The Master of Science in Public Health (MSPH) program with a specialty in tropical medicine provides advanced training in infectious diseases of global public health significance. The MSPH in Tropical Medicine is designed for students wishing to pursue careers in infectious disease. This program provides a solid foundation in parasitology, vector biology and other infectious diseases of public health significance. The coursework includes core public health courses and specialty courses covering biological, cellular and epidemiological aspects of infectious pathogens and diseases. Research and a thesis are required as part of the degree requirements. Students graduating with the MSPH degree generally seek research or administrative positions in public health, biomedical sciences, or related fields at academic institutions, governmental and non-governmental organizations, health care organizations, or biotechnology / pharmaceutical companies. The MSPH degree is also designed for students who enter the program with the intention of subsequently pursuing a doctoral or medical degree.

A minimum of 42 credits of coursework is required for the degree. Because of scheduling and sequencing of courses, entry in the Summer or Fall Semesters is encouraged, but enrollment is open throughout the year. MSPH degree requirements include:

- SPHTM public health core courses
- MSPH Tropical Medicine program specialty courses
- Elective courses (including independent study)
- Research project under the guidance of departmental faculty
- A thesis based on the results of the research project

Appendix 1 contains an example of a typical schedule for students in the MSPH program.

More information about the program can be found on the Tropical Medicine departmental webpage (http://www.sph.tulane.edu/publichealth/tropmed/index.cfm) or by contacting the program director (Dr. Nirbhay Kumar – nkumar@tulane.edu) or the department (tromped@tulane.edu) at (504) 988-3558. Information about the Tulane University School of Public Health and Tropical Medicine (SPHTM), including academic programs, courses, and academic policies can be found on the school webpage (http://www.sph.tulane.edu/). Further details on Policies and Procedures for Academic Standards within the School of Public Health and Tropical Medicine can be found at https://tulane.app.box.com/policy-academic-stand. Other academic policies and guidelines can be found at http://www.sph.tulane.edu/publichealth/academics/student-policies-guidelines.cfm.
Students will have the option to enroll in a number of graduate certificates of the School of Public Health and Tropical Medicine to acquire additional skills to supplement their primary degree concentration. Most graduate certificates are designed for students outside the student’s home department or degree program. For more information on the certificate programs please see: http://www.sph.tulane.edu/publichealth/academics/graduate-certificate-programs.cfm

**Student Advising.** Faculty advisors are assigned to students in the MSPH degree program at the time of acceptance. Generally, advisors are assigned based on the interests of students as stated in the Personal Statement section of the application. Students can also request a particular advisor or change advisors at any time prior to beginning their thesis research. The advisor meets with the student at orientation, and at least once per year thereafter to guide the student in scheduling classes and to monitor academic progress. Following meetings with the advisor students are required to submit a signed advising form to the Program Manager. In addition, advisors offer advice on career goals and opportunities. Students are also encouraged to meet with other faculty members within and outside the department for advice and guidance on academic and career matters. It is the responsibility of the student to ensure that all degree requirements have been met and all documentation has been properly submitted in a timely fashion to the Program Manager.

**Thesis Advisor.** The thesis advisor is responsible for supervising the research project leading to the thesis. Students should take into consideration their field of interest and the expertise of the advisor prior to final selection. Students are expected to learn about research areas of the Faculty members and discuss the scope of the research projects prior to final selection. In addition, students should discuss the feasibility and facilities available to carry out the proposed research project and expectations. Once a thesis advisor is chosen, students are required to submit the Student Thesis Advisor Agreement to the Program Manager for approval by the MSPH Program Director (Appendix 3). In certain circumstances, it may become essential to change the advisor-advisee agreement. The student or advisor will notify the Program Director for timely advice and reassignment of an advisor. Any disagreements will be mediated by the Program Director and the Department Chair.

**Public Health Core Requirements (15-18 credits).** Students are required to take core courses in each of the six public health core areas (see below). Multiple sections of most core courses are available each semester (i.e., Fall, Spring and Summer). On-line courses for some public health core courses are also available. Therefore, in terms of scheduling, these courses are generally the most flexible. Students that do not have a background in biomedical sciences should take Biological Basis of Disease (TRMD-6010) in their first semester or as early as possible. Other than that the order in which the public health core courses are taken is determined by convenience or the interests of the student. For example, students wanting to take advanced biostatistics or epidemiology courses as electives will need to take BIOS-6030 or EPID-6030 as early as possible since those courses are prerequisites for more advanced courses. The core public health courses are:
Course #        Name                                                                 Cr.  
BIOS-6030  Introductory Biostatistics                                           3  
EPID-6030  Epidemiologic Methods I                                             3  
GCHB-6030  Social and Behavioral Aspects of Global Health                     3  
GEHS-6030  Survey of Environmental Health                                      3  
GHSD-6030  Principles of Health Systems Administration and Management        3  
TRMD-6010* Biological Basis of Disease                                         3  

*MSPH students with a strong biomedical background are strongly encouraged to take the challenge examination and waive TRMD-6010. Students wishing to take the challenge exam should contact Dr. Wiser (Primary Instructor. Faculty Core Course Coordinator.

Program Specialty Requirements (18 credits). Students are required to take the following specialty courses focusing on infectious diseases of the tropics:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Name (semester offered)</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRMD-6050</td>
<td>Medical Helminthology (Fall)</td>
<td>2</td>
</tr>
<tr>
<td>TRMD-6060</td>
<td>Medical Entomology (Spring)</td>
<td>3</td>
</tr>
<tr>
<td>TRMD-6070</td>
<td>Medical Protozoology (Fall)</td>
<td>2</td>
</tr>
<tr>
<td>TRMD-6090</td>
<td>Parasitology Laboratory (Fall)</td>
<td>1</td>
</tr>
<tr>
<td>TRMD-6170</td>
<td>Immunology (Fall)</td>
<td>3</td>
</tr>
<tr>
<td>TRMD-6330</td>
<td>Microbial Diseases of the Tropics (Fall)</td>
<td>2</td>
</tr>
<tr>
<td>TRMD-6420</td>
<td>Tropical Virology (Spring)</td>
<td>3</td>
</tr>
<tr>
<td>TRMD-7020*</td>
<td>Infectious Disease Seminar (Fall, Spring)</td>
<td>1+1</td>
</tr>
</tbody>
</table>

*TRMD-7000 (Tropical Medicine Seminar) can be substituted for one or both semesters.

Electives (6 credits without TRMD 6010 waiver / 9 credits with TRMD 6010 waiver). Students may select electives offered by Tropical Medicine or any other department in the school as well as any graduate level course offered throughout the university. Students should take elective courses that are consistent with their career goals and program objectives. Electives that complement the thesis research project are strongly encouraged.

Up to 6 credits of independent study (TRMD-7990) can be counted towards the MSPH degree. However, an individual independent study can be no more than 3 credits. Independent studies can be based on laboratory, field, or library research. In consultation with a faculty member serving as the independent study instructor, students develop a title and goals and submit an Independent Study Registration form (https://tulane.app.box.com/independent-study). In addition, the student and faculty member directing the independent study must fill out and sign a departmental independent study form which can be obtained from the Program Manager.
**Waivers and Transfer Credits.** Public health core courses may be eligible for a waiver if students can demonstrate prior graduate level course work or pass a challenge examination in the subject. A student does not receive credit for the waived course. The waiver allows the student to take additional elective courses instead of the core course. Students wishing to waive a core course should first submit the waiver form (https://tulane.app.box.com/corecoursewaiver) and supporting documentation to the Academic Program Manager of the department in which the core course is taught. The Program Manager will obtain the necessary signatures and the signed form should then be returned to the Department of Tropical Medicine Academic Program Manager for proper processing. Additional information on waivers can be found in the Policies and Procedures for Academic Standards (https://tulane.app.box.com/policy-academic-stand).

Credits for courses taken at other institutes may also be eligible to be transferred to Tulane, however SPHTM departments reserve the right not to accept credit toward a SPHTM degree. Course credits to be transferred must be at the graduate level and should not have been used to fulfill the requirements of another degree. No more than 25% of the credits for a degree program can be transferred (i.e., maximum 11 credits). Rules governing the transfer of credit and the procedure for transferring credit are found in the Policies and Procedures for Academic Standards (https://tulane.app.box.com/policy-academic-stand). Students wishing to transfer credits from another university should complete the transfer-credit form (https://tulane.app.box.com/transfer-credit), attach the supporting documentation, and obtain all of the required signatures. The completed and signed form should then be returned to the Department of Tropical Medicine Academic Program Manager for proper processing.

Waivers and transfers should be implemented as soon as possible after the student matriculates. It is the responsibility of the student to ensure that all of the necessary forms have been submitted and approved. For questions regarding waivers and transfers, please see the Academic Program Manager.

**Research Project.** Students in the MSPH program are required to carry out research project to fulfil the practicum requirement; however a research project may take longer than the minimum time required for a practicum. The details of the practicum and the procedures for registering can be found in the Practicum Handbook (https://tulane.app.box.com/practicum-handbook). All of the forms in the practicum handbook need to be completed, signed and appropriately filed in the departmental office. A thesis based on results of the research project substitutes the practicum report. The complete thesis approved and signed forms are due no later than the last day of class during the semester in which the student plans to graduate.

Students should follow the procedures outlined in Appendix 3 and register for SPHL-9980 Practicum (0 credits) during the semesters in which the practicum research project is being carried out. Students can register for SPHL-9980 for up to five semesters or until the final practicum report (form E) is submitted. A $50 registration is assessed, but no other tuition is required. Students registered for SPHL-9980 are considered full-time students for financial aid purposes.
The required research project should include the following elements:

1) Title of the Research Project
2) Project goals and objectives, including description of testable hypothesis
3) Background Literature
4) Research Materials and Methods
5) Research Approach
6) Results
7) Discussion
8) Conclusion / Summary
9) A list of references used for the research topic

For general information on the Practicum requirements, please see the handbook located here: https://tulane.app.box.com/practicum-handbook.

Culminating Experience. MSPH students will fulfill the culminating experience with a written thesis based upon their practicum research project. The written thesis will be developed addressing all the points of the research / practicum project.

The written thesis (Minimum font size 11, type double space, 1 inch margin (top, bottom, right and left) will be arranged in the following order (see Appendix 4 for more details):

1. Page 1: Title of the project, Name of the student, Name of the faculty Advisor, Names of thesis readers
2. Page 2: Acknowledgements, if desired
3. Page 3: Abstract
4. Background Literature (No page limit)
5. Project Hypothesis, Project goals and specific aims (1 page)
6. Materials and Methods (No page limit)
7. Description of Results (including Data Figures and data tables) (no page limit)
8. Discussion of Results
9. Conclusions
10. List of references

During their final semester, students must register for SPHL-7950-01 (Culminating Experience Thesis). A $50 fee is assessed, but no automatic full-time status is granted as with SPHL-9980. Students also need to fill out and sign the Culminating Experience Completion Form (https://tulane.app.box.com/culm-exp-comp-form). Each student in consultation with the thesis advisor will request at least one faculty member of the department or from another department (if necessary) to evaluate the written thesis (culminating experience). If needed, the thesis may need to be revised to address specific comments of the evaluators (advisor and thesis reader). The final thesis approval form must be signed and dated by the advisor and the thesis reader. The final printed and approved electronic versions of the thesis, along with the signed Culminating
Experience Completion Form, must be turned into the Academic Program Manager no later than the last day of class of the semester the student plans to graduate. These theses will be maintained in the department library. The thesis is a formal written document that addresses the research project and the results of the research project may also lead to peer reviewed scientific publication to be written under the guidance of thesis advisor. Recommended elements of the thesis are found in appendix 4. See also the Culminating Experience Handbook (https://tulane.app.box.com/culm-exp-handbook) for more information on preparing a thesis.
Appendix 1

Model Schedule for Students Entering in the Fall Semester

Fall Semester (year 1)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRMD 6050 Medical Helminthology</td>
<td>2</td>
</tr>
<tr>
<td>TRMD 6070 Medical Protozoology</td>
<td>2</td>
</tr>
<tr>
<td>TRMD 6090 Parasitology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>TRMD-6330 Microbial Diseases of the Tropics</td>
<td>2</td>
</tr>
<tr>
<td>TRMD 6170 Immunology</td>
<td>3</td>
</tr>
<tr>
<td>+/- TRMD 7020 Infectious Disease Seminar</td>
<td>0-1</td>
</tr>
<tr>
<td>1-2 Public Health Core Courses</td>
<td>3-6</td>
</tr>
<tr>
<td>0-2 Electives</td>
<td>0-6</td>
</tr>
<tr>
<td></td>
<td>12-18</td>
</tr>
</tbody>
</table>

Spring Semester (year 1)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRMD 6060 Medical Entomology</td>
<td>3</td>
</tr>
<tr>
<td>TRMD 6420 Tropical Virology</td>
<td>3</td>
</tr>
<tr>
<td>TRMD 7020 Infectious Disease Seminar</td>
<td>1</td>
</tr>
<tr>
<td>1-3 Public Health Core Courses</td>
<td>3-9</td>
</tr>
<tr>
<td>1-3 Electives</td>
<td>2-9</td>
</tr>
<tr>
<td></td>
<td>12-18</td>
</tr>
</tbody>
</table>

Identify possible mentor for thesis research

Summer Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 Public Health Core Courses</td>
<td>0-9</td>
</tr>
<tr>
<td>Begin Practicum Research *</td>
<td></td>
</tr>
<tr>
<td>• A student can begin on Practicum / research any time after one semester in residence.</td>
<td></td>
</tr>
</tbody>
</table>

Fall Semester (year 2)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/- TRMD 7020 Parasitology Seminar</td>
<td>0-1</td>
</tr>
<tr>
<td>0-2 Public Health Core Courses</td>
<td>0-6</td>
</tr>
<tr>
<td>0-2 Electives</td>
<td>0-6</td>
</tr>
<tr>
<td></td>
<td>0-12</td>
</tr>
</tbody>
</table>

Continue Practicum Research

Spring Semester (year 2)

Complete Practicum Research
Write and Submit Final Thesis
Appendix 2

Department of Tropical Medicine
Practicum/Thesis Research Project SOP

All MSPH students involved in a Thesis Practicum in the Department’s research laboratories need to adhere to the following guidelines:

1. Before work in the laboratory can begin the student must be properly registered and all necessary forms/required training needs to be completed and approved by the student’s academic advisor & submitted to the Program Manager for processing.
2. The faculty member and the student should have clear and written guidelines detailing the practicum/thesis study objectives. Practicum paperwork can be found in the Practicum Handbook on the school’s website.
3. A student needs to complete all necessary training determined by the thesis advisor, paperwork and be fully registered for the Practicum before they can begin.

*Departments must maintain full documentation of each special study taken by their students. All documentation needs to in the students departmental file.*
Appendix 3

Graduate Student Thesis Advisor Agreement

By signing this form, we agree that the faculty member listed below will function as the graduate student’s thesis advisor until completion of the thesis. If for any reason the advisor listed on this sheet will no longer function as thesis advisor, the student or advisor must notify the department and the Program Director. Any disagreements will be mediated by the Program Director and Department Chair.

Graduate student’s name (PRINT) ____________________________________________

Graduate student’s signature __________________________________ Date __________

Faculty thesis advisor’s name (PRINT) _________________________________________

Faculty thesis advisor’s signature __________________________________ Date __________

Program director’s signature __________________________________ Date __________

Department Chair signature __________________________________ Date __________


Appendix 4

Recommended Elements of the Thesis

The MSPH thesis should contain the following elements:

**Title Page:** In addition to including a descriptive title, Name of the student, faculty advisor and date, the title page should include a statement to the effect: “A thesis submitted to the Department of Tropical Medicine in partial fulfillment of the Masters of Science in Public Health.”

**Font and Page format:** Use Arial or Times Roman font, font size 11 and maintaining 1 inch margin (top, bottom, right and left).

**Acknowledgements (if any)**

**Abstract (1 page):** A succinct summary (maximum 1 page) which includes key points of the background and significance, goals, results and any conclusions derived from the research. It may also include long term implications of research findings.

**Background and Significance or Introduction (no page limit):** A description of the published literature relevant to the research problem or public health issue being addressed. Any gaps in the knowledge or understanding of the research topic should also be identified. It does not need to be exhaustive, but should be thorough enough so that the reader can understand the overall importance of the project. Also supply definitions and explanation of terminology if needed.

**Hypothesis, Goal(s), Objective(s), Question(s) or Rationale and Specific Aims (1 page)**

**Materials and Methods (no page limit):** Describe the research methods, data collection, laboratory techniques, evaluation methods, and statistical analyses used to carry out the research.

**Results (no page limit):** It should include a detailed description of the results or findings. Figures and/or tables with detailed legends should be included, as needed.

**Discussion (no page limit):** A general summary of the results should begin this section followed by discussion of whether the hypothesis was proven, the objective(s) met, or the question(s) answered. Limitations, biases, and other interpretations of the results should also be addressed at the end of the discussion section. The results should also be compared to other published studies and possible discrepancies and interpretations of research results discussed. Other discussion items include how the study enhances our knowledge or understanding in the field, additional questions that are raised by the study, or future studies to better address the issues.

**Conclusions and/or Recommendations (maximum 2 pages):** State major conclusions derived from the project. Provide recommendations for future research or changes in public health practice or policy.
**Literature Cited or References**: A list of literature and webpages cited in the text. There is no specified format, but the format should be consistent throughout the document. Complete bibliographic information and URLs should be provided.

**Appendices**: Items included in the appendix can include but are not limited to: questionnaires or surveys, data sets deemed too large to be included in the Results, and materials developed as a result of the project.