

# MASTER'S OF SCIENCE IN MEDICAL SCIENCES: CLINICAL & TRANSLATIONAL SCIENCE PATHWAY GRADUATE STUDENT HANDBOOK 2019-2020

This Handbook provides useful information, guidelines, and policies for current and prospective students as well as faculty and staff who are actively involved in the MSMS program. This Handbook serves as a general guide and all program participants should consult the regulations and policies found in the University of Kentucky Graduate School Bulletin (see link below), which supersedes any information found in the MSMS Handbook.

## Important Links:

Academic Calendar:

<http://www.uky.edu/registrar/registrar-academic-calendar>

University of Kentucky Graduate School Bulletin:

<http://gradschool.uky.edu/graduate-school-bulletin>

Additional information and resources can be found at:

<http://gradschool.uky.edu/student-resources-0>

Registrar:

<http://www.uky.edu/registrar/>

Director of Graduate Studies (DGS):

Dr. Melinda Wilson

Email: [Melinda.wilson@uky.edu](mailto:Melinda.wilson@uky.edu)

## Introduction

The Master's of Science in Medical Sciences (MSMS) is a broad interdisciplinary degree program housed in the College of Medicine. Participating Departments and Centers include Anatomy and Neurobiology; Behavioral Sciences; Graduate Center for Nutritional Sciences; Graduate Center for Toxicology; Microbiology, Immunology and Molecular Genetics; Molecular and Biomedical Pharmacology; Molecular and Cellular Biochemistry; and Physiology.

The Clinical & Translational Pathway of the MSMS (MSMS-CTS) offers a clinical and translational science pathway for those with a rigorous medical sciences background (e.g., health-related professional degree, MS or PhD in basic medical sciences) or those seeking a dual degree (e.g., MD/MS). The program provides mentored research training with a flexible curriculum tailored to the needs of professional scholars interested in designing, implementing and publishing their own research studies or contributing to clinical and translational science teams.

Faculty members make every effort to insure that those who receive an advanced degree in CTS are fully capable of meeting the standards of professional scholarship. **The graduate scholar must assume responsibility for planning his/her program and must take the initiative in securing advice from the faculty.** However, to help you with this process, this Handbook includes important information about the structure of the MSMS-CTS program. You are strongly encouraged to become familiar with this Handbook, including the **Student Checklist** that is presented on page 17. This checklist may be a useful tool to ensure that you are on-track when it comes to the requirements of the CTS pathway program. Because this Handbook contains a number of active links to websites, you should save an electronic copy of this Handbook. Every effort has made to ensure that the links are correct, but webpages do move from time to time. If you have a problem accessing any of the webpages described in the Handbook, please email the DGS, Dr. Claire Clark ([claire.clark@uky.edu](mailto:claire.clark@uky.edu)).

## Curriculum

The plan of study for the MSMS program consists of a 14 credit hour Core Curriculum and a tailored course of study based on career goals. The number of additional credit hours in the tailored curriculum is determined by whether the student plans to complete a thesis (Plan A, 10 additional credit hours plus 6 hours of master's research) or a research paper (Plan B, 16 additional credit hours). The Core Curriculum is primarily housed within the Department of Behavioral Science.

The 14 credit hour Core Curriculum consists of the following courses:

BSC 731	Methods and Technologies in CTS	(3 credits)
BSC 732	Interdisciplinary Protocol Development	(3 credits)
BSC 733	Seminar in Clinical & Translational Science	(1 credit)
BSC 534	Ethics and Responsibility in Clinical Research	(3 credits)
BSC 625 (772)	Fundamentals of Biostatistics for Clinical and Translational Research	(3 credits)
	or	
STA 580	Biostatistics	(3 credits)
BSC 790	Research in Medical Behavioral Science	(1 credit)

## **Course Descriptions for Core Curriculum (14 credit hours)**

### **BSC 731: Methods and Technologies in Clinical and Translational Science.** (3 credit hours – Spring and Fall)

This overview course is designed to introduce the student to the major methods and technologies of clinical and translational science (CTS) with an emphasis on human subject's research. This course teaches students how to formulate research questions and write literature reviews; apply CTS research methods, including experimental, survey, and qualitative research methodologies, to diverse areas of research by aligning appropriate methodologies to research questions of interest; and enhance interdisciplinary communication skills.

**Prerequisites:** Graduate standing, permission of instructor

### **BSC 732: Interdisciplinary Protocol Development.** (3 credit hours – Spring and Fall)

This course will introduce students to the processes involved in the development and implementation of interdisciplinary research. Students will consider key aspects of the leadership, communication, and teamwork involved in conducting interdisciplinary research. Students will also learn about the structure and functioning of the National Institutes of Health (NIH) as well as the NIH grant application and review process. Finally, using their knowledge regarding the research methods and technologies of clinical and translational science, students will develop an NIH-format research grant application.

**Prerequisites:** Graduate standing, BSC 731, permission of instructor.

### **BSC 733: Seminar in Clinical and Translational Science.** (1-3 credit hours – Spring and Fall)

This seminar course is designed to orient students to the clinical and translational research community and activities at the University of Kentucky and to incorporate a multidisciplinary cooperative approach to clinical and translational research. Students are expected to apply their knowledge of effective scientific communication, responsible conduct of research, and methods and technologies of clinical and translational science to ongoing discussions. The course will consist of four evening seminars focusing on different topics of clinical and translational research as well as 3 additional seminars of the student's choice.

**Prerequisites:** Graduate standing.

### **BSC 534: Ethics and Responsibility in Clinical Research.** (3 credit hours – Spring and Fall)

The goal of this course is to provide an overview of ethical considerations when conducting and reporting clinical research, as well as to provide experience in the practice and application of ethics to clinical science. This course will address issues relevant to ethically sound study design, responsible conduct of research and scientific misconduct. Students will also complete human subject's protection training and learn to conduct research in an ethical manner.

**Prerequisites:** Graduate standing, permission of instructor.

### **BSC 625 (772): Fundamentals of Biostatistics for Clinical and Translational Research.** (3 credit hours – Spring and Fall)

This course is for students that are either actively engaged in clinical and/or translational research or intend to be involved in research in the near future. This course consists of lectures, demonstrations and discussion sessions on biostatistics for the health sciences. The course activities are intended to promote the application of biostatistics to research concepts in the students' areas of interest and to foster practical knowledge that supports students' own research interests.

**Prerequisites:** Graduate standing, permission of instructor.

**BSC 790: Research in Medical Behavioral Science.** (1 credit hour – Spring, Summer and Fall)

The research practicum is based on a detailed research training plan developed with the primary mentor that contributes to original research and leads to a peer-reviewed publication.

**Prerequisites:** Graduate standing.

The BSC 790 course warrants several additional comments. First, please note that BSC 790 is an independent study course, so it does not have class meetings to attend. For Fall or Spring semester, 1 credit of BSC 790 should constitute about 3 hours per week of independent study/research across a semester that lasts approximately 16 weeks. Summer session is on a compressed 12 week schedule, instead of the usual 16 weeks for the fall and spring semesters. Students taking BSC 790 for 1 credit during Summer session should anticipate about 4 hours per week for the 12-week term.

When you intend to register for BSC 790, there are several steps that should occur before registration. First, scholars should identify a faculty member to supervise their work in the course and meet to discuss course expectations. A mutual agreement between the student and the faculty member should be reached regarding course objectives and research-related expectations. Once that agreement has been reached, please contact the DGS Dr. Claire Clark, ([claire.clark@uky.edu](mailto:claire.clark@uky.edu)) so that you can receive permission to register for BSC 790. During the semester, scholars should meet periodically with the supervising faculty member to discuss progress. The supervising faculty member will then be asked to submit a grade for BSC 790 at the end of the semester.

### **Planning the Sequence of the Core Curriculum**

As you begin the MSMS-CTS Pathway program, you should think about the pace at which you will complete the Core Curriculum and other course requirements (see next section). Typically the Core Curriculum (described above) can be completed in 1-2 years. Students who intend to complete these Core courses in 1 year may want to consider the following sequence:

#### **One-Year Core Sequence**

Semester 1: BSC 731, BSC 625 (772), BSC 733

Semester 2: BSC 732, BSC 534, BSC 790

Please note that BSC 731 is a prerequisite for BSC 732, and that BSC 733 and BSC 790 could easily be reversed in terms of order.

Students who intend to complete the Core courses in 2 years may want to consider the following sequence:

#### **Two-Year Core Sequence**

Semester 1: BSC 731, BSC 733

Semester 2: BSC 732

Semester 3: BSC 534, BSC 790

Semester 4: BSC 625 (772)

As noted above, BSC 731 is a prerequisite for BSC 732. This two-year sequence may not be feasible based on other demands in your schedule and course availability, but it does represent a potential way to think about ordering the Core courses.

## Other Course Requirements

Additional coursework to fulfill the MSMS degree requirement is selected from courses offered in the graduate health science programs in the Medical Center and other colleges. Students will work with their mentors to design a career-focused curriculum along discipline specific tracks that target the needs, training, and career goals of each student. The number of additional credit hours within this tailored curriculum is determined by whether the student chooses Plan A (with thesis; 10 additional hours plus 6 credit hours of Master's research) or Plan B (with research paper, 16 additional hours). Plans A and B are described in more detail below (see "Plan Options"). The courses to be included tailored curriculum should be approved by the student's advisory committee and the DGS.

Students interested in community and policy research could consider courses in the College of Public Health, such as CPH 663: Survey and Public Health, and CPH 605: Epidemiology. Those interested in clinical trials should consider CPH 664: Design and Analysis of Clinical Trials. Students pursuing biomedical research should consider taking IBS 601/BCH 607: Biomolecules and Metabolism, BCH 401G: The Fundamentals of Biochemistry course, MI 495G: Bacterial Pathogens, or MI 494G Immunobiology. A student pursuing a career in the pharmaceutical industry might consider taking Principles of Drug Action (PHA 621) and Molecular Targets and Therapeutics (PHA 622).

BSC 790 can be used to address some of the credit hours related to these other course requirements. However, it is critical to note that there are limits in how many of your credit hours can come from independent study/research under BSC 790. At least two-thirds of the minimum requirements for the master's degree must be in regular courses, and at least half of the minimum course requirements (excluding thesis, practicum, or internship credit) must be in 600- or 700-level courses.

## Registration for Courses

Students who are beginning the MSMS-CTS Pathway program should consult the letter of acceptance from the Graduate School which contains several pieces of information about registering for classes, including a link to UKIT for establishing a UK Link Blue email account as well as Student ID number and User ID. A UKIT email account must be established before attempting to register for classes. Upon acquiring a UK Link Blue account, student should visit the UK Registrar's page (<http://www.uky.edu/registrar/how-to-register>).

All students should consult the Academic Calendar in the registrar's office to determine their specific [registration window](#). Students currently enrolled in the MSMS-CTS program have a priority registration window different from incoming students, who register approximately 1-2 weeks prior to the start of the semester in which they begin their studies. Failure to register during the priority registration window will require late registration and a late fee. Courses in the CTS Core Curriculum all require permission of the instructor to register, so students should email the instructor before attempting to register, identifying themselves as an MSMS-CTS student in that email.

Please also note that **students must register for at least one course every Fall/Spring semester** in order to remain in the program. If a student is unable to attend courses in a given semester but is still actively engaged in research with his/her mentor, s/he should register for at least one credit hour of BSC 790 (Research in Medical Behavioral Science).

In the event that the student is not conducting research and needs to sit out for a semester, a Leave

of Absence must be requested **at least 1 week before the start of classes** for that semester. To make a Leave of Absence request, a student should contact the DGS (Dr. Melinda Wilson, [Melinda.wilson@uky.edu](mailto:Melinda.wilson@uky.edu)) and cc' Dr. Claire Clark from the Department of Behavioral Science ([claire.clark@uky.edu](mailto:claire.clark@uky.edu)). The Graduate School has set its policies for maximum Leaves of Absence as no more than two consecutive semesters off and no more than four total semesters. If either maximum is exceeded, the student will have to re-apply to the MSMS-CTS Pathway program and pay the Graduate School's fee.

### **Research Mentor and Advisory Committee**

The emphasis of the MSMS-CTS Pathway is mentored research training provided by a primary mentor charged with supporting the scholar's career development. Students should identify an area of interest and then explore opportunities with faculty members in that area. This can be accomplished by examining the research programs of the different faculty in the Departments/Centers of interest. Victoria King, PhD, (Career Development Director, CCTS; email: [vicky.king@uky.edu](mailto:vicky.king@uky.edu); tel: 859-323-1225) is also available to help with mentor matching.

**Note:** Students are asked to share this Handbook with their research mentor and advisory committee to inform them of expectations and procedures.

In addition to a primary mentor, students should form an advisory committee consisting of a chair (typically, the primary mentor) and at least 2 other faculty members, for a total of at least 3 faculty members. All students will be required to meet with their advisory committee at least once a year to review the student's progress. The results of this meeting will be communicated to the student in writing with a copy sent to the DGS, and the student's committee will address any deficiencies in a student's academic background. Your advisory committee is also responsible for administering the Final Examination that is required before your MSMS degree is awarded (see below for more details about the Final Examination).

### **Plan Options**

All students in the MSMS-CTS will complete a total of 30 credit hours, but how those credit hours are distributed is determined by whether the student chooses the thesis option (Plan A) or non-thesis option (Plan B). Students entering the Clinical & Translational Pathway who choose the thesis option (Plan A) are required to completed a total of 24 hours of graduate level coursework (i.e., Core Curriculum and tailored curriculum) plus at least six hours of masters research. The non-thesis option (Plan B) requires 30 hours of graduate level coursework. For both Plan A and Plan B, 50% of the coursework must be at the 600 level or above and two-thirds of the coursework must be in formally organized courses.

Worksheets describing the Graduate School and Clinical & Translational Pathway degree requirements, as well as steps for each plan are provided to all students and copies are included as attachments to this handbook. Each student is responsible for ensuring they adhere to the guidelines, timetables, and submission deadlines related to their specific Plan option as described in the worksheets.

Students in the **Plan A thesis option** should register for Master's Thesis Research hours during the semester in which they conduct their research project. Students should contact the DGS regarding the course number to use when registering for Master's Thesis Research. In addition, once students complete 6 credit hours of Master's Thesis Research, they will need to be registered for a Residency Credit for Master's Degree once they complete six credit hours of

Master's Thesis Research. Registration in the Residency Credit for Master's Degree ensures that a student is considered to be in full-time status for the purposes of financial aid and loan deferments until the student graduates, but is capped at a total of 6 semesters (not counting summer terms). NOTE: The DGS of the MSMS program submits the request for registration in the Residency Credit for Master's Degree and will forward this to the Graduate School once notified by the student.

Plan A requires a Final Examination (i.e., defense of a written formal master's thesis) according to the guidelines established by the Graduate School. The complete thesis must be provided to the committee at least two weeks prior to the defense date. The defense follows an oral presentation of the thesis research and is conducted by a committee of at least three faculty members. Typically the student's mentor serves as Chair of the advisory committee.

For Plan A, it is important that you review the Graduate School's website, which contains information (e.g., deadlines; <http://gradschool.uky.edu/thesis-and-dissertation-preparation>) as well as specific instructions about formatting your thesis ([Electronic Thesis Instructions](#)). It is the student's responsibility to review and comply with these instructions.

The Graduate School has numerous procedures that Plan A students are required to follow regarding the Thesis Defense/Final Examination process. Please review this three-step process, fees, and the Electronic Thesis or Dissertation (ETD) Approval Form that is required for completing your degree (see [Electronic Thesis Defense Process](#)). The Final Examination (i.e., thesis defense) must take place *no later than eight days prior* to the last day of classes during the semester in which you intend to graduate. The defense *may not* be scheduled during the period between semesters or at the end of the twelve-week summer session and the beginning of the fall semester. Check the [Academic Calendar](#) for deadlines to schedule your thesis defense.

The final, accepted thesis document must be submitted to the Graduate School *no later than* 60 days following the date of your defense. You will not have the entire 60 days if you defend late in the semester and need to graduate that semester (check the [Academic Calendar](#) for deadlines). Prior to the final submission *you must* have your thesis reviewed by the Graduate School to check for correct formatting. This process takes about 48 hours and may take longer during peak periods, especially towards the end of the semester.

**Plan B** does not have a formal written thesis but does require a total of 30 credit hours of graduate coursework and a Final Examination involving a written document covering their research project. The report should be formatted for submission to a peer-reviewed journal. The general format of the actual Plan B final master's examination is up to the student's advisory committee. For example, the committee may require the student to prepare a PowerPoint-style presentation that will serve as the basis for questioning about the research paper. The research paper must be provided to the committee at least *two weeks prior* to the date of the exam. The presentation would include the hypothesis to be tested, the methodology used, the results of the study, interpretation of the results, and future directions. However, the Final Examination must still conform with the Graduate School's policies, so please see below for more details about the Final Examination.

## Final Examination

**For both Plans A and B**, students must submit complete two important forms that are related to graduation and the Final Examination (see <http://gradschool.uky.edu/degree-forms>). First,

students must complete the Application for Degree via [myUK](#) (click on “Student Services,” then “myRecords,” then “Apply for Degree”). Second, students must submit the [Master’s Degree Candidate Form](#) at least two weeks before the intended date of the Final Examination. Graduate School policy states that students will not be allowed to sit for a thesis defense or final exam if there are unresolved academic issues. Therefore, you need to check your transcript to ensure there are no missing grades or coursework in which you received a grade of “I”. In addition, you must be in good academic standing (your GPA is 3.00 or higher).

**Students in both Plans A and B must pass a Final Examination.** A Final Examination (oral and/or written) is given to all candidates for master's degrees not later than eight days before the last day of classes of the semester in which the degree is to be awarded. The examining committee (typically your Advisory Committee) consists of at least three qualified faculty members recommended by the Director of Graduate Studies (DGS) and appointed by the Dean of the Graduate School. At least two committee members (including the chair or co-chair) must be members of the Graduate Faculty, and at least one of the two must be a Full member of the Graduate Faculty. To determine whether potential committee members have Graduate Faculty status, visit <https://ris.uky.edu/cfdocs/gq/dgsgradfac/>. In all decisions the majority opinion of the committee prevails. If the committee is evenly divided, the candidate fails the Final Examination. If the candidate fails the Final Examination, the committee may recommend to the Dean of the Graduate School the conditions under which a second examination may be administered. A third examination is not allowed.

### **Timetable to Completion**

As previously noted, it is anticipated that the Core Curriculum will be completed in 1-2 years, with about another year for obtaining the remaining credit hours associated with Plans A or B.

### **Exiting the MSMS-CTS Program**

The University requires all graduate programs to have an Assessment Plan that focuses on the effectiveness of the program. To support our Assessment Plan, you will be asked at the time that you exit the MSMS-CTS program (whether through graduation, transferring to a different CTS program, or withdrawal from the program) to reflect upon the experiences that you had in the MSMS-CTS program. You may be asked to complete an exit survey and/or exit interview if your schedule permits.

### **Additional Information**

#### **Beginning the Program as a Post-Baccalaureate Student**

To accommodate students’ timetables for program completion, there are times when students take CTS courses before formal admission to the program, usually as a post-baccalaureate student. It is the policy of the Graduate School that post-baccalaureate students can only take 9 credit hours and have them count towards the course requirements for this graduate program. If you begin taking courses as a post-baccalaureate student, you must apply to the Graduate School for formal admission as a graduate student via the [ApplyYourself website](#). It is your responsibility to complete this application. If you have previously submitted application materials to the ApplyYourself website and it will not allow you to complete the application submission, please try using a different email address from your previous application.

#### **Deferring Entry into This Program**

If you have been admitted to this program, but have not yet begun classes and need to wait 1-2 semesters before beginning the program, you need to request a deferral. To be approved, a deferral request must be sent via email to the DGS ([claire.clark@uky.edu](mailto:claire.clark@uky.edu)) at least one week before the start of classes for that semester. Following this procedure of deferral request will prevent you from having to submit a new application and paying another application fee to the Graduate School. Failure to submit a deferral request at least 1 week before the start of the semester will mean that you must re-apply to the Graduate School and pay another application fee. To read the Graduate School's policy regarding deferrals, please see <http://gradschool.uky.edu/student-resources-0>.

### **Applying for a Leave of Absence from This Program**

If you need to not take courses for a semester, you need to request a leave of absence from this program. A leave of absence must be requested **at least 1 week before the start of classes** for that semester by emailing Dr. Claire Clark ([claire.clark@uky.edu](mailto:claire.clark@uky.edu)). The Graduate School has set its policies for maximum Leaves of Absence as no more than two consecutive semesters off and no more than four total semesters. If either maximum is exceeded, the student will have to re-apply to the PhD program and pay the Graduate School's application fee. To read more the Graduate School's policy regarding leaves of absences, please see <http://gradschool.uky.edu/apply-readmission>

### **Obtaining the Certificate in Clinical and Translational Science on Your Official Transcript**

Students in the PhD in CTS program who complete the Core Curriculum and 1 credit hour of BSC 790, and who have a 3.0 grade point average (GPA) or better in these courses, will have satisfied the requirements associated with the Certificate in Clinical and Translational Science. Per the policy of the Graduate School, to have the Certificate in CTS included on your official transcript, students will need to fill out another application to the Graduate School (specifically for the Certificate program) via the [ApplyYourself website](#). To avoid having to pay a second application fee, the student should call Vivian Bowling (Admissions Officer, UK Graduate School, tel: 859-257-4619) when they reach the fee payment section of the application and request that the fee be waived. Once you have completed this second application to the UK Graduate School, please notify the DGS, Dr. Claire Clark ([claire.clark@uky.edu](mailto:claire.clark@uky.edu)).

To ensure that your Certificate is included in your official transcript, it is your responsibility to notify the DGS when you have completed the required curriculum (i.e., Core Curriculum and 1 credit of BSC 790). The DGS will verify your grades in the required courses and then will submit the [Graduate Certificate Award Request](#) to the Graduate School.

### **Financial Aid and the Employee Education Program (EEP)**

The Clinical & Translational Pathway does not provide stipends or tuition at the present time to cover tuition costs. To apply to the EEP, you must fill out [this form](#) each semester and submit it after registering for classes either by email ([edubenefits@uky.edu](mailto:edubenefits@uky.edu)), fax (859-323-8494), or in-person at 115 Scovell Hall. Please be sure to check the EEP's deadlines for applying which can be found [here](#) (be sure to scroll down). If you make any changes to your courses for that semester, you will need to re-submit an amended form that shows the changes to the EEP.

The EEP has two maximums that are important to know: 1) You may only have tuition for a maximum of 8 credit hours waived per semester (and unused credit hours under this maximum

do not carry over to future semesters); and 2) The maximum number of credit hours per academic year is 18 credit hours. Please note that graduate-level waivers (i.e., those that would be used for tuition in the CTS program) in excess of \$5,250 in a calendar year are subject to taxation. Answers to frequently asked questions about the EEP can be found [here](#). Questions about the EEP should be directed by email to [edubenefits@uky.edu](mailto:edubenefits@uky.edu) or by calling (859) 257-8772.

## **ID Badges**

The UK student ID is available at the UK WildCard [UKID Center](#), 107 Student Center, 9 am – 5 pm, for \$15 (257-1378). This ID may be used for a variety of services on campus (copying services, athletic events, library use, etc.) and provides other discounts in Lexington.

Students engaged in research may be required to access various restricted areas. In this case, they should contact the Administrator or DGS of the Department/Center in which the research is being conducted for obtaining a Medical Center ID badge.

## **Health and Health Insurance**

[University Health Services](#) provides medical treatment for full- and part-time students. The university also has a student health insurance [plan](#) (voluntary) that provides benefits for sickness and injury. The University of Kentucky requires all international students and their dependents to have health insurance.

## **Parking**

Students, who are also employees, have 2 official parking options. The K tag (student) is \$272/year for the stadium parking lot, with a shuttle to the Medical Center. Additional information, including summer parking rates, can be found at the UK Parking and Transportation office [website](#).

## **Safety and Research Training**

MSMS students who participate in laboratory research must complete the basic [safety training](#) required for biomedical research at UK. *Students and faculty research mentors must review any additional safety or research training requirements prior to engaging in specific lab activities.*

Laboratory accidents should be reported immediately to the faculty mentor or appropriate lab personnel to determine a course of action. Non-life threatening accidents requiring medical attention need to be reported first to Worker's Care (1-800-440-6285). The injured employee (including graduate students) must go to [UK Employee Health](#) (part of University Health Services on Limestone) in the Kentucky Clinic for medical treatment.

## **Vacations and Holidays**

Students are considered both trainees and employees. Most departments consider that students have approximately four (4) weeks total vacation time each calendar year, consistent with vacation allocations for other employees. Any vacation time taken during the holiday break for Christmas and New Year's, during spring break, and vacation days away from campus at other times are included in this four-week allocation. Generally, students are expected to keep a schedule similar to the UK staff calendar (and not the academic calendar) and to be on campus

on a continuing basis during regular work hours throughout the year. Students should also be aware that the demands of research protocols or presentations may require work on holidays, weekends, or evenings.

### **Academic Probation**

The Graduate School will place a student on academic probation if their GPA average falls below 3.00 after completing 12 or more credit hours. A student must restore their GPA to 3.00 or above within the next 9 credit hours. Otherwise, they will be dismissed by the Graduate School, but may apply for readmission at a later date. Students on academic probation are ineligible for fellowships, tuition scholarships, and final exams.

### **Termination from the Program**

If necessary, termination procedures will be conducted as specified in the rules of the Graduate School. Reasons for termination include one or more of the following:

- failure of the final examination;
- scholastic probation for three continuous semesters;
- failure to make satisfactory progress toward completion of a satisfactory thesis as determined by the thesis advisor and the student's Advisory Committee.

In addition, misconduct of a serious nature during the master's program, e.g., cheating, plagiarism, scientific misconduct such as falsification of scientific data, misuse of data or misuse of equipment, are causes for dismissal from the program following procedures outlined in the [UK Student Code of Conduct](#).

### **Application to Master's of Science in Medical Science-Clinical & Translational Pathway Program**

In the event that you know other individuals who may be interested in the Master's of Science in Medical Science-Clinical & Translational Pathway program, information about how to apply is presented below.

Applicants for the MSMS-Clinical & Translational Science Pathway must have a MS or PhD in basic medical sciences, MD, DMD, DDS, PharmD, DVM, DO, DNP, PA, PT or those seeking a dual degree (e.g., MD/MS). Prior to submitting an application, prospective applicants must contact Sarah Treberg (Curriculum Coordinator; email: [sarah.treberg@uky.edu](mailto:sarah.treberg@uky.edu); tel: 859-323-5803) about the MS in Medical Science-Clinical and Translational Pathway program.

The application process involves a completed application to the [Graduate School](#). Application materials include transcripts, a current curriculum vitae (CV) and two letters of support. Please note that there are specific instructions regarding letters of support and a link that should be sent to letter-writers. Additionally, applicants should prepare narrative responses to [questions](#) and upload to the personal statement section of the application. Applications are accepted for both the Fall and Spring semesters. **All** application materials for the Fall semester must be received by **May 1**. All application materials for the Spring semester must be received by **October 1**. Late or incomplete applications will **not** be considered until the following application cycle. Individualized consideration is given to how each applicant may contribute to the learning environment and to the profession, weighing and balancing the range of the criteria prioritized by the selection committee. Following review of applications by the

Admissions Committee, applicants will be notified of their status.

**Attachments** (**Note:** Worksheets are not official documents, but simply a tool for students and mentors to use in developing coursework and identifying committee members for their final exam. The worksheets and this handbook also described expectations and procedures for each Plan option):

- Plan A Worksheet and Checklist
- Plan B Worksheet and Checklist

**Master of Science in Medical Sciences  
Clinical & Translational Science Pathway**  
Requirements, Curriculum, and Checklist for the Thesis (Plan A) Option

Student Name \_\_\_\_\_ Date \_\_\_\_\_

**Core Curriculum (14 credits)**

COURSE PREFIX- NUMBER	COURSE TITLE	CREDIT HR
BSC 731	Methods & Technologies in CTS	3
BSC 732	Interdisciplinary Protocol Development	3
BSC 733	Seminar in CTS	1
BSC 534	Ethical and Responsibility in Clinical Research	3
BSC 625	Fundamentals of Biostatistics for CTS	3
BSC 790	Research in Medical Behavioral Science	1
		Total

Credits: 14

**Remaining Coursework (10 credits plus 6 hours of Master's Thesis Research)**

COURSE PREFIX- NUMBER	COURSE TITLE	CREDIT HR
XXX 768	Master's Thesis Research	6
		Total Credits:

**30**

**Total Credits for the M.S. in Medical Sciences Plan A Option: 30**

**Student Advisory/Thesis Committee**

**Committee Chair (advisor)** \_\_\_\_\_

**Committee Member** \_\_\_\_\_

**Committee Member** \_\_\_\_\_

**Committee Member** \_\_\_\_\_

Plan A requires defense of a written formal master's thesis according to the guidelines established by the Graduate School. The complete thesis must be provided to the student's committee at least 2 weeks prior to the defense date. The defense follows an oral presentation of the thesis research and is conducted by a committee of at least three faculty members.

Typically the student's advisor chairs the committee. Students should consult with their advisor regarding the selection of committee members and scheduling of the exam (also see attached Checklist).

## **Student Checklist for Masters of Science in Medical Sciences -Plan A Option-**

The Master of Science degree in Medical Sciences Plan A option requires:

- successful completion of the Core Curriculum
- at least 24 credit hours of graduate level course work with at least 2/3 of the course work in a traditional classroom setting (no special project, independent study, etc.) and at least 12 hours must be at the 600 or 700 level (excluding thesis credit)
  - These 24 credit hours include both the Core Curriculum and the tailored curriculum
- at least 6 hours of Master's Thesis Research (does not count towards the 24 credit hours of coursework)
- a minimum 3.0 grade point average for all course work
- successful completion of defense of thesis\*
- submission of an approved written thesis to the Graduate School

The student should work with their mentor and/or the MSMS DGS to identify appropriate coursework beyond the required Core Curriculum.

1. Be sure to enroll in the semester for which you were accepted.
2. You must be enrolled EVERY Fall and Spring semester until you complete your degree.
3. Establish a course curriculum with your advisor, advisory committee, or DGS of the MSMS program.
4. Identify, design, and conduct a research project with guidance from your advisor.
5. Identify an examination committee at least one (1) semester before you plan to graduate.
6. Complete your thesis based on the format described by the Graduate School.
7. Successfully pass your Master's examination (thesis defense).

*-Please follow the guidelines below during the semester that you intend to graduate-*

**Forms:** Be sure check the "[Forms](#)" page on the Graduate School web site under "Students in Master's/Specialist Programs" for accessing, filling out, and submitting important forms. There is a "Check sheet for Master's Thesis Students" that may be useful to review.

**Application for Degree:** The application for a degree is due within 30 days after the beginning of the semester (15 days for summer session). Go to "myuk" and click on "Student Services" then "myRecords" and then "Graduate Degree Application". You need to check the [Academic Calendar](#) in the registrar's office for specific deadlines related to the semester you intend to graduate.

**Request for Final Master's Examination (Thesis Defense):** You must submit the Request for Final Master's Examination form at least 2 weeks prior to examination. You may access and submit the form [here](#).

**Date of examination:** The thesis defense must take place no later than eight days prior to the last day

of classes during the semester in which you intend to graduate. The defense *may not* be scheduled during the period between semesters or at the end of the twelve-week summer session and the beginning of the fall semester. Check the [Academic Calendar](#) for deadlines to schedule your thesis defense.

**Thesis:** The final, accepted thesis document must be submitted to the Graduate School *no later than* 60 days following the date of your defense. You will not have the entire 60 days if you defend late in the semester that you intend to graduate (check the [Academic Calendar](#) for submission deadlines). Prior to the final submission *you must* have your thesis reviewed by the Graduate School to check for correct formatting. This process takes about 48 hours but may take longer during peak periods, especially during the end of the semester.

**Note:** The Graduate School policy states that you will not be allowed to sit for the exam if you have unresolved academic issues. Therefore, you need to check your transcript to ensure there are no missing grades or coursework in which you received a grade of "I". In addition, you must be in good academic standing (your GPA is 3.00 or higher).

**Master of Science in Medical Sciences  
Clinical & Translational Science Pathway**  
Requirements, Curriculum, and Checklist for the Non-Thesis (Plan B) Option

Student Name \_\_\_\_\_ Date \_\_\_\_\_

**Core Curriculum (13\4 credits)**

COURSE PREFIX- NUMBER	COURSE TITLE	CREDIT HR
BSC 731	Methods & Technologies in CTS	3
BSC 732	Interdisciplinary Protocol Development	3
BSC 733	Seminar in CTS	1
BSC 534	Ethical and Responsibility in Clinical Research	3
BSC 625	Fundamentals of Biostatistics for CTS	3
BSC 790	Research in Medical Behavioral Science	1
		Total

Credits: 14

**Remaining Coursework (16 credits)**

COURSE PREFIX- NUMBER	COURSE TITLE	CREDIT HR
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
		Total Credits:

30

**Total Credits for the M.S. in Medical Sciences Plan B Option: 30**

**Student Plan B Exam Committee**

**Committee Chair (mentor)** \_\_\_\_\_

**Committee Member** \_\_\_\_\_

**Committee Member** \_\_\_\_\_

**Committee Member** \_\_\_\_\_

Plan B does not have a formal written thesis but does require a final master's exam that involves a written document covering their research project. The report should be formatted for submission to a peer-reviewed journal. The general format of the actual Plan B final master's exam is up to the student's advisory committee. For example, the committee may require the

student to prepare a PowerPoint-style presentation that will serve as the basis for questioning about the research report. The research report (or paper/proposal- see below) must be provided to the committee at least two weeks prior to the date of the exam. The presentation would include the hypothesis to be tested, the methodology used, the results of the study, interpretation of the results, and future directions. Please see this checklist from the Graduate School about the forms (e.g., Application for Degree and Request for Final Master's Examination) that students are required to submit and the deadlines for those forms (see <http://gradschool.uky.edu/studentforms> and scroll to "Students in Master's Specialists Programs→Check sheet for Master's Non-Thesis Students).

## **Student Checklist for Masters of Science in Medical Sciences -Plan B Option-**

The Master of Science degree in Medical Sciences Plan B option requires:

- successful completion of the Core Curriculum
- at least 30 credit hours of graduate level course work with at least 2/3 of the course work in a traditional classroom setting (no special project, independent study, etc.) and at least 15 hours must be at the 600 or 700 level
  - These 30 credit hours include both the Core Curriculum and the tailored curriculum
- a minimum 3.0 grade point average for all course work
- successful completion of a final exam\*

The student should work with their major advisor and/or the MSMS DGS to identify appropriate coursework beyond the required Core Curriculum.

1. Be sure to enroll in the semester for which you were accepted.
2. You must be enrolled EVERY Fall and Spring semester until you complete your degree
3. Establish a course curriculum with your advisor, advisory committee, or DGS of the MSMS program.
4. Outline and conduct research.
5. Identify an examination committee one semester before you graduate.
6. Successfully pass your Master's examination.

*-Please follow the guidelines below during the semester that you intend to graduate-*

**Forms:** Be sure check the "[Forms](#)" page on the Graduate School web site under "Students in Master's/Specialist Programs" for accessing, filling out, and submitting important forms. There is a "Check sheet for Master's Non-Thesis Students" that may be useful to review.

**Application for Degree:** The application for a degree is due within 30 days after the beginning of the semester (15 days for summer session). Go to "myuk" and click on "Student Services" then "myRecords" and then "Graduate Degree Application". You need to check the [Academic Calendar](#) in the registrar's office for specific deadlines related to the semester you intend to graduate.

**Request for Final Master's Examination:** You must submit the Request for Final Master's Examination form at least 2 weeks prior to examination. You may access and submit the form [here](#).

**Date of examination:** The final examination must take place no later than eight days prior to the last day of classes during the semester in which you intend to graduate. Final examinations may not be scheduled during the period between semesters or at the end of the twelve-week summer session and the beginning of the fall semester. Check the [Academic Calendar](#) for

deadlines to schedule your final examination.

**Note:** The Graduate School policy states that you will not be allowed to sit for the exam if you have unresolved academic issues. Therefore, you need to check your transcript to ensure there are no missing grades or coursework in which you received a grade of “I”. In addition, you must be in good academic standing (your GPA is 3.00 or higher).