dissertation

PhD students must complete a dissertation that has a strong basic social science or natural science research focus, and make a unique and original contribution to the scientific literature. The dissertation should help the student prepare for a career in research through demonstrated excellence in

the research methods that are used. Consistent with the purpose of the PhD program, dissertations should go beyond basic descriptive analyses of existing data sets (through novel theoretical or methodological applications are acceptable); and have greater innovation and significance than just monitoring and evaluation of an existing project.

Department of Tropical Medicine and Infectious Disease

Chair: Ronald Blanton, MD, MS

William G Vincent Professor of Tropical Medicine

Mission

The Department of Tropical Medicine and Infectious Disease conducts basic and applied research in the fields of tropical medicine, parasitology and applied population-based malaria evaluation research and educates students to address the clinical, laboratory and evidence-based approaches to prevent and control tropical diseases.

About TRMD

The Department of Tropical Medicine and Infectious Disease (TRMD) has long and prestigious history as one of the oldest institutions studying, preventing and managing tropical diseases. A leader in the field, TRMD has a strong international reputation for research and education in vector-borne and other tropical infectious diseases. TRMD addresses tropical diseases from the clinical, laboratory and epidemiological approaches.

The degree programs educate students in field work, epidemiology and evidence-based prevention and control along with state-of-the-art laboratory studies of tropical diseases. Graduates are prepared to work in disease control programs, diagnostic parasitology labs, academic and research institutions, governmental and non-governmental organizations, health care organizations, or biotechnology / pharmaceutical companies.

Department faculty have extensive expertise in areas such as mosquito biology and biochemistry, medical and biochemical entomology, tropical virology, and population-based prevention and evaluation. They conduct basic and applied research on vector-borne infectious diseases like Chagas, Dengue fever, West Nile virus, Lassa fever, and Ebola virus.

Graduate Degrees

- Public Health and Tropical Medicine, MPHTM (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/public-health-tropical-medicine-mphmt/>)
- Tropical Medicine, MS (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/tropical-medicine-ms/>)
- Tropical Medicine, PhD (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/tropical-medicine-phd/>)

Graduate Certificates

- Clinical Tropical Medicine Certificate (Graduate) (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/tropical-medicine-certificate/>)
- Methods in Monitoring and Evaluation Certificate (Graduate) (<https://catalog.tulane.edu/public-health-tropical-medicine/tropical-medicine-and-infectious-disease/methods-monitoring-evaluation-certificate/>)

Courses

Tropical Medicine (TRMD)

TRMD 6010 Biological Basis of Disease (3)

This course provides a foundation of knowledge about the human body in health and disease. It gives an overview of important concepts of the biological mechanisms of disease at the cellular, individual, and societal levels. At the cellular level, the course summarized DNA and cellular function, genomics, immunology, and vaccination. At the individual and societal levels, the course addresses the most important infectious and non-infectious causes of death worldwide, providing background on their pathophysiology, clinical aspects, and patterns of disease occurrence, risk factors, and methods of prevention.

TRMD 6040 Early Introduction to Laboratory Research in Tropical Medicine (0)

This introductory course serves to introduce new students to foundational concepts and methods in laboratory research, including the regulatory and applied aspects of laboratory based research. Assigned to a faculty supervisor and shadowing laboratory personnel during day-to-day laboratory activities, students will gain a firsthand practical experience. Additionally, students will gain the theoretical aspects from various activities, including presentations, article readings, and in-class discussions.

TRMD 6050 Medical Helminthology (3)

Medical Helminthology is the study of worm (helminth) parasites of medical significance to humans. In this course, we will discuss the helminths which cause human disease in terms of geographic distribution, transmission, clinical presentation and pathology, diagnosis, treatment, and control strategies. Emphasis will be placed on the helminths which affect large populations of humans and on those which are emerging pathogens. Clinicians will receive a strong grounding in diagnosis and treatment of diseases due to helminths, and public health professionals will appreciate how to apply and evaluate different methods of prevention and control on a population basis.

TRMD 6060 Medical Entomology (3)

This course is designed to provide the fundamental information necessary for understanding and evaluating both the role of arthropods in transmission of pathogens causing human disease, and the role of arthropods in directly causing human disease. Following a brief overview of the general anatomy, physiology, and classification of arthropods, individual groups of medical importance are considered in detail with regard to the recognition of important species, the epidemiology and pathogenesis of associated diseases, and the principles and methods of vector control.

TRMD 6070 Medical Protozoology and Malaria (3)

The identification of medically important parasites relies heavily upon macroscopic and microscopic examination of clinical specimens. In this course students will learn the basic principles of identifying parasitic helminthes and protozoa in blood, feces, and tissue specimens. Prepared specimens of the major helminth and protozoan pathogens of humans will be provided for macroscopic and microscopic examination. Students will learn the basic operations of the microscope and how to identify and distinguish the various helminthes and protozoa. Samples demonstrating the pathological features of the disease will also be provided. The techniques for preparing diagnostic specimens of parasites in blood and feces will be reviewed. In the laboratory students will learn the basic principles of identifying parasitic protozoa in blood, feces, and tissue specimens. Students will learn the basic operations of the microscope and how to identify and distinguish the various protozoa. The techniques for preparing diagnostic specimens of parasites in blood and feces will be reviewed.

TRMD 6080 Medical Protozoology Lab (1)

This course provides students with training in the use of a microscope and the identification of medically important protozoa in fecal, blood, tissue and other specimens. Laboratory exercises will focus upon the detection and recognition of parasitic protozoa in prepared samples. Students will learn how to distinguish the various protozoa which infect humans and be able to identify protozoa in clinical and histological preparations.

Prerequisite(s): TRMD 6070.

TRMD 6090 Parasitology Laboratory (1)

The identification of medically important parasites relies heavily upon macroscopic and microscopic examination of clinical specimens. In this course students will learn the basic principles of identifying parasitic helminthes and protozoa in blood, feces, and tissue specimens. Prepared specimens of the major helminth and protozoan pathogens of humans will be provided for macroscopic and microscopic examination. Students will learn the basic operations of the microscope and how to identify and distinguish the various helminthes and protozoa. Samples demonstrating the pathological features of the disease will also be provided. The techniques for preparing diagnostic specimens of parasites in blood and feces will be reviewed.

TRMD 6100 Health and Human Rights (1)

This course is designed to provide a forum for discussion of pertinent issues in global health and human rights and to motivate students to become active advocates for their resolution. Students will participate in weekly discussions with local and national experts in public health, clinical medicine, and health sciences research who are also strong advocates for human rights. The speakers will stress the importance of addressing the underlying social, political, and economic factors influencing health. Speakers will give examples from their background and the motivations for their career choices and discuss the skills and strategies necessary to become effective advocates for health and human rights.

TRMD 6170 Immunology (3)

This course is designed for students of public health and the basic biomedical sciences who are interested in a current overview of immunology.

This course is a comprehensive introduction to immunity and immunopathogenesis as it relates to health and disease. Following a thorough consideration of cells and tissues of the immune system, attention is given to immune recognition and regulation of immune responses, with special emphasis on the role of cytokines in immunity. Finally, clinical concepts are presented with current knowledge of basic immune mechanisms for each: autoimmunity and autoimmune disease, transplant rejection, immunity to tumors, primary immunodeficiency diseases, and immunity to infectious agents including viruses and parasites, and immunopathogenesis of HIV/AIDS.

TRMD 6200 Impact Evaluation in Global Health (3)

This course introduces students to the basic concepts, principles, and practices for public health programs and interventions. It focuses on impact evaluation at the national and sub-national levels, in addition to community and intervention-based evaluations. Lectures, discussions, and assignments will highlight evaluation strategies for health programs and disease-specific prevention and control interventions in international settings with a focus on diseases and programs in the tropics. The course is intended to 1) introduce students to impact evaluation, 2) provide a solid grounding in study designs relevant in field settings; 3) develop students' skills in designing evaluation plans, and 4) serve as a foundation for more specialized program evaluation classes as well as for courses on data analysis, sampling, epidemiology, and operations research. This course is not intended for those students who already have taken GCHB 6200 or GCHB 6340.

TRMD 6250 Biomedical Research Methods (3)

Students will be able to apply the basic biomedical methods used in public health and tropical medicine research or practice, and summarize the principle and the theoretical basis. They will be able to analyze the strengths and weaknesses of the different methods, and design hypothesis-driven studies to address public health and tropical medicine problems, applying the appropriate methods. Students will also assess scientific papers and critically appraise their relative merit in the field of public health research and practice.

TRMD 6330 Microbial Disease of the Tropics (3)

This required course builds foundational knowledge regarding the important bacterial and mycotic (fungal) pathogens in the tropics. This course forms a part of the foundations of tropical medicine knowledge. Students will learn the etiology, epidemiology, transmission characteristics, pathogenesis, clinical features, diagnosis and management of diseases caused by these pathogens. This course draws on faculty expertise both within Tulane and outside. The course focuses on disease topics not usually covered in depth in the US medical or public health curriculum. Additionally, the content of this course is a required component of the syllabus for the American Society of Tropical Medicine & Hygiene's CTropMed certification examination.

TRMD 6340 Diagnostic Methods in Microbiology (2)

This laboratory course parallels topics presented in TRMD 6330. The course is designed to teach students how to perform basic laboratory tests using simple techniques applicable to developing countries. Most of these will be diagnostic tests for infectious diseases, although some clinically relevant non-diagnostic techniques will also be taught (e.g., complete blood counts). The bulk of the course consists of hands-on laboratory experience conducting laboratory tests with clinical specimens and analyzing prepared teaching specimens. Procedures for organism isolation and identification and rapid diagnostic kits will be covered.

TRMD 6350 Disease Prevention & Control in Developing Countries (2)

This course is designed to prepare students to recognize and contribute effectively to the public health needs of communities in developing countries. It includes four broad content areas: (1) concepts of disease prevention and control with special reference to developing countries, including types of surveillance, monitoring and control strategies, (2) analysis of community needs, and provision of basic preventive services; (3) prevention and control of important endemic diseases such as malaria, tuberculosis, vaccine-preventable diseases; and (4) other topics such as special needs populations, disaster/refugee health programs, sources of information, and local and international organizations and programs. The course will emphasize practical rather than theoretical considerations based on the needs of the practitioner working under relatively resource-poor conditions.

Enrollment limited to students in the Medicine or Pub Hlth Trop Med (GR) departments.

TRMD 6420 Tropical Virology (3)

This course covers the broad area of virology with an emphasis on viruses of public health concern in developing and tropical countries. Both historically problematic and emerging viruses are covered. Topics include the molecular biology, epidemiology, and pathology of selected viruses. Focus is placed on developing an understanding of the molecular aspects of the viral life cycle that give rise to transmission and pathogenic characteristics, especially in the context of the co-evolution of the virus and host. Additional topics include the interactions between the virus and host immune response, as well as viral control and the development of vaccines and anti-viral pharmaceuticals. Students enrolled in the course should come with a basic understanding of communicable disease concepts.

TRMD 6450 Tuberculosis: Global Trends and Interactions with the HIV Epidemic (2)

This course is designed as an overview of tuberculosis and the challenges posed by the dual epidemics of TB and HIV. The course comprises a series of lectures and case studies. Guest faculty are recognized experts in this area and bring extensive experience and case study material to the course. A field activity to supplement in-class learning is offered. This is a visit to the Wetmore Tuberculosis Clinic. The course includes three broad content areas – basic concepts of tuberculosis disease and epidemiology, clinical manifestations and management; challenges posed by the interactions of Tuberculosis and HIV infection and global initiatives to integrate TB and HIV control programs; and issues in tuberculosis control with special reference to multidrug resistance, social aspects, and program strategies. The biological, clinical and programmatic perspectives gained from this course will assist students in interpretation and critique of programs and policies related to tuberculosis control.

TRMD 7000 Tropical Medicine Seminar (1)

Tropical Medicine Seminar is designed as a journal club, with the specific goal of training students to develop skills in critically evaluating and effectively presenting relevant scientific literature. Each student is expected to present at least one article to the class from recent tropical medicine literature, and to attend and actively participate during presentation delivered by other students. Course may be repeated up to unlimited credit hours.

Maximum Hours: 2

TRMD 7020 Infectious Disease Seminar (0-1)

The seminar experience is intended to stimulate a critical reading of the current literature and to ensure that each student learns to present important and potentially controversial data in a rigorous and careful fashion.

Maximum Hours: 99

TRMD 7180 Immunoparasitology (2)

This advanced level course is designed to provide students of public health and the basic biomedical sciences with an update on the role of immunity to parasitic infections and the immunopathogenesis of clinical parasitic diseases. Special emphasis will be placed on current knowledge of mechanisms of immunity to protozoan and helminth infections that cause malaria, trypanosomiasis, leishmaniasis, toxoplasmosis, schistosomiasis and filariasis, some of the most widespread and debilitating diseases in endemic countries of the world. Additional topics include parasitic opportunistic infections of AIDS patients, and updates on protozoan and helminth vaccine development.

TRMD 7300 Mechanisms of Pathogen Intervention (2)

This course provides an advanced foundation of knowledge about the selection and mechanisms of action of different interventions against important viruses, bacteria and unicellular parasites of public health significance. The course describes how drugs, vaccines and other intervention agents reach their cellular targets and how they act in harmony with the host immune system to control or eradicate the pathogen, inside the human or the arthropod hosts.

Prerequisite(s): TRMD 6170.

TRMD 7330 Advanced Topics in Host Pathogens (2)

This course will provide both an overview and an update on the recent advances in the study of host-pathogen interaction at the cellular and molecular levels. The focus will be on pathogen molecules that mediate interactions with host (and vector, if applicable), and the role these interactions play in host recognition and modulation, pathogen survival, virulence, and disease progression. The course will cover topics such as host specificity, immune evasion, pathogenicity and host-pathogen coevolution. Examples from the current literature will illustrate the link between basic science research in infectious diseases and our understanding of broader biological phenomena, as well as mechanisms of pathogenesis.

Prerequisite(s): TRMD 6170, 6070 and 6330.

TRMD 7420 Population-Based Malaria Prevention and Control (3)

This course introduces the principles of prevention and control of malaria infection and disease, as well as population based methods for evaluating the success of control programs or new interventions. This course investigates how culture, society, and the environment influence disease transmission, risk factors, and health status. Students will analyze data and integrate information using a monitoring and evaluation framework to inform prevention and control policy. Topics covered will include vector ecology, malaria epidemiology, malaria control strategies, malaria monitoring and evaluation, issues around cost-effectiveness, and prospects for elimination.

Prerequisite(s): (EPID 6030, SPHL 6860 or 6060).

TRMD 7500 Advanced Tropical Virology (2)

This course covers advanced topics in tropical virology. The focus is on viruses of recent public health concern in developing and tropical countries. Both historically problematic and emerging viruses are covered. Topics from published literature include molecular biology, epidemiology and pathology. Emphasis is placed on extending and deepening the understanding of the molecular aspects of the viral replication that gives rise to transmission and pathogenic characteristics. Additional topics include the interactions between the virus and host immune response, as well as viral control and the development of vaccines and anti-viral pharmaceuticals.

Prerequisite(s): TRMD 6420.

TRMD 7650 One Health Approaches to Disease (3)

One Health is a framework to expand interdisciplinary collaborations and communications for optimal health of people, domestic animals, wildlife, plants and our environment. This course will explore the theory behind One Health, describe methods and tools used in One Health, and develop skills to work with interdisciplinary teams and communication across professions. Using a One Health framework, we will discuss case studies of emergent health issues including emerging diseases, antibiotic resistance, food safety and security, climate change, and disease surveillance. Students will work in teams to produce an analysis of a health issue using a One Health framework.

Prerequisite(s): (SPHL 6020, 6820 or minimum score of PASS in 'SPHL 6020 Exemption') and (SPHL 6060 or 6860) and (SPHL 6070 or 6870) and (SPHL 6080 or 6880).

TRMD 7800 Advanced Medical Entomology (3)

This advanced course applies the most current knowledge in vector biology to the study of arthropods and diseases they transmit. It meets twice a week: a 2hr30' classroom session (a lecture and in-class activities) followed by a 2hr30' lab session, in which students reinforce classroom learnings with practical experience in performing bioassays; bioinformatic, ecological, behavioral and surveillance experiments; computer and video simulations, and metabolomics. Drawing from current, primary literature and discipline-specific guidelines, students also write and present a research proposal on a topic of interest. Primary and guest instructors, which include vector biologists and biochemists from local, regional and national institutions, reflect diverse identities. This unique structure makes the course well-suited for anyone interested in vector-borne research and disease control.

Prerequisite(s): TRMD 6060*.

* May be taken concurrently.

TRMD 7820 Malaria (2)

This is an advanced course which provides a rigorous approach to both the basic and applied issues related to malaria and malaria control. Areas covered in detail include cell biology and biochemistry of the parasite-red cell integration, antimalarial drug action and resistance mechanisms, parasite genetics and cell biology and the immunologic aspects of malaria, including asexual and sexual stage candidate vaccine antigens. At the conclusion of the semester, students are expected to critically review current malaria control and research strategies and to suggest and defend appropriate alternatives.

TRMD 7960 Clinical Tropical Medicine (3)

Clinical Tropical Medicine is designed to offer an overview of topics of clinical importance in tropical medicine, with an emphasis on a syndromic approach to patient presentation. Through a combination of lectures and clinical case presentations with group discussions the course both introduces key subject matter and will help students apply their knowledge to the clinical sphere. It is expected to complement other course offerings from the Tropical Medicine Department for the MPHTM and Diploma in Tropical Medicine curricula. Participants should have some experience in clinical medicine (usually a terminal degree in medicine, nursing, or veterinary sciences) and should either have experience or be in the process of learning about diseases of the tropics.

TRMD 7990 Special Studies (1-3)

Masters students and advisor select a topic for independent study and develop learning objectives and the expected written final product.

TRMD 8080 Large Dataset Management and Sequencing: Part 1 (3)

TRMD 8080 and 8090 are interdependent courses designed to develop skills in generating hypotheses specific to DNA sequence data, applying protocols for sample collection, analysis of large data sets, use of the MinION instrument and presentation of research findings that demonstrate rigor and reproducibility. TRMD 8080 (fall semester) introduces students to the principles and theoretical bases of novel molecular methods, design studies and hypotheses to be addressed. Students learn to collect sequence data using an accessible sequencing instrument. TRMD 8090 (spring semester), equips students with techniques for evaluating and analyzing large data sets, with attention to rigor and reproducibility. The experience of these courses will be broadly applicable, regardless of the area of public health pursued.

TRMD 8090 Large Dataset Management and Sequencing: Part 2 (3)

TRMD 8080 and 8090 are interdependent courses designed to develop skills in generating hypotheses specific to DNA sequence data, applying protocols for sample collection, analysis of large data sets, use of the MinION instrument and presentation of research findings that demonstrate rigor and reproducibility. TRMD 8080 (fall semester) introduces students to the principles and theoretical bases of novel molecular methods, design studies and hypotheses to be addressed. Students learn to collect sequence data using an accessible sequencing instrument. TRMD 8090 (spring semester), equips students with techniques for evaluating and analyzing large data sets, with attention to rigor and reproducibility. The experience of these courses will be broadly applicable, regardless of the area of public health pursued.

TRMD 8100 Laboratory Rotation (2)

Doctoral students are required to take TRMD 8100 Laboratory Training three times in different DTM faculty laboratories for a total of six credits (2 each). The faculty member will be identified on the student's transcript as the person teaching the course. At the completion of each lab rotation, the advisor will fill out a lab rotation form and assign a pass/fail grade. In addition to a record of grade on the student's transcript, this report will be maintained in the student's file by the department. Before enrolling in the TRMD 8100 course, students are encouraged to meet with various faculty members and discuss the prospect of doing a rotation with them. The rotations will acquaint the student with the different research programs available in the department and assist the student in choosing a permanent dissertation advisor. In addition, by rotating through several laboratories the student will obtain laboratory experience and training in specialized areas. Ideally the laboratory rotations should begin during the first semester and continue through the summer until a permanent advisor is chosen in the second year.

Course Limit: 3

TRMD 8990 Doctoral Independent Study (1-3)

Doctoral students and advisor select a topic for independent study and develop learning objectives and the expected final written product.

Maximum Hours: 99

TRMD 9980 Master's Thesis Research (0)

MS students engaging in thesis research.

Course Limit: 3

Dual and Accelerated Degrees

Graduate Dual Degrees

Graduate/Professional Dual Degrees:

- School of Medicine: MPH, MSPH, MPHTM or PhD
- School of Social Work: MSW/MPH in Community Health Sciences or Social, Behavioral, and Population Sciences

- School of Business: MBA/MHA
- School of Law: JD/MHA; JD/MPH in Health Systems Management

Medical students may enroll in a dual degree in SPHTM with study in any of the concentrations in the MPH, MSPH or MPHTM degrees. Up to 10 credits from the medical school may be applied toward the MPH, MSPH or MPHTM degrees. Students complete the same concentration requirements for the public health degrees.

Students enrolled in the JD degree may enroll in a dual degree in SPHTM with study in the MHA degree or the MPH in Health Systems Management. Up to 10 credits from the law school may be applied toward the MHA or MPH degree. Students complete the same public health degree requirements for the public health degrees.

School of Social Work students in the MSW degree program may obtain a dual degree in SPHTM pursuing the MPH in Community Health Sciences (online) or Social, Behavioral, and Population Sciences (residential, although some courses are available online). Up to 10 credits from the social work school may be applied toward the MHA or MPH degree. Students complete the same public health degree requirements for the public health degrees.

Business School students in the MBA may obtain a dual degree with the MHA degree at SPHTM. Up to 10 specific credits from the business school may be applied toward the MHA degree. Students complete the same MHA degree requirements.

Undergraduate Accelerated Degree

Undergraduate Accelerated Degrees:

- Public Health majors: BSPH/MPH, MSPH, MPHTM or MHA
- School of Science and Engineering: BS/ MPH, MSPH, MPHTM or MHA
- School of Business: BSM/MPH, MSPH, MPHTM or MHA

Undergraduate students in the BSPH degree in the School of Public Health, the BS degree in the School of Science and Engineering or the BSM degree in the School of Business may combine the degree with the MPH, MSPH, MPHTM or MHA degrees. Students apply to the program in the second semester of their junior year and, in consultation with their advisor, may begin taking graduate course in their senior year.

The accelerated degree program allows student to apply 12 credits of graduate foundational courses to the bachelors degree and the MPH, MSPH, MPHTM, or MHA degrees. In addition, students in the BSPH program also receive a course waiver for SPHL 6020 Foundations in Public Health. This results in the saving of approximately 1 semester of course work toward the MPH, MSPH, MPHTM or MHA degree.

Programs

- BS/MHA Accelerated Degree (p. 96)
- BS/MPH, MSPH or MPH&TM Accelerated Degree (p. 97)
- BSPH/MPH or MSPH or MPHTM or MHA Accelerated Degree (p. 97)
- JD/MPH or MHA Dual Degrees (p. 98)
- Master of Social Work/Master of Public Health Dual Degree (p. 99)
- MBA/MHA Dual Degree (p. 99)
- MD/MPH or MSPH or MPHTM Dual Degree (p. 99)

BS/MHA Accelerated Degree

Overview

BS/MHA and BSM/MHA Accelerated Degrees

The BS and BSM Accelerated Degree Programs are a path for continuous study from the bachelor's degree through the Master of Health Administration (MHA) professional degree at the School of Public Health and Tropical Medicine (SPHTM). The accelerated degree is an opportunity for Bachelor of Science majors in the School of Science and Engineering or Bachelors of Science in Management majors in the School of Business to begin graduate study for the MHA during their senior year; students may take up to 12 graduate credits from the designated public health graduate courses that are applied to the MHA degree.

Students must graduate from the BS or BSM program to continue in the MHA program.

Requirements

Accelerated BS/MHA or BSM/MHA

The MHA program is a 54 credit masters in health administration plus an administrative residency. (See the MHA degree requirements) BS/MHA or BSM/MHA Accelerated Degree students may take up to 12 credits of graduate courses during their senior year. Students may select up to 12 graduate credits from the following courses:

Course ID	Title	Credits
HPAM 6050	Health Systems Concepts	3
HPAM 6200	Intro to Healthcare Analytics	3
HPAM 6300	Data Visualization and Communication	3
HPAM 6710	Quantitative Decision Models	3

BS/MPH, MSPH or MPH&TM Accelerated Degree

Overview

Public Health Accelerated Degree Programs

BS or BSM/MPH or MSPH or MPH&TM

These accelerated degrees are an opportunity for Bachelor of Science majors in the School of Science and Engineering or Bachelors of Science in Management majors in the School of Business to begin graduate study in one of the public health professional degrees during their senior year. The BS/MPH, MSPH, MPHTM or BSM/MPH, MSPH, MPH&TM Accelerated Degree Programs are a path for continuous study from the bachelor's degree through a master's level professional degree at the School of Public Health and Tropical Medicine (SPHTM). The accelerated degree program leads to a Master in Public Health (MPH), a Master of Public Health and Tropical Medicine (MPH&TM), or a Master of Science in Public Health (MSPH).

Students may take up to 12 graduate credits of public health foundational courses as an undergraduate that may be applied to both the undergraduate degree and the MPH, MPH&TM or MSPH degrees.

Students must graduate from the BS or BSM program to continue in the MPH, MPH&TM, MSPH degree program. Once students have been accepted into the accelerated degree program, they should meet with a public health advisor to incorporate graduate classes into their senior year schedule.

The BS or BSM/MPH or MSPH or MPH&TM accelerated degree may be completed in approximately 1½ - 2 years following graduation. Actual time depends on the number of credits students complete per semester and the time to complete the applied practice experience and integrated learning experience.

Requirements

BS or BSM/MPH or MSPH or MPH&TM

BS or BSM students may select any of the MPH, MSPH or MPH&TM degree concentrations. These degrees require a total of 42 - 45 credits plus an applied practice experience (APE) and an integrative learning experience (ILE).

Accelerated degree students may take up to 12 credits from the following courses during their senior year (no substitutions):

Course ID	Title	Credits
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3

BSPH/MPH or MSPH or MPHTM or MHA Accelerated Degree

BSPH/MPH or MSPH or MPH&TM or MHA Accelerated Degrees

The accelerated degree program is a path for continuous study from the BSPH degree through a professional master's degree at the School of Public Health and Tropical Medicine (SPHTM). BSPH majors may combine their undergraduate study with a Master in Public Health (MPH), a Master of Science in Public Health (MSPH), a Master of Public Health and Tropical Medicine (MPH&TM), or a Master of Health Administration (MHA). The accelerated degree is an opportunity for undergraduate public health majors to begin graduate study during their senior year; students may take up to 12 graduate credits of public health courses that may be applied to the MPH, MSPH, MPH&TM, or MHA degrees.

Students must graduate from the BSPH program to continue in the MPH, MSPH, MPH&TM, or MHA. Once students have been accepted into the accelerated degree program, they should meet with their public health advisor early in their senior year to plan graduate courses into their senior year schedule.

The MPH, MSPH, MPHTM, or MHA may be completed in approximately 1½ - 2 years following graduation from the BSPH. Actual time depends on the number of credits students complete per semester and the time to complete the applied practice experience and integrated learning experience or the administrative residency.

Students in this accelerated degree program are waived from the SPHL 6020 Foundations in Public Health requirement as the foundational knowledge learning objectives in this course are obtained in the BSPH core courses. Students must instead complete an additional elective.

Requirements

BSPH/MPH or MSPH or MPH&TM Accelerated Degrees

BSPH students may select any of the professional public health degrees (MPH, MSPH, MPH&TM, MHA). These degrees require a total of 45 credits plus an applied practical experience and integrative learning experience.

Combined degree students complete up to 12 credits of graduate courses during their senior year. Students select from the following courses.

Course ID	Title	Credits
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3

BSPH/MHA Accelerated Degree

The MHA program is a 54 credit masters in health administration plus an administrative residency. (See the MHA degree requirements). BSPH/MHA Accelerated Degree students may take up to 12 credits of graduate courses during their senior year in the BSPH program. Students choose from the following courses:

Course ID	Title	Credits
HPAM 6050	Health Systems Concepts	3
HPAM 6200	Intro to Healthcare Analytics	3
HPAM 6300	Data Visualization and Communication	3
HPAM 6710	Quantitative Decision Models	3

JD/MPH or MHA Dual Degrees

Students enrolled in Tulane School of Law may apply for the dual JD/MHA degree. The dual degree requires students to complete all requirements in both schools. Students may share up to 12 credits that count toward both degrees and should work closely with advisors in both schools for course selection and advising. The MHA program includes an approximately 400-hour administrative residency. Contact Dr. David Washburn dwashburn@tulane.edu for more information. For the MPH program, contact Dr. Kevin Callison at kcallison@tulane.edu.

Requirements

Tulane Law students (see the requirements here: <https://law.tulane.edu/academics/jd> (<https://law.tulane.edu/academics/jd/>)) can combine their studies with the MHA degree for health administration (see the requirements here: <https://sph.tulane.edu/hpam/mha> (<https://sph.tulane.edu/hpam/mha/>)). The MHA degree requires a total of 54 credits and an approximately 400-hour administrative residency. Students accepted as joint degree students may apply up to 12 credits of designated law school courses related to health care toward the MHA degree. Please check with Dr. David Washburn dwashburn@tulane.edu for which courses are allowed. Joint degree students complete all of the requirements for the MHA degree.

Tulane Law students may also complete a joint degree with the MPH in Health Policy (see the requirements here: <https://sph.tulane.edu/hpam/mp-health-policy> (<https://sph.tulane.edu/hpam/mp-health-policy/>)). The MPH is 45 credits, and joint degree students may apply up to 12 credits of designated law school credits to the MPH. Please check with Dr. Kevin Callison, kcallison@tulane.edu, for which courses are allowed. Joint degree students complete the same MPH in Health Systems Management requirements.

Master of Social Work/Master of Public Health Dual Degree

The MSW/MPH dual degree is an opportunity for students to pursue both a MSW from the School of Social Work and a MPH from the School of Public Health and Tropical Medicine. The dual degree requires students to complete all requirements in both schools; student may share up to 12 credit hours between degrees.

Requirements

Tulane students in the MSW in Social Work may combine their studies with the MPH. The MPH degrees requires a total of 45 credits plus a practicum and integrated learning experience.

Contact Maya Begalieva, PhD for information on designated shared courses, MPH degree requirements and scheduling.

MBA/MHA Dual Degree

Students enrolled in Tulane School of Business may apply for the dual MBA/MHA degree. The dual degree requires students to complete all requirements in both schools. Students may share up to 12 credits that count toward both degrees. Students should then work closely with advisors in both schools for course selection and advising. The MHA program includes an approximately 400-hour administrative residency. Contact Dr. David Washburn dwashburn@tulane.edu for more information.

Requirements

Tulane MBA (<https://freeman.tulane.edu/graduate/full-time-mba/>) students may combine their studies with the MHA degree for health administration (see the MBA requirements here (<https://catalog.tulane.edu/business/mba/>)). The MHA degree requires a total of 54 credits plus an approximately 400-hour administrative residency. Students accepted as joint degree students may apply up to 12 credits of specific MBA courses related to health care toward the MHA degree. Contact Dr. David Washburn dwashburn@tulane.edu for more information.

MD/MPH or MSPH or MPHTM Dual Degree

MD/MPH, MSPH or MPHTM

Medical student in the joint degree program may select any of the professional degree programs as the master's level of specialization. The MPH in Health Systems Management, the MPH in Community Health Sciences and MPH in Epidemiology are the most common areas selected, but all professional degree areas are available.

In the selected area of study, combined degree students complete the MPH, MSPH, MPHTM or MHA requirements as listed for these degrees.

Requirements

MD/MPH, MSPH or MPHTM

Medical student in the joint degree program may select any of the professional degree programs as the master's level of specialization. The MPH in Health Systems Management, the MPH in Community Health Sciences and MPH in Epidemiology are the most common areas selected, but all professional degree areas are available.

In the selected area of study, combined degree students complete the MPH, MSPH, MPHTM or MHA requirements as listed for these degrees.

Leadership, Advocacy, and Equity, DrPH

Overview

The DrPH program in Leadership, Advocacy, and Equity is a part-time, applied professional degree that prepares leaders in public health and other practice settings to create and manage programs and organizations. The DrPH program has a strong focus on field applications of needs assessment, coalition building, and program planning, grounded in an advanced understanding of the social determinants of health on health equity. Advanced study focuses on leadership and strategic management, systemic barriers to health equity, community advocacy, and program development and grant writing. Graduates of the program are expected to lead in the areas of health equity and advocacy to improve organizations and communities.

Program Competencies:

- Analyze the impact of historical and contemporary multilevel bias, trauma, and resilience on health inequities between marginalized groups.
- Develop priority settings to address complex health topics that pose the greatest public health threats by utilizing equity focused health impact assessment tools and methodologies.
- Design an advocacy strategy that promotes health equity in a specified community by identifying and mapping stakeholders, appropriate platforms, key processes, and engaged organizations.

- Translate evidence-based research and practice-based findings into culturally responsive, sustainable public health programs and initiatives.
- Propose a program or initiative that addresses an identified health equity need and advocates and empowers individuals and communities to achieve optimal well-being.

Requirements

The DrPH Degree in Leadership, Advocacy, and Equity requires a total of 57 credits (15 credits of pre-requisites and 42 credit hours of doctoral coursework) that includes:

Course ID	Title	Credits
Foundational Coursework - Prerequisites		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Program Required Courses		
SPHL 8000	Principles of Public Health Leadership	3
SPHL 8010	Budget and Financial Management	3
SPHL 8020	Leadership and Strategic Management	3
SPHL 8080	Public Health Pedagogy	3
SPHL 8100	Health Equity and Advocacy	3
SPHL 8200	Public Health & Social Policy	3
SBPS 8220	Community Organizing for Social Change	3
SPHL 8250	Study and Evaluation Methods in Public Health	3
SBPS 8750	Social Determinants of Health I: Theory	3
SBPS 8770	Social Determinants of Health in Public Health Practice	3
SPHL 8820	Advance Program Planning and Grant Writing	3
Electives		6
SPHL 9450	Practice Based Portfolio: Background	3
SPHL 9460	Practice Based Portfolio: Experiential Learning	0
SPHL 9470	Practice Based Portfolio: Culminating Experience	0
Total Credit Hours		57

The DrPH in Leadership, Advocacy, and Equity is a part-time program which follows a cohort model. Students complete two 8-week courses during the Fall and Spring terms, and 0-2 courses during the Summer term.

Model Schedule*

*Based on a Fall start

For students needing to complete the foundational pre-requisite courses:

Year 1		Credit Hours
Fall		
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
Credit Hours		6
Spring		
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
Credit Hours		6

Summer Session

SPHL 6080	Design Strategies in Public Health Programs	3
Credit Hours		3
Total Credit Hours		15

After completion of the foundational pre-requisite courses students continue with the plan of study listed below.

For students that have completed the foundational pre-requisite courses prior to matriculation:

Year 1		Credit Hours
Fall		
SPHL 8200	Public Health & Social Policy	3
SPHL 8000	Principles of Public Health Leadership	3
Credit Hours		6
Spring		
SPHL 8250	Study and Evaluation Methods in Public Health	3
SBPS 8220	Community Organizing for Social Change	3
Credit Hours		6
Summer Session		
Electives		6
Credit Hours		6
Year 2		
Fall		
SPHL 8010	Budget and Financial Management	3
SPHL 8080	Public Health Pedagogy	3
Credit Hours		6
Spring		
SBPS 8750	Social Determinants of Health I: Theory	3
SBPS 8770	Social Determinants of Health in Public Health Practice	3
Credit Hours		6
Summer Session		
SPHL 9450	Practice Based Portfolio: Background	3
Credit Hours		3
Year 3		
Fall		
SPHL 8100	Health Equity and Advocacy	3
SPHL 8020	Leadership and Strategic Management	3
SPHL 9460	Practice Based Portfolio: Experiential Learning	0
Credit Hours		6
Spring		
SPHL 8820	Advanced Program Planning and Grant Writing	3
SPHL 9470	Practice Based Portfolio: Culminating Experience	0
Credit Hours		3
Total Credit Hours		42

Public Health Certificate (Graduate)

Overview

The Certificate in Public Health provides students with foundational knowledge of public health. It is designed for public health and working professionals from a variety of backgrounds, including physicians, nurses, public health administrators, health educators, clinical researchers, and policy experts looking to enhance their public health knowledge as well as students interested in exploring the field of public health. The Certificate in Public Health coursework can be applied toward a Master of Public Health (MPH) degree. The Certificate is comprised of five 3-credit hour courses:

Foundations in Public Health, Biostatistics for Public Health, Epidemiology for Public Health, Health Systems Policy and Management, and Design Strategies in Public Health Programs. Courses can be completed on a full- or part-time basis, online or in-person.

Requirements

Course ID	Title	Credits
SPHL 6020	Foundations in Public Health	3
SPHL 6050	Biostatistics for Public Health	3
SPHL 6060	Epidemiology for Public Health	3
SPHL 6070	Health Systems Policy and Management	3
SPHL 6080	Design Strategies in Public Health Programs	3
Total Credit Hours		15

Undergraduate Public Health

Programs

Associate Dean of Undergraduate Education: Joseph Keating, PhD MA

Mission

The Tulane Bachelor of Science in Public Health (BSPH) degree is an academic degree that addresses the health of populations and communities through instruction, service, and community-based research. The degree is firmly grounded in a background of humanities, social science and the liberal arts. The degree fulfills Tulane University's campus-wide undergraduate core proficiency through this background while stressing an additional commitment to quantitative and scientific skills.

About Public Health

Public health addresses health at a broad level, and the impact of professional public health is felt by individuals, families, and communities. The field of public health promotes healthy lifestyles, helps to develop policies, conducts education campaigns, confronts the spread of infectious disease, conducts research to improve methods, and uses data to track and measure health status and the effectiveness of health programs.

At Tulane, Undergraduate Public Health Studies has been one of the fastest-growing programs for several years. The program educates students in the key concepts of the field, providing a firm grounding in the foundational aspects of public health. Students can tailor their electives to meet personal academic and professional goals, which may cover areas such as global health, maternal and child health, nutrition, environmental health, data science, or another public health niche. An undergraduate public health degree is also a good fit for students planning to pursue graduate work for careers in medicine, allied health professions, and some pre-law areas.

Undergraduate

Major

- Public Health, BSPH (p. 111)

Minor

- Public Health Minor (p. 110)
- Public Health Nutrition Minor (p. 114)

Courses

Public Health Undergraduate (SPHU)

SPHU 1010 Intro To Public Health (3)

Students are introduced to the concepts and practice of public health in the U.S. and internationally by tracing its historical evolution. Classic public health problems and their resolution will be discussed in the context of the broader contemporary social environment. The latter part of the course is focused on public health practice in both the U.S. and developing countries, with a consideration of the structure, function, and financing of public health organizations. The many different roles for public health professionals in these organizations also are described.

SPHU 1020 Cell, Individual & Community (3)

This course provides a foundation of knowledge about the human body in health and disease. It gives an overview of important concepts on the biological mechanisms of disease at the cellular, individual, and population/ community levels. The course will focus on a natural progression in the development of health and disease, moving from a discussion of the cellular mechanisms, to manifestations in the individual, and finally, to disease effect and interventions at the community level. This course is designed to provide a firm foundation in the mechanisms of health and disease. Furthermore, each session will offer insights into current public health topics and research trends.

SPHU 1890 Service Learning (0-1)

Students complete a service activity in the community in conjunction with the content of a three-credit co-requisite course. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 1891 Service Learning (0-1)

Students complete a service activity in the community in conjunction with the content of a three-credit co-requisite course. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 1940 Transfer Coursework (0-20)

Maximum Hours: 99

SPHU 2016 Infectious Disease Outbreaks (3)

This course will introduce students to the operational pillars of infectious disease outbreaks such as clinical management, logistics, infection prevention and control, policy and regulations. Students will begin with the basic concepts of infectious diseases, dynamics of disease transmission, and emerging and reemerging infectious diseases. The course encourages a wider conversation on the implications of infectious diseases in the broader context of public health, and challenges students to think creatively about solutions for prevention and control.

SPHU 2050 Arthropods and Public Health (3)

This course provides a broad introduction to insects and other arthropods that transmit infectious pathogens, or cause problems to humans through infestation or other contact. The impact of arthropods on the history of human civilization and development will be explored, as will their use as food and in art. Arthropod utilization in forensic science and for medicinal purposes will be discussed. Throughout the course the myriad adaptations utilized by arthropods, allowing them to become the most specious group of animals in existence, will be highlighted.

SPHU 2150 Foundations of Environmental Health (3)

This course is designed to provide students with an introduction to and overview of key areas in environmental health. Using the perspectives of the population and community, the course will cover factors associated with the development of environmental health problems. Students will gain an understanding of the interaction of individuals and communities with the environment, the potential impact on health of environmental agents, and specific application of concepts of environmental health. The course consists of lectures that cover principles derived from core environmental health disciplines. The sequence begins with background material and "tools of the trade"; agents of environmental diseases; and applications and domains of environmental health.

SPHU 2160 Biostatistics in Public Health (3)

This course provides an overview of various statistical methods used in public health practice and research. Emphasis is on application of appropriate methods and interpretation of results. Examples and problems from public health settings will be included. Various statistical software will be used to analyze data (excel, SPSS and others), but prior computing experience is not required. Topics covered include methods of summarizing data and estimation and hypothesis testing techniques, including the t-test, the chi-square test, the analysis of variance, correlation analysis, and linear regression.

SPHU 2300 Introduction to Nutrition (3)

This course is designed to provide students with an introduction to the basic principles of nutrition science and research. It is recommended for undergraduate students who have not had a prior course in nutritional science. It is designed to help students gain basic knowledge about the roles of specific nutrients, with emphasis on their sources, functions, and metabolism in the human body, basic principles of digestion and absorption. Other topics include food selection for optimal health, energy balance and weight control, dietary practices in health promotion and chronic disease prevention, nutrition throughout the lifespan, and in introduction to public health nutrition including but not limited to food safety, food supply, food insecurity, and food policy.

SPHU 2333 Introduction to Global Maternal and Child Health (3)

The course introduces undergraduate students to the complex public health problems that affect women and children in the USA and in developing countries. The course will introduce and use the socio-ecological framework and the life-course models to examine factors that determine women and children's health and disease. The foundation of the course is a comprehensive review of common health issues that affect pregnancy, children and teenagers worldwide. Programs and policy to address these issues will also be reviewed and discussed in the context of socio-ecological frameworks.

SPHU 2400 Global Health in Action (3)

This course is targeted towards students considering global health work. Using a "Best Practices" lens, students will explore how to have a meaningful, field-based global health experience, and how to incorporate their global health experience into a future career. Students will examine policy issues and other health determinants in order to understand effective strategies to respond to health challenges in a global setting. As an outcome, students will approach global health in its wider social, economic and political context. Lectures, readings from primary literature, and field-based case studies will provide the framework for discussion, analysis, and interpretation of global health in action.

SPHU 2410 Health & Women's Rights (3)

This course addresses health and women's rights around the world from health equity, gender, and ethnicity perspectives. The main topics are: women's human rights and gender equality, discrimination against women and girls; rights of LGBTI people; gender-based violence; early marriage and pregnancy; right to contraception and abortion; forced sterilizations and abortions, and virginity examinations; female genital mutilation; maternal mortality; sexual transmission of HIV; trafficking of women and girls; women's rights during complex humanitarian emergencies; migration and reproductive health; and postcolonial feminism and health. The course contextualizes and analyzes: 1) health and women's rights within their economic and political context, 2) the social inequality roots of health and women's rights issues, and 3) the main health and rights challenges faced by women and girls. It uses country case studies from around the world. It is open to all undergraduate students.

SPHU 2420 Health Challenges and Climate Change (3)

Climate change affects the very basic foundations of health - adequate and nutritious food, safe water, fresh air, and secure shelter. This course introduces the direct and indirect links between climate change and human health. Examples of health impacts related to climate change will include those arising from drought induced water and food insecurity, vector-borne and water-borne diseases, temperature extremes, wildfires, and extreme hydrological events. Underlying socio-ecological determinants that influence exposure and vulnerability will be described. The course will also explore opportunities for mitigation and adaptation to reduce the threats of climate change. Case studies of how countries are responding to the health challenges posed by climate change will be presented.

SPHU 2430 Pandemics and Public Health (3)

Pandemics have shifted social norms, devastated economies, and transformed society throughout history. This lecture and discussion-based course investigates how culture, society, politics, and the environment influence the development and control of pandemics; and describes how scientists and public health officials integrate data and information to inform public health pandemic policy. In this transdisciplinary course students will 1) learn how science, economics, communication, government response, and social tensions influence control practices and policy, using examples from the Spanish Flu, cholera, HIV, SARS-CoV-2, and the plague; and 2) provide a foundation for more specialized classes that can be applied to prevent and control future pandemics.

SPHU 2810 Special Topics in Public Health (1-3)

Special Topics in Public Health. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 2940 Transfer Coursework (0-20)

Maximum Hours: 99

SPHU 3010 Foundations of Health Care Systems (3,4)

SPHU 3010 introduces and examines the framework of a health care system, taking a particular look at the United States' system. The course examines the relationship between health and health care; public and private financing models; and the delivery of health care, both through public health and traditional medical care. Students will analyze issues related to the "iron triangle" of health care (i.e., cost, quality, and access) and will discuss the future of health care in the United States from a management and policy perspective.

Prerequisite(s): SPHU 1010.

SPHU 3011 Introduction to Occupational Health and Safety (3)

The working population continues to grow, and so is the expansion of workplaces where people spend long hours every day. Injuries, diseases, and deaths in the workplace are major public health issues. The workplace environment must be safe and healthful to support the working population. This course introduces students to the fundamentals of occupational safety and health. It examines the physical, chemical, and biological hazards and risks in the workplace environment, as well as the scientific and policy measures for improving workplace safety and health in the United States. Students are given case study exercises to enhance their understanding and application of best practices for promoting the public health in the workplace environment.

SPHU 3015 Public Health Program Implementation and Management (3)

This course develops practical skills for the design, implementation, and management of public health programs. A solid grounding in personal, financial, and organizational determinants of health and organizational effectiveness will complement the use of practical management tools and techniques such as logic model development for program design and implementation. Students will apply these concepts and tools within the context of service delivery and policy-making in the field of public health.

Prerequisite(s): SPHU 3110*.

* May be taken concurrently.

SPHU 3100 Environmental Pollution & Biomarkers of Health (3)

This course introduces the concept and practical issue of environmental exposure to polluted water, soil, and food that cause adverse health effects on humans. Students will learn how to apply biomarkers to determine the magnitude of exposure and health associated with toxic chemicals (metals and trace elements). The use of biomarkers in other health issues related to climate change and occupational environment (such as in mining and farm workers) will be also discussed. Students work collaboratively on exposure, biomarkers, and health data assessment to draw relevant information and communicate to public health policy and practice. The course consists of lectures, article reading, discussion, quizzes, and problem sets.

SPHU 3110 Social and Behavioral Perspectives in Public Health (3)

Students integrate their understanding of public health science in this applied problem-solving course that brings together the social science-based theories and models with techniques of seeking community input. Students go beyond the initial results of data to seek explanations for public health problems using a social ecological framework and public health behavioral theories. This course demonstrates the value of anchoring program planning in the social and behavioral sciences, which lays the groundwork for strong program implementation and evaluations.

Prerequisite(s): SPHU 1010.

SPHU 3120 Issues & Strategies in Public Health (3)

This seminar-style course is designed to provide students with basic biological and social concepts, control practices, and policies underlying the epidemiology of diseases of global importance. This course investigates how culture, society and the environment influence disease transmission, risk factors, disease prevention and health status. The course will be transdisciplinary, emphasizing the connections between the biological nature of disease and the social, economic and political context that influences prevention and control practices. Examples of health topics that may be addressed are malaria, neglected tropical diseases, diabetes, and vaccine preventable diseases.

SPHU 3170 Foundations of Epidemiology (3)

This course is designed to give students a general introduction to epidemiological concepts and basic tools of the field. The historic and current contributions made through the use of epidemiology in shaping our understanding of disease in populations will be described and investigated. The course will assist the student in establishing a foundation for the definition of and response to public health challenges in the community as well as the global society. The course will introduce a number of areas of specialization within the field of epidemiology including infectious and non-infectious diseases and other health issues.

SPHU 3200 Nutrition & Chronic Disease (3)

This course will provide students the opportunity to explore the complex relationships between diet, obesity and chronic disease outcomes particularly cardiovascular disease and cancer. The emphasis of the course will be using evidence-based approaches to investigate relationships between diet and disease. We will review research from experts in areas related to nutrition. The course will focus on the causal pathway from diet and inactivity to obesity to negative chronic outcomes with overnutrition being the pivotal mechanism to disease. Students will explore current diet trends and learn practical skills around making food choices in addition to examining the current research on diet factors associated with chronic disease.

Prerequisite(s): SPHU 3170.

SPHU 3330 Disasters & Environmental Health (3)

This course focuses on the complex intersection of population health and disasters through the lens of environmental health. Students will examine the impacts that disasters (natural and technological) have on environmental and human health, along with influences attributed to climate change. Case studies will be incorporated as a didactic and learning element of the course to highlight critical environmental health challenges, overall population health concerns, and associated impacts imposed by disasters.

SPHU 3350 Lifecycle Nutrition (3)

This course is designed to build on the basic principles of nutrition and explores nutrition through each major life stage including, but not limited to, pre-pregnancy, pregnancy, infancy, early childhood, childhood, adolescence/teenage years, adulthood, and older adulthood. During this course, students will apply basic nutrition knowledge to evaluate the rationale for nutritional needs of normal growth and development, eating habits, and dietary cautions for each life stage. Consequences of under- or over-nutrition at critical life stages and policies, programs, and interventions that have been implemented to address these consequences will also be examined. The role of the social determinants of health and other lifestyle factors in meeting suggested nutritional requirements and guidelines at various life stages will also be discussed.

Prerequisite(s): SPHU 2300.

SPHU 3360 Public Health Nutrition: Principles to Practice (3)

This course comprehensively explores the intersection between nutrition and public health. It introduces students to the science of nutrition and dietetic practice within community and public health settings, including skill sets and scope of practice found within public health nutrition. Through a structural, social-determinants lens, this course emphasizes the role of nutrition in disease prevention, health promotion, and overall well-being, considering existing and potential health inequities. Students will delve into multidisciplinary aspects of public health nutrition, such as program development and intervention, epidemiology, policy, assessment, and behavior change. Public health nutrition concepts and practices will be discussed in the context of individuals, communities, and populations, and public health nutrition programs and services in the US and globally will be highlighted.

Prerequisite(s): SPHU 2300.

SPHU 3500 Public Health Approach to Sexual Violence (3)

This course provides an in-depth examination of sexual violence from a public health perspective. Theories of sexual violence, the epidemiology of sexual violence (scope, causes, risk factors, and consequences), and public health approaches to reducing sexual violence will be covered.

SPHU 3560 Biological Basis of Disease (3)

Biological basis of disease provides a foundation of knowledge about the human body in health and disease. The focus of the course is on the biological mechanisms of disease with an emphasis on molecular, cellular, genetic, and immunological aspects. The etiology and pathophysiology of the most important infectious and non-infectious diseases in terms of prevalence and mortality are thoroughly discussed. Applications of genomics and other biotechnologies to health and disease, as well as its treatment and prevention, are also covered. Intermediate and advanced students in public health, pre-medicine, or other biomedical fields may find this course particularly useful.

Prerequisite(s): CELL 1010 or SPHU 1020.

SPHU 3570 Introductory Microbiology (3)

This course is an introduction to the biology of bacteria, protists, fungi, and viruses, their structure, life cycles, geochemical activities, diversity, and nutrition. We will also cover fundamentals of metabolism, genetics and genomics, microbial biotechnology, roles in health, disease and human immunological responses. This course is meant for students with fundamental understanding of general biology, molecular biology, and organic chemistry.

SPHU 3600 Women's Reproduction & Obstetric Health (3)

This course is geared toward public health undergraduate students with a strong interest in women and maternal health. The course has two distinct objectives. The first objective is to provide an overview of the pathophysiology of the female reproductive system and a survey of the complications of pregnancy, labor and delivery. The second objective is to explore medical and lay practices related to women gynecological and obstetric health, in USA and worldwide. Existing scientific evidences associated with these practices will be examined, along with ways to reconcile medical authoritative knowledge and women's autonomy.

SPHU 3810 Special Topics in Public Health (0-3)

Special Topics in Public Health. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 3890 Service Learning (0-1)

Students complete a service activity in the community in conjunction with the content of a three-credit co-requisite course. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 3891 Service Learning (0-1)

Students complete a service activity in the community in conjunction with the content of a three-credit co-requisite course. Course may be repeated up to unlimited credit hours.

Corequisite(s): SPHU 3011.

Maximum Hours: 99

SPHU 3910 Special Topics (3)

Special Topics course

Maximum Hours: 99

SPHU 3920 Special Topics (3)

Special Topics course

Maximum Hours: 99**SPHU 3940 Transfer Coursework (0-20)****Maximum Hours:** 99**SPHU 4010 Formulation of Public Health Policy (3)**

An overview of the roles and responsibilities of public health government, nongovernment agencies, private organizations, health services, and health systems in promoting health. An overview of the influence of policies, laws, regulations, and legislation on both individual and population health. The course will include both historic and modern case studies of existing and emerging public health issues at the local, national, and global level.

Prerequisite(s): SPHU 1010.**SPHU 4160 Introduction to Statistical Packages (3)**

This course covers the elementary concepts and applications for managing and analyzing data using the Statistical Analysis System (SAS) and Stata statistical packages. The concepts covered are applicable to virtually all academic and professional settings. Each lecture begins with a presentation to introduce fundamental mapping concepts and is complemented with hands-on exercises to reinforce technical application. The first part of the course covers SAS applications, and the analog concepts for Stata are covered in the second part of the course.

Prerequisite(s): SPHU 2160.**SPHU 4180 Introduction to Qualitative Methods (3)**

Qualitative data can be a valuable source of information for public health programs. This course is an applied learning experience to equip public health students with skills in qualitative research. Course lectures, readings, and activities are linked to a project with a public health organization in New Orleans. Students learn principles of qualitative research, how to collect, organize, and store textual data using NVIVO software, and approaches to textual data analysis and presentation.

SPHU 4200 Evidence Based Public Health (3)

This course introduces the student to the scientific, epidemiological, organizational and management skills needed in designing and obtaining funding for an evidence-based public health intervention within an organizational or community setting. Students become familiar with the role and operation of not-for-profit organizations, foundations, national and international government agencies, and the local community in this process. Students learn to access publicly available and electronic information provided by these agencies and organizations. The course illustrates how evidence-based public health is used by funding agencies in developing and awarding grants and by public health providers and community contractors in applying for and receiving them. Emphasis is placed on how evidence-based public health is used in writing grant proposals and students have an opportunity to write a grant proposal as part of the course.

Prerequisite(s): SPHU 1010.**SPHU 4210 Health & Environmental Risk (3)**

This course covers the basic concepts of environmental health risk assessment. The National Academy of Sciences model framework for chemical risk assessment (hazard identification, dose response assessment, exposure analysis, and risk characterization) is used throughout the course. An introduction to toxicology and the rationale for risk assessment used by federal agencies will be discussed. Case studies on contemporary environmental pollutants, personal care products, etc., will be covered in the course.

Prerequisite(s): SPHU 2150.**SPHU 4220 Latino Health in the US (3)**

Addressing the health needs of Latinos in socially and culturally appropriate ways is critically important for creating an inclusive, cost-effective health care system and a more equitable society. Effective public health policies, interventions and population-based preventive programs are important tools for promoting healthy behaviors and reducing risk factors for adverse health outcomes in this vulnerable population. The goal of this course is to strengthen student's knowledge and understanding of Latinos in the United States and the health problems affecting them at the individual, community, and population level. Students will explore successful policies and public health interventions targeting those populations.

Prerequisite(s): SPHU 3110*.

* May be taken concurrently.

SPHU 4240 Epidemiology of Sexually Transmitted Infections (3)

This course is designed to provide students with the skills to conduct epidemiologic research in HIV and other sexually acquired infections. The first part of the course, we discuss the etiology, treatment, epidemiology and common prevention methods for the most common and/or most serious STIs. In the second part of the course, we will cover the methodological issues of surveillance, study design in the context of clinical and behavioral research. Ethical aspects of conducting research in HIV/STI are also discussed. Students will have hands on practice examining methodological issues by completing four exercises. Finally, we put STIs into context by discussing social, economic and political ramifications of these infections in the world by reviewing two books and one movie that illustrate these concepts.

Prerequisite(s): SPHU 3170.

SPHU 4260 Organizational Leadership and Management in Public Health (3)

Organizational Leadership and Management in Public Health is a interdisciplinary course that examines the complex challenges inherent in leading and managing organizations in the public health sphere, including public and private settings. Students will explore leadership and management principles in the current environment through the analysis of case studies and current events. In-class activities will expose students to diverse perspectives and challenges of leadership and decision-making.

SPHU 4300 Public Health Communication (3)

This course examines the intended and unintended effects of health communication, with specific focus on how the mass media and the Internet stimulate change in knowledge, attitudes, behavior, and subsequent health outcomes. Three health communication foci will be explored: 1) planned communication campaigns designed specifically to elicit health behavioral change, 2) traditional mass media's role in influencing health outcomes, and 3) the evolving influence of the Internet on health outcomes. This course examines the linkages between communication effects and various health topics, including smoking/alcohol, sex, diet, and physical activity. By the end of the course, students will understand the theoretical and practical aspects of the linkage between communication and public health and be able to apply such to public health initiatives.

Prerequisite(s): SPHU 1010.

SPHU 4310 Nutrition Education and Communication (3)

This course prepares the future public health nutrition professional with the necessary skills and strategies to provide nutrition education to and communicate with individuals, communities, and populations. While considering cultural differences, root causes of health inequities, and differences in health literacy levels, this course will explore evidence-based principles, strategies, and methods used in nutrition education and communication. During this course, students will analyze different communication techniques and the utilization of various platforms to disseminate accurate nutritional information. A strong focus of this course is on developing skills in designing educational programs, creating materials, and employing communication strategies to promote healthy eating behaviors and improve nutritional outcomes. Students will practice individual counseling approaches, participate in social media, and engage with and critique nutrition information delivered through mass media.

Prerequisite(s): SPHU 2300 and 3360*.

* May be taken concurrently.

SPHU 4330 Resilience in International Disasters (3)

This course addresses the field of disaster and international humanitarian studies, trends and recent developments in the field, and strategies to reduce disaster risk. It builds basic concepts and tools that will prepare students to understand humanitarian issues for disaster management. Students will learn to articulate concepts about disasters and the changing patterns of disasters, disaster resilience and international humanitarian response. They will develop a broad view of the key organizations involved in and components of the international humanitarian response system. The course methodology includes case studies of major disasters including the Haiti earthquake of 2010, Hurricane Katrina, the current crisis in Syria, famines in the Horn of Africa, Sahel, Southern Africa and the 2004 Asian Tsunami. Students will gain hands-on experience in computing indicators used to determine the effects of disasters on public health. Guest lecturers from the Centers for Disease Control will participate through tele video-conferencing.

Prerequisite(s): SPHU 1010.

SPHU 4340 Public Health Genomics (3)

This course is designed to prepare public health students for the study of human health in a post-genome era. Students will learn the molecular basics and the complex issues involved in applying and integrating genomic technology and information into public health. The students will be able to discuss the ethical, legal, and social implications of genomics on public health.

SPHU 4350 Zoonotic Infections (3)

This course provides a foundation of knowledge on the public health consequences of infections originating in vertebrate animals that cross over to humans with or without disease. Topics include: the consequences of animal-transmitted infections on the emergence of new human diseases; adaptation process of animal infections transitioning from animal microbes to become human microbes; human activities, occupational exposures, and medical practices that enable microbial transitions. Students will present reports and follow zoonotic disease outbreaks in real time.

Prerequisite(s): SPHU 1020.

SPHU 4410 Data and Information Management in Public Health (3)

This course provides students with a full introduction to data and information management. The topics include tools for collecting data, database concepts, data-entry techniques, queries of databases, data sharing, data reporting, and database design. Hands-on exercises are mainly practiced on MS Access. Having taken the course, students will be able to perform basic database functions to clean, collect, sort, share, retrieve, report, and alter data.

SPHU 4540 Capstone Senior Seminar (3)

This seminar is designed for public health students in their senior year. The course fulfills the Public Health capstone requirement. The class sessions will facilitate individual growth and career development through a series of guest lecture presentations, reflection essays, and the development of a professional public health portfolio.

SPHU 4550 Capstone Independent Study (3)

Working one-on-one with a faculty member, the student will complete a high-level research paper. Students should seek out a sponsoring faculty mentor and speak to the program manager to register for credit.

SPHU 4560 Capstone Internship (3)

This seminar is designed for students doing a public service internship during the spring. The seminar offers students an opportunity to discuss and explore issues related to their internship experience including the topics of service, service-learning in higher education, and civic engagement. Finally, the seminar is meant to compliment the public service internship experience in facilitating individual growth and career development.

Maximum Hours: 99

SPHU 4570 Internship (3)

Public Health Internship. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 4580 Capstone International Program (3)

Tulane's Office of Study Abroad works with international programs that provide academic research or internship projects, which can count as a public health Capstone. To complete this type of Capstone, the experience needs to be approved by the department program staff.

SPHU 4810 Special Topics in Public Health (1-3)

Special Topics in Public Health. Course may be repeated up to unlimited credit hours.

Prerequisite(s): SPHU 1010 and 1020.

Maximum Hours: 99

SPHU 4890 Service Learning (0-1)

Students complete a service activity in the community in conjunction with the content of a three-credit co-requisite course. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 4892 Service Learning (0-1)

Students complete a service activity in the community in conjunction with the content of a three-credit co-requisite course. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 4910 Independent Study (1-3)

The student will work closely with a faculty member from the department of Environmental Health Sciences. The student and faculty member will craft a research topic together. Students should consult their advisor for assistance. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 4920 Independent Study (1-3)

The student will work closely with a faculty member from the department of Environmental Health Sciences. The student and faculty member will craft a research topic together. Students should consult their advisor for assistance.

SPHU 4990 Honors Thesis (3)

During the senior year students may write an Honors Thesis that may be used to fulfill the BSPH Capstone. To be eligible to write an Honors Thesis, a student must have an overall cumulative GPA of 3.4 or higher, and a GPA of 3.5 or higher in the major or majors for which the thesis is to be written. The Honors Thesis requires two semesters (SPHU 4990 Fall and SPHU 5000 Spring) of work with a three-member faculty thesis committee. This option can be very rewarding for students planning to go on to graduate school. Interested students should speak to a faculty member during their third year at Tulane about this option, as well as to administrators of the Office of Academic Enrichment. Students receive 7 total credit hours as well as writing intensive credit for completing an Honors Thesis.

SPHU 5000 Honors Thesis (4)

For especially qualified seniors with approval of the faculty director and the Office of Academic Enrichment. Students must have a minimum of a 3.400 overall grade-point average and a 3.500 grade-point average in the major.

Prerequisite(s): SPHU 4990.

SPHU 5380 Junior Year Abroad (1-20)

Junior Year Abroad. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

SPHU 5390 Junior Year Abroad (1-20)

Junior Year Abroad. Course may be repeated up to unlimited credit hours.

Maximum Hours: 99

Public Health Minor

The Public Health Minor is designed for students who are looking for an introduction to the field and its disciplines. This minor offers a complementary curriculum for students who are on a pre-medical track or those majoring in fields, such as environmental sciences or policy, which may incorporate a health focus. The coursework for the minor offers exposure to the concepts and applications of public health in a variety of the specific disciplines that make up the School of Public Health and Tropical Medicine.

To declare the Public Health minor:

- Student must be in good academic standing with an overall GPA of 2.0 or better.
- All minor courses must be taken for a letter grade.
- Completion of the minor requires a GPA of 2.0 or better in all classes taken for credit towards the minor.

Requirements

The Public Health Minor requires a minimum of 18 hours in undergraduate public health credits.

Students are required to take the following courses for a total of 18 credits:

Course ID	Title	Credits
Required Courses		
SPHU 1010	Intro To Public Health	3
SPHU 1020	Cell, Individual & Community	3
SPHU 3170	Foundations of Epidemiology	3
Select three additional Public Health courses ¹		9
Total Credit Hours		18

¹ Students choose three (3) additional public health courses for nine (9) credits. Courses with the SPHU prefix (e.g., SPHU 3010, SPHU 4210) will count as an elective. One study abroad course may count toward this requirement with approval of a program advisor.

Please note the following before applying to the Public Health Minor:

- Applicants must be in good academic standing with an overall GPA of 2.0 or better.
- All minor courses must be taken for a letter grade.
- Completion of the minor requires a GPA of 2.0 or better in all classes taken for credit towards the minor.

Public Health, BSPH

The Tulane Bachelor of Science in Public Health (BSPH) degree is an academic degree which addresses the health of populations and communities through instruction, service, and community based research. The degree is firmly grounded in a background of humanities, social science and the liberal arts. The degree fulfills Tulane University's campus-wide undergraduate core proficiency through this background while stressing an additional commitment to quantitative and scientific skills.

Newcomb-Tulane Core Proficiencies

Newcomb-Tulane College General Education Curriculum

The Newcomb-Tulane College Core Curriculum allows students to explore a wide-range of disciplines and embodies the mission and values of the College by allowing students to have flexibility in their core curriculum courses while exploring a full-range of courses.

The core curriculum—which is composed of a minimum of 30 credits—is divided into three parts: proficiency requirements, distribution of knowledge requirements, and additional requirements. To ensure that students experience the breadth of knowledge at the collegiate level, AP, IB, and Cambridge A-Level courses can be used to satisfy proficiency requirements only in Formal Reasoning and Foreign Language.

Courses will be designated as satisfying the distribution requirements according to the content and methodology rather than the departmental affiliation of the course.

The new core curriculum general education requirements went into effect with the entering class of 2018.

Courses proposed to satisfy core requirements will be ratified by the Newcomb-Tulane Curriculum Committee.

Proficiency Requirements

Writing Skills (2 courses and 6 credits)

- Tier 1: Freshman writing (ENGL 1010 Writing or ENGL 1011 Writing for Academic Purposes) unless the student is exempt because of their score on the A.P./I.B./Cambridge-A level exams.
- Students receiving exemption from ENGL 1010 Writing/ENGL 1011 Writing for Academic Purposes are required to take an approved writing class during their freshman year. Approved courses will have at least 1/3rd of the grade based upon writing (excluding in class exams), but no revision is required.
- Tier 2: One additional writing course at the 2000 level or above taken from an approved list. Approved courses will have at least 1/3rd of the grade based upon writing (excluding in class exams), to include revision and re-evaluation by the instructor.
- Students are encouraged to take the Tier-1 writing course prior to taking the Tier-2 writing course; however, students are not prohibited from taking the Tier-1 and Tier-2 courses simultaneously.

Note: creative writing courses cannot be used to satisfy the writing proficiency requirement.

Formal Reasoning (1 course and 3 credits)

- One course in mathematics or symbolic logic from an approved list.

Foreign Language (0-3 courses)

The foreign language proficiency requirement is achieved in any of the following ways:

- A passing grade in a course at the 2030 level (3rd semester of Tulane 4-credit hour Foreign Language or ASLS coursework) or higher in accordance with assigned placement level.
- A passing grade on a Tulane-administered proficiency exam for students with assigned placements above the 2030 level. Students who do not successfully pass the proficiency exam will be automatically placed and must successfully complete a course at the 2030 level.
- A passing grade in a course at the level of placement above 2030.
- Advanced Placement score of 4 or 5 in a foreign language test as noted in the AP/IB chart
- Higher-Level IB score of 5 or higher in a foreign language test as noted in the AP/IB chart
- Cambridge A-Level score decided by the appropriate language department.
- SAT II achievement test of 640 or higher in a foreign language.

Note: This requirement is waived for students in B.S.E. programs.

Distribution Requirements

(A course can satisfy only one of the distribution areas.)

Mathematics and the Natural Sciences (2 courses including 1 lab science course and 7 credits)

(Those completing the B.F.A. degree need only complete 1 course with lab)

Social and Behavioral Sciences (2 courses and 6 credits)

Textual and Historical Perspectives (2 courses and 6 credits)

Aesthetics and the Creative Arts (3 credits), which can be fulfilled in 1-3 courses.

Additional Core Requirements

The First Year Seminar (<https://catalog.tulane.edu/newcomb-tulane/first-year-seminar-courses/>) (1 course, 1-3 credits)

This requirement can be satisfied by a Tulane Interdisciplinary Seminar (TIDES) course or Colloquium course (COLQ 1010 Freshmen Colloquium Seminar (1-3 c.h.) or COLQ 1020 Freshman Colloquium (1-3 c.h.))

Public Service (2 courses)

Students develop their commitment to civic engagement through the completion of service learning courses experiences. All students will complete their public service through service-learning courses, an approved public service internship, or an approved public service research experience. These courses can also be used to satisfy other areas of general education.

- To meet this requirement for graduation, all students must complete two semesters of service. One of these semesters must be at the 2000 level or above. The first experience should be completed by the 2nd semester of the sophomore year.
- Service Learning courses require a minimum of 20 hours of service per semester. Those service-learning courses designated as requiring a minimum of 40 hours of service carry one additional credit hour. No course may carry more than 4 credits.

Race and Inclusion (1 course, 3 credits)

One course and 3 credits. Courses that fulfill this requirement will focus on the intersections of race with power, privilege, equity, justice, and/or inclusion and will focus at least 60% their content on these issues in the United States. These courses may also be used to satisfy proficiency or distribution core curriculum requirements.

Global Perspectives (1 course, 3 credits)

One course and 3 credits. Courses that fulfill this requirement will focus at least 60% content with stated objectives to develop historical, cultural, and societal knowledge of an area beyond the United States. These courses may also be used to satisfy proficiency or distribution core curriculum requirements.

For more information please visit the Core Curriculum website (<https://college.tulane.edu/core-curriculum/>).

Requirements

Program Competencies

- Describe the history, philosophy, core values, concepts, functions, and population-based approaches of public health.
- Explain the behavioral, environmental, biological, and socio-economic determinants that impact human health and contribute to health disparities.
- Apply data collection and analysis to develop evidence-based population approaches to public health problems.
- Discuss and apply cultural competencies and concepts of public health planning, implementation, assessment, and evaluation.
- Describe the fundamental characteristics and organizational structures of the U.S. health system as well as the systems in other countries.
- Describe the legal, ethical, economic, and regulatory aspects of public health practice and health policy.
- Demonstrate public health communication skills using oral, written, mass media, and electronic technology formats.

Course ID	Title	Credits
Public Health Basic Core		
SPHU 1010	Intro To Public Health	3
SPHU 1020	Cell, Individual & Community	3

SPHU 2150	Foundations of Environmental Health	3
SPHU 2160	Biostatistics in Public Health	3
SPHU 3010	Foundations of Health Care Systems	3
SPHU 3110	Social and Behavioral Perspectives in Public Health	3
SPHU 3170	Foundations of Epidemiology	3
SPHU 4010	Formulation of Public Health Policy	3
Capstone (Select 1) ¹		
SPHU 4560	Capstone Internship	3
or SPHU 4540	Capstone Senior Seminar	
or SPHU 4550	Capstone Independent Study	
or SPHU 4560	Capstone Internship	
or SPHU 4580	Capstone International Program	
or SPHU 4990	Honors Thesis	
or SPHU 5000	Honors Thesis	
BSPH Electives		
Select a minimum of six courses		18
Total Credit Hours		45

¹ Students are eligible to complete their capstone after five semesters as an undergraduate, and with a majority of their other program requirements completed. See capstone options at <https://sph.tulane.edu/bsph/capstone> (<https://sph.tulane.edu/bsph/capstone/>).

BSPH Electives

BSPH Electives provide the opportunity to focus on specialized public health knowledge or to gain a breadth of knowledge across public health fields.

Because of the multi-disciplinary nature of public health, students are encouraged to consult with their program advisors to explore electives that will further their career goals or expand their public health interests and integrate other relevant disciplines into their study of public health.

A minimum of 3 courses for a minimum of 9 credit hours must be completed in courses offered by Public Health faculty (SPHU classes).

Public Health Electives

Course ID	Title	Credits
SPHU 2016	Infectious Disease Outbreaks	3
SPHU 2050	Arthropods and Public Health	3
SPHU 2300	Introduction to Nutrition	3
SPHU 2333	Introduction to Global Maternal and Child Health	3
SPHU 2400	Global Health in Action	3
SPHU 2410	Health & Women's Rights	3
SPHU 2420	Health Challenges and Climate Change	3
SPHU 3015	Public Health Program Implementation and Management	3
SPHU 3120	Issues & Strategies in Public Health	3
SPHU 3200	Nutrition & Chronic Disease	3
SPHU 3330	Disasters & Environmental Health	3
SPHU 3500	Public Health Approach to Sexual Violence	3
SPHU 3560	Biological Basis of Disease	3
SPHU 3600	Women's Reproduction & Obstetric Health	3
SPHU 4160	Introduction to Statistical Packages	3
SPHU 4180	Introduction to Qualitative Methods	3
SPHU 4200	Evidence Based Public Health	3
SPHU 4210	Health & Environmental Risk	3
SPHU 4220	Latino Health in the US	3
SPHU 4240	Epidemiology of Sexually Transmitted Infections	3
SPHU 4260	Organizational Leadership and Management in Public Health	3
SPHU 4300	Public Health Communication	3

SPHU 4330	Resilience in International Disasters	3
SPHU 4340	Public Health Genomics	3
SPHU 4350	Zoonotic Infections	3
SPHU 4410	Data and Information Management in Public Health	3
SPHU 4570	Internship (non-capstone)	3
SPHU 4910	Independent Study	1-3
SPHU 4920	Independent Study	1-3

Combined degrees: BSPH + MPH/MSPH/MPHTM degrees - Foundational Courses - SPHL 6050, SPHL 6060, SPHL 6070, SPHL 6080

Combined BSPH + MHA degree - HPAM 6050, HPAM 6200, HPAM 6300, HPAM 6710

Additional Electives

Certain courses above the 2000-level from other schools and departments with public health content or relevance may be approved by the program director as electives for public health majors. See the SPHU website <https://sph.tulane.edu/bsph/degree> (<https://sph.tulane.edu/bsph/degree/>) for a list of approved electives outside of Public Health courses.

Study Abroad electives: SPHU 5390 or SPHU 5390 Study Abroad credits approved by the program.

Public Health Nutrition Minor

Overview

The Public Health Nutrition Minor is designed to equip students with the knowledge and skills necessary to understand and address the interplay between nutrition and public health. This minor offers a complementary curriculum for students who are majoring in a health-focused field, science-focused field, and liberal arts. The coursework for the minor offers students exposure to interdisciplinary aspects of public health nutrition, such as education and communication, epidemiology, systems, and policy.

Requirements

Course ID	Title	Credits
Core Courses (12 credit hours)		
SPHU 1010 or SPHU 1020	Intro To Public Health Cell, Individual & Community	3
SPHU 2300	Introduction to Nutrition	3
SPHU 3360	Public Health Nutrition: Principles to Practice	3
SPHU 4310	Nutrition Education and Communication	3
PH Skill-Based Nutrition Selectives (Choose 2)		
SPHU 3015	Public Health Program Implementation and Management	
SPHU 3200	Nutrition & Chronic Disease	
SPHU 3350	Lifecycle Nutrition	
SPHU 3570	Introductory Microbiology	
SPHU 4330	Resilience in International Disasters	
SPHU 4550	Capstone Independent Study	
SPHU 4570	Internship	
PSDV 3500	Global Food Politics & Policy	
ECON 3530	Global Food Economy	
EVST 3010	Food System Leadership in the Gulf South	
Total Credit Hours		18

Per university policy, students are not permitted to share credits between minors. Only three credit hours can be shared with a Public Health Major.

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