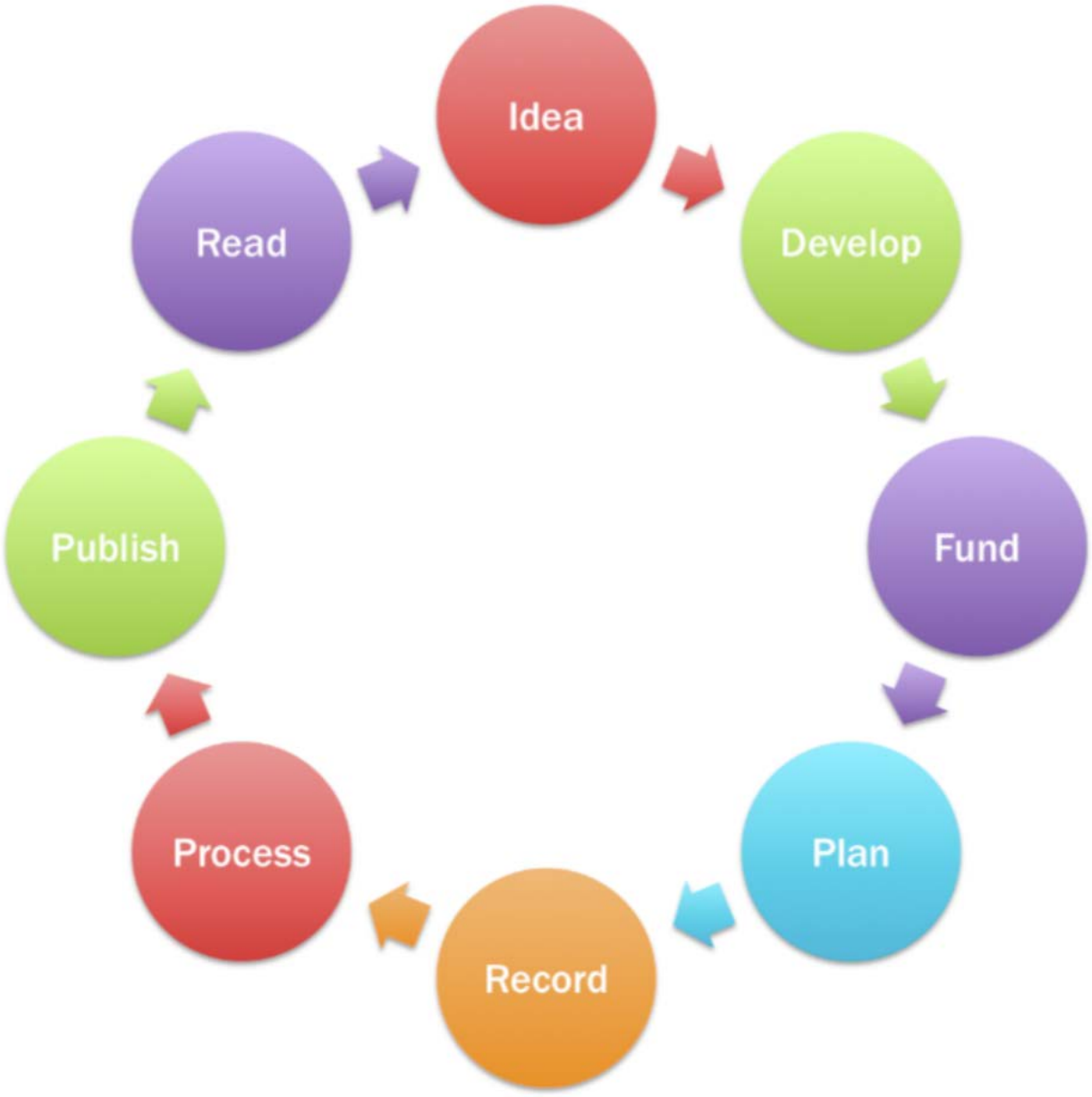
MD/PHD Student Affairs Reference Manual

Graduate School of Biomedical Sciences



1. MDP course numbers, names, and expectations:
    a. MDP 740 A, B and C
    b. MDP 741
    c. MDP 742
    d. MDP 743
    e. MDP 745
    f. MDP 800
2. Q-Exam guidelines
3. MD/PhD Mentor and Advisor Structure
4. RCR requirements and descriptions

1. MDP Course Description and Expectation

MDP 740 A: Developing Solutions to Research Problems – taken during Year One (FOM1) in the program

Course Goals:
The goal for the course is to engage MD-PhD students in the critical thinking skills required to perform biomedical research, in a manner that enables their intellectual contribution to the University's academic and research functions. The course will examine specific questions of relevance in medicine, and explore how these questions are addressed from multiple scientific perspectives, (e.g. epidemiological, population based, animal model research, cellular and molecular mechanisms). The course will be mostly based on critical analysis of primary literature. Faculty will provide brief background material in the form of lectures, to enable analysis of the primary research papers. Students will discuss papers in small teams and within the whole group. Each section will culminate with the presentation by students of an original research proposal on the specific question being studied.

Learning Objectives: Upon completion of this course, the MD-PhD students should be able to:
- Distinguish different approaches used to answer biomedical research questions (e.g. epidemiological, population-based, animal models, cellular and molecular mechanisms).
- Understand the basic elements of study design in epidemiological and population based studies.
- Understand the basic elements of study design in animal models
- Understand some of the basic elements underlying cellular and molecular mechanistic studies.
- Learn to design rigorous studies at different levels of complexity.
- Define medically relevant questions of individual interest, which will inform choice of summer research rotations and Thesis research.

Curricular Expectations
- Students will attend all scheduled sessions
- Students will have carefully read and analyzed pre-assigned material
- Students will actively participate in discussion of primary research papers
- Students will be a substantial contributor within the team to the design and presentation of an original research proposal at the end of each trimester

Course Offering
This course is offered Fall, Spring and Summer each year

MDP 740 B: Developing Solutions to Research Problems – Taken during Year Two (FOM2) in the program

Course Goals: The goal for the course is to expose MD-PhD students to areas of basic and translational research, and to the knowledge skills necessary to conduct research in these areas in a manner that enables their intellectual contribution to the University's academic and research functions. To meet this goal, the student will work directly with a selected member of the research faculty for a minimum of one hour per week over the course of the semester (15 hours total). The focus and experimental methodologies of the investigators research will be explored in-depth through analysis of the primary literature and participation in individual and/or group discussion.

Learning Objectives:
Upon completion of this course, the MD-PhD students should be able to:

- Identify papers in the primary research literature that relate to specific questions of biomedical relevance, and explain the basis for their relevance.
- Assess the general biomedical research area, and the clinical and translational implications of the research activity of specific investigators at this institution.
- Articulate novel questions related to a specific area of active investigation that could be the basis of a viable thesis project.

Curricular Expectations:

- Students will identify and contact one or two faculty researchers each term (fall and spring).
  Students will define a schedule of a minimum of 15 total contact hours each term with the selected faculty members, as well as 30 non-contact hours each term in preparation of meetings with the selected faculty member.

Course Offering

- This course is offered Fall and Spring each year

MDP 740 C: Developing Solutions to Research Problems – Taken in years following completion of PhD (CCE, AS)

Course Goals: The goal for the course is to expose MD-PhD students to areas of basic and translational research, and to the knowledge skills necessary to conduct research in these areas in a manner that enables their intellectual contribution to the University's academic and research functions. To meet this goal, the student will work directly with a selected member of the research faculty, which can include but is not limited to their PhD thesis mentor, for a minimum of one hour per week over the course of the semester (15 hours total). They will discuss experimental strategies to address questions of basic, clinical, and/or translation importance. These can include, but are not limited to, work that advances the student's personal research toward publication or presentation.

Learning Objectives:
Upon completion of this course, the MD-PhD students should be able to:

- Propose feasible experimental strategies, including application of appropriate techniques, assessment of potential contingencies and pitfalls, and identification of alternative approaches, for investigation of novel research questions.
- When presented with two or more reports from the primary literature that reach conflicting conclusions about similar questions, evaluate the evidence and defend the merits of a particular argument. This includes an articulation of the major conclusions from each report, and an identification and evaluation of experiments that support the conclusions.
- Articulate the contribution of their personal research to knowledge in the broader area of interest.

Curricular Expectations:
The student will remain engaged in research during the clerkship enrollment which can be reflected in work toward their Capstone project, defending and editing their thesis dissertation, attending lab meetings, defenses, reviewing literature, attending research seminars and other UMass related scientific events.

It is expected that at the time of dissertation and defense, the student will complete the defense a minimum of three weeks prior to the date of return to the clerkships (CCE). If the completed dissertation and administrative forms are not submitted to GSBS by the return date, the scheduled clerkship will be cancelled until dissertation work is completed.

Course Offering

- This course is offered Fall, Spring and Summer each year

MDP741 – Introduction to Translational Medicine – Taken during full-time research years in GSBS

Course Goals:
The MD/PhD program stresses the importance of clinical involvement throughout the graduate years. The first goal of this course is to provide students with a continuous link to clinical skills and to familiarize students with different clinical settings. Sessions should reinforce clinical skills learned from the first two years of the medical curriculum plus the 16 weeks of clerkship in Care of Family and Care of Adults prior to research studies. The second goal is to introduce clinicians and potential mentors to the MD/PhD students. The third goal of this section of the course is to ease the transition back to the clinical years of medical school. Students are encouraged to work with physician scientists that will help them to get hands on experience with the day-to-day work of physician scientists.

Curricular Expectations: The students will engage in clinical experiences for a minimum 15 hours in the fall, spring and summer semesters each. The students can round with physicians on the ward services, attend an outpatient clinic, or participate in supervised freestanding clinics in the local area. They can also participate in a series of monthly, student organized and clinician led seminars*. Prior to returning to the clerkships, each student working with a designated clinical preceptor, will perform complete interviews, physical examinations, oral presentations, and write ups on hospitalized patients. Students will be evaluated by their faculty in these skills and a summary report will be generated at the end of the course.

Students will enter their preceptor hours into the e*Value system using an “on the fly” evaluation form that will include the date, time, term, preceptor and hours. This information will be provided by the student by the end of each enrollment term.

The guidelines for a preceptor are as follows:

- They must be a faculty member at UMass either Full, Associate or Assistant Professor.
- They cannot be a resident, fellow or visiting scholar.
- The clinical sessions can take place at any of the hospital or affiliated hospital campuses and local free clinics as long as they are directly supervised by a UMass faculty member.

Course Offering

- This course is offered Fall, Spring and Summer each year

MDP742 - HIPAA and OSHA Certification – Taken during GSBS research years – Fall only

Course Goal:
To maintain HIPAA and OHSA qualifications while enrolled in the research portion of the combined degree program.

Curricular Expectation: Complete the certification module of HIPPA and OSHA online course/assessment in Black Board Learn annually (within the first two weeks GSBS fall semester) each year. This is an online class which can be accessed by each MD/PhD student registered for this course in PeopleSoft. The scores will be monitored by the MD/PhD Program Administrator during the student's PhD years.

Course Offering

- This course is offered Fall of each year

MDP743 – Preparation for Thesis Research – Taken during 1st thematic section of CCE during summer following FOM2

Course Goal:
Preparation of MD/PhD students to enter GSBS full time research in fall term after completing 16 weeks of clinical clerkships from May through August prior to GSBS start. This includes meetings with the future PI, literature review and, when scheduling permits, attendance at lab meetings. For students who have not yet selected a PI the requirements are to work with MD/PhD Advisors and GSBS leadership to target and meet with potential lab rotation mentors during the summer term.

Curricular Expectations:
For students who have selected an advisor: Attend meetings with intended mentor, literature review, and attendance at lab meetings. Work on development of life skills needed to balance clinical and research obligations.

For students who have not selected a thesis mentor they should be meeting with potential rotations, talking to MD/PHD advisor and attending research seminars from potential labs. Outcome should be a signed lab rotation form submitted to GSBS by late August in time to start the rotation day one of Fall term.

Course Offering

- This course is offered Summer each year

MDP745 – Foundations in Basic Science Boot Camp – Taken during Fall of Qualifying Research Year in GSBS (BBS only)

Course Goal:
To provide a foundation in experimental design and data analysis for basic science research.

Curricular Expectations:

- To acquire basic quantitative skills to analyze biological data.
- To be comfortable with and understand quantitative aspects of primary literature.
- To be able to design experiments with statistical analysis in mind to include: describe results accurately and precisely using quantitative language; understand appropriate controls; and have an open mind to what the data are saying.

Course Offering:

- This course will be offered during fall term of each year

MDP 800 - MD/PhD Seminar Series – Taken during Fall and Spring of every GSBS research term

Course Goal:
Obtaining exposure and understanding of the research being undertaken by other students in the MD/PHD Program. The seminar assists students in developing communications competency through these presentations. Every month, two upper level graduate students present their research project. A moderator will maintain the 20-minute timeframe and facilitate the discussion

Curricular Expectations:
This seminar series is a monthly event, organized by the MD/PhD students, and participation is required for all years in the program who are not otherwise engaged with another academic requirement.

Course Offering

- This course is offered Fall and Spring

2. Transition to Graduate School

a. The summer following FOM2 each MD/PhD student will enroll in a thematic section of the CCE (Core Clerkship Experience)
b. Each student will enroll in, on the GSBS side, MDP 743 Preparation for Thesis Research
c. The form BBS_05 or CPHR_03, Thesis Advisor Selection and Departmental Financial Agreement must be returned to the GSBS Office (S1-824) by June 1st prior to the start of full-time research.
d. A formal letter (G1) will be sent to each selected thesis advisor regarding the requirements of the program and commitment of each student to a limited number of clinical hours, seminar and retreat presentation.

3. BBS 860 Qualifying Exam Format (MD/PHD Program Specific)

A. Purpose and Scope

The purpose of the qualifying exam is to evaluate the student's readiness for graduate level scientific study and to gauge the student's potential for successful completion of the Ph.D. dissertation. The Qualifying Exam Committee conducts this evaluation primarily based on the student's preparation and defense of an original research proposal as well as general knowledge of biomedical science and reasoning ability. The student's performance in any coursework (medical school or graduate school classes) may also be considered as well as laboratory performance during rotations and beyond.

B. Exam Format

All MDP students are expected to complete their qualifying exams during their first year in the Ph.D. portion of the program. The recommended time frame is to schedule the exam to be completed before the end of March of the first full year in the laboratory or no later than 6 months after joining a thesis laboratory. The student must have completed all required coursework for the first two years of the medical school curriculum, passed Board Exam Step 1, and joined a MDP affiliated laboratory. The student and their thesis advisor choose 3 GSBS members to serve on Qualifying Exam Committee while the Graduate School will appoint a General Examiner to complete the committee. The advisor is not a member of the Committee and is not present during its deliberations. However, the advisor can assist the student in developing the abstract and specific aims, which should be discussed at a joint meeting of the Committee, student and advisor. The Committee members should be selected based on their expertise and ability to contribute to the scientific discussions that take place during the exam. At least one committee member should be an MD/PhD Program affiliated faculty member, One member of the QE Committee should be selected as Chair. In addition, the QE Committee may become the student's Thesis Research Advisory Committee, especially if the QE proposal is on the topic of the student's thesis research.

The Proposal

Students are encouraged to write a proposal that relates directly to their likely thesis research, although an unrelated topic may be chosen. The student's advisor should be consulted on this issue. The student should write an abstract, including a description of the research problem and specific aims, in consultation with the advisor. The abstract is then submitted to the committee for preliminary discussion and scheduling of an abstract meeting. At the abstract meeting, the Committee will discuss the overall plans for the proposal and decide if the proposal topic and abstract are appropriate, or if revisions are needed. Students will have one-week maximum to submit a revised abstract. When a revised abstract is required, this revision can be evaluated by the Committee via an email or phone based discussion, or, when necessary, a second abstract meeting, at the discretion of the Chair. Only 2 abstract submissions are allowed.

Four weeks following approval of the abstract, the student will submit a research proposal with the format and page limitations shown below. The proposal is to be prepared without consultation with committee members or the thesis advisor, however the chair of the committee can provide input on general approach and formatting issues. The student may consult with their peers, *i.e.* postdocs and students.

The format of the proposal should be based on the NIH F31 Application and style, as detailed and modified below.

Formatting:

Font, Paper, and Margins

Use an Arial, Helvetica, Palatino Linotype, or Georgia typeface, a black font color, and a font size of 11 points or larger. (A Symbol font may be used to insert Greek letters or special characters; the font size requirement still applies.)
Type density, including characters and spaces, must be no more than 15 characters per inch. Type may be no more than six lines per inch. Use standard paper size (8 ½" x 11) . Use at least one-half inch margins (top, bottom, left, and right) for all pages. No information should appear in the margins. [Single spaced.]

Figures, Graphs, Diagrams, Charts, Tables, Figure Legends, and Footnotes

May be included in the SPECIFIC AIMS and RESEARCH STRATEGY sections without going over the page limitations listed below. You may use a smaller type size but it must be in a black font color, readily legible, and follow the font typeface requirement. (9-point font usually works for legends) Color can be used in figures; however, all text must be in a black font color, clear and legible.

Headers and Footers

You may use the headers and/or footers only for page numbers and to place your name on the proposal. [This different then NIH directions, btw]

Proposal Page Limits:

PROJECT SUMMARY	no more then 30 lines
PROJECT NARRATIVE	2-3 Sentences
SPECIFIC AIMS PAGE	1 page
RESEARCH STRATEGY (including figures, tables and diagrams)	6 pages
BIBLIOGRAPHY & REFERENCES CITED	no page limit

PROJECT SUMMARY – is meant to serve as a succinct and accurate description of the proposed work when separated from the proposal. State the proposal's broad, long-term objectives and specific aims. Describe concisely the research design and methods for achieving the stated goals. This section should be informative to other persons working in the same or related fields and insofar as possible understandable to a scientifically or technically literate
reader. In the ABSTRACT, avoid describing past accomplishments and the use of the first

person.
PROJECT NARRATIVE – describe the relevance of this research to public health. In this section, be succinct and use plain language that can be understood by a general, lay audience.
SPECIFIC AIMS – State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved. List succinctly the specific objectives of the research proposed, *e.g*., to test a stated hypothesis, solve a specific problem, or challenge an existing scientific paradigm.
RESEARCH STRATEGY – Organize the Research Strategy in the specified order using the instructions provided below. Start each section with the appropriate section heading — Significance & Approach. Cite published experimental details in the Research Strategy section and provide the full reference in the Bibliography and References Cited section.

(a) Significance
• Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
• Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
• Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.
(b) Approach
• Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project—include how the data will be collected, analyzed, and interpreted.
• Discuss the expected outcomes and results
• Discuss potential problems, caveats, and alternative strategies and outcomes.
Regarding specific experimental methods – do not go into great detail describing the specifics of buffers, time courses, equipment to be used, etc. However, you are responsible for knowing how all methods work, as well as explaining their strengths and weaknesses if asked in the Oral Exam.
Preliminary Data – any recent or published data that the student (or colleagues?) have generated can be used to set up the Significance and Approach sections. <u>However, this is not a necessary part of the proposal and the lack of Preliminary Data will not negatively impact the proposal or the oral exam.</u>
BIBLIOGRAPHY & REFERENCES CITED – Provide a bibliography of any references cited, including title, authors, journal, year, volume, and page numbers.

The Oral Exam

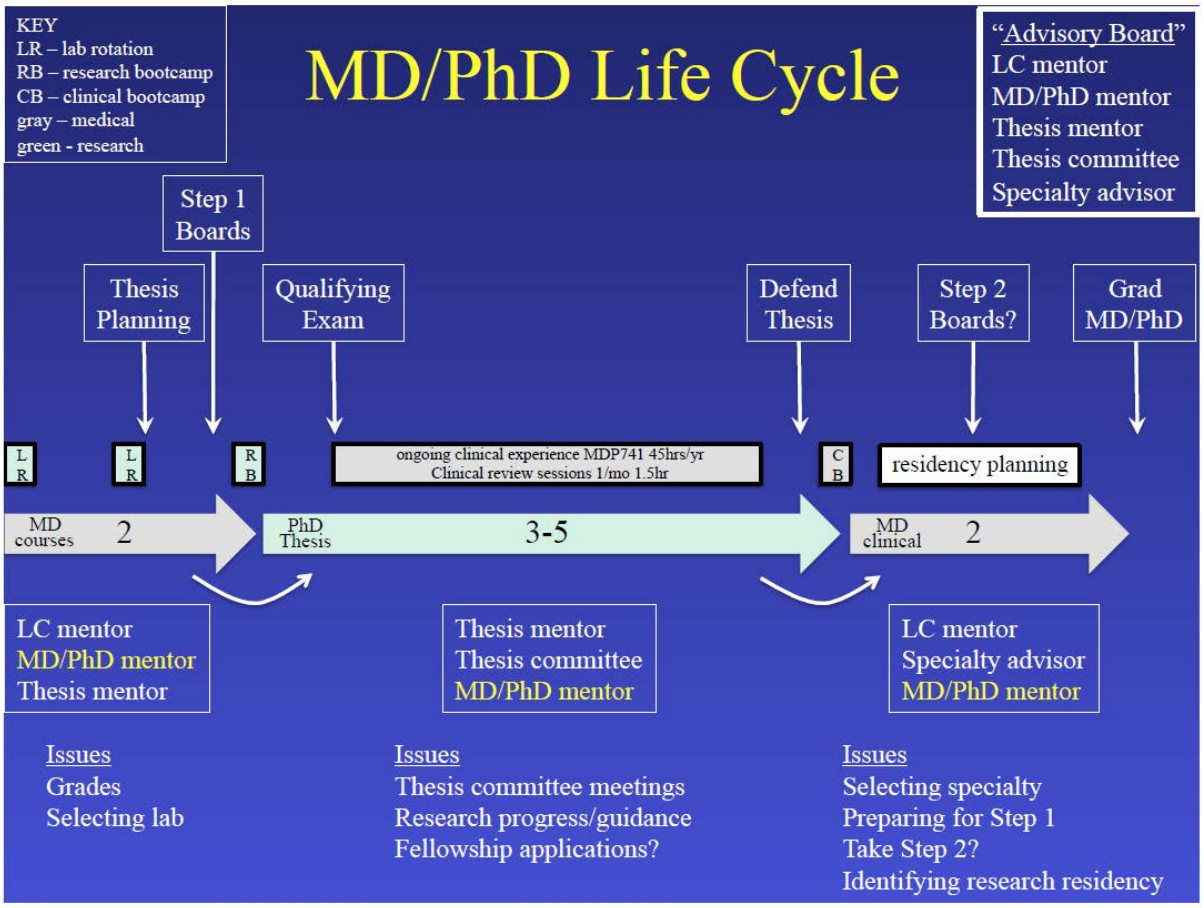
The oral exam will take place no sooner than 10 days following submission of the proposal. MDP students should aim to complete the exam before April 1 of their first full year in the laboratory. Before the oral exam begins, the Committee will meet briefly, in the absence of the student, to review materials related to the student's progress in the program and the format of the oral exam. A typical exam will begin with a succinct presentation of the research proposal by the student describing the specific problem to be addressed, the experimental approach to be used, and interpretation of anticipated results. The Committee will ask question, as the presentation proceeds, designed to evaluate the proposed research, familiarity with the scientific literature, scientific reasoning ability, and general knowledge of the field. After a question period, the student is often asked to leave the examination room while the Committee discusses the progress of the exam and determines whether an additional question period is needed to complete the exam. After the exam is concluded, the student will be asked to leave the room while the Committee arrives at its decision. Scoring and evaluation of the student will be according to the standard GSBS scoring requirements. The Chair will inform the student of the Committee's decision, and a written report of the examination results will be submitted to Dean of the Graduate School, via the QE evaluation form.

Results of the Qualifying Examination – Pass, Revise, Retest or Fail

Pass – enter thesis research.
Revise – specific sections of the proposal are re-written and subject to approval by the committee with no need for an oral examination retest.
Retest – oral defense of specific areas or complete proposal must be completed within 2 weeks of original defense.
Fail – academic withdrawal from the GSBS program.

MD/PhD students are highly encouraged to use the QE proposal as a basis for submission of an F30 or F31 individual Ruth L. Kirschstein National Research Service Award with the support of their thesis mentors.

4. MD/PhD Mentor and Advisor Structure



5. Professionalism and Research Conduct (PRC)

Course Goals: Provide guidelines for maintaining ethical and honest research standards with annual updates on the responsible conduct of research.

Curricular Requirements: In addition to the GSBS (BBS and CPHR) RCR requirements, there are additional, annual curricular activities to complete as an MD/PhD student.

GSBS – Pre-Year One (BBS and CTS students) - Taken during summer prior to medical school start

- **Seminar:** Responsible Conduct of Research Seminar "On Being a Research Scientist"
  Time/Day: TBD

GSBS – Pre-Q Research (year 1 GSBS, year 3 program) - CPHR program students

- **CTS 702** Ethics for Clinical Research (CPHR track)
- Online **CITI** training modules (BBS and CPHR track)
- Using Animals and/or Human Subject as needed (BBS and CPHR track)

GSBS Thesis Research (year 2 GSBS, year 4 program) – BBS program students

- **BBS 601** Professionalism an and Research Conduct (BBS track)

GSBS – Graduate Research (year 3 GSBS, year 5 program) – BBS program students

- RCR Refresher – for BBS students who have taken BBS 603, the CPHR course, CTS702, Ethics for Clinical Research should be taken at this time. CPHR students who have already taken this class are exempt. *This course is a reading/writing intensive, weekly, classroom format with readings, presentations, exams and homework.*

GSBS – Graduate Research (year 4GSBS, year 6 program)- All MD/PhD students

- Draft an IRB application (if doing so for their research) or work with someone who is drafting an IRB application to be familiar with the process and attend and observe two IRB sessions.
- Attend two IRB meetings during the academic year (http://www.umassmed.edu/ccts/irb/)

SoM - CCE (year 3 SoM, year 6+ program) – All MD/PhD students

- Read "On Being a Scientist: A Guide to Responsible Conduct in Research"

SoM – AS/FCE (year 4 SOM, year 7+ program) – All MD/PhD students

- **Seminar** "On Being a Scientist: A Guide to Responsible Conduct in Research"
  1. A 2-hour classroom session will be organized to discuss several of the hypothetical scenarios which help guide ethical decision-making process which are included in the book requirement from the prior year.

6. MD/PhD Program Financial Commitment

a. The MD/PhD Program pays for 8 semesters in Medical School during which a student must be in good standing and up-to-date with all their current requirements (i.e. no extending).
b. All or part of any semester completed in the School of Medicine is considered a whole term. For example, if a student takes one or two blocks of clinical skills sessions prior to starting clerkship rotations they are still enrolled in Medical School and the Program is billed for an entire term. If a course or clerkship is taking during any semester, or part of a semester, it is considered a full semester.
c. If at any time a student must repeat part or all of a course during FOM1 and FOM2 by extending the medical school academic program, they will need to complete the requirement while on a Leave of Absence. Any terms completed on an LOA from the MD/PHD Program and GSBS, which is also defined by the suspension of program benefits, will not count toward the 8 semesters.

7. MD/PhD Transition back to School of Medicine

Overview of Process for Transition back to School of Medicine (SOM)

1) ***MD/PhD program compiles list of students who will potentially return in next academic year***
   a. Typically occurs September, annually
   b. List is shared with Student Affairs for preliminary planning (EVOS, other aspects of return)
   c. Student Affairs invites potentially returning students to annual meeting to discuss return process
2) ***Student initiates terminal TRAC***
   a. Terminal TRAC scheduled upon approval from the research advisor and research committee
   b. TRAC meeting occurs ideally between **October-November** in the year prior to return
      i. This timing allows the student to participate in CCE EVOS
      ii. Research committee provides guidelines regarding thesis defense
      iii. TRAC provides permission to schedule thesis defense
3) Permission to schedule thesis defense is granted
   a. permission conveyed to student, advisor, TRAC chair, program director, MD/PhD program
   b. Copy of TRAC form is sent to ADSA
   c. Student selects date for return to CCE
      i. Options include **May (Block 1)** or **September (Block 2)** or **January (Block 3);**
      ii. **There must be at least 3 months between permission to schedule thesis defense and the date of actual return (i.e. for May 7, 2018 return, permission to schedule defense cannot occur later than February 7, 2018**
   d. Student communicates plan for return to Student Affairs
      i. Email to ADSA with cc to Deb Leger and Registrar, including intent to return, and planned date of return
   e. TRAC is disbanded and writing committee is formed
4) Thesis defense is scheduled
   a. Date of defense date determines when to submit thesis to committee
   b. Dr. Lane meets with students to review the timeline for defense
   c. Student must allow a minimum of 3 weeks after the defense for final editing/writing, before starting rotations in SOM; if this timeline cannot be met for any reason, the student must discuss this with the MD/PhD leadership and receive pre-approval for a change to this timeline
   d. Committee chair will be asked two weeks prior to defense if the dissertation is in reasonable shape and if edits could be easily completed within a required 3-week timeline post-defense.
   e. Students are provided with guidelines that should minimize revisions post defense
   f. Students may not begin clinical rotations, or Transition to CCE (if not yet completed) until the final thesis has been submitted, accepted and signed. **There are no exceptions to this rule**.

Logistics for re-entry to the SOM

1) Students can re-enter at 3 time points*, corresponding roughly with Thematic sections (May, Sept, Jan*)
2) Students on occasion may need more time to write:
    a. Permission for additional time must be requested from Dr. Lane and Dr. Chimienti
    b. If approved, students may transition to SOM and begin with MDP740C during the first block, to finish editing the thesis and submit it, and then continue with rotations (roughly corresponding to beginning clinical work in blocks 1B, 2B, 3B)
    c. This is considered a full term in the School of Medicine and as such, counts toward the total of 8 paid terms in medical school.
3) Students must have **9 credit hours per semester** to be enrolled as full-time students in the SOM
4) Students may not participate in clinical rotations or the Transition to CCE (if this requirement has not been met) until they have been released by GSBS; there are no exceptions to this rule.

Remember, the MD/PhD program will support 8 semesters of enrollment in SOM for students.

Timeline for planned return

Fall (annually, around September) – MD/PhD Program Administrator reaches out to students to determine plans to return

- List of returning students is sent to ADSA/Student Affairs
- Students planning return meet with ADSA and Dr. Lane as group (scheduled **October/November** annually)
- Student initiates terminal TRAC meeting **October-November**
- Students begin preparations for EVOS participation, assignment of rotations for return
- TRAC determines whether to give student permission to schedule defense
- Copy of approved TRAC form is sent to ADSA indicating approval to schedule defense for each student
- ADSA with MD/PhD leadership and Program Administrator list of students planning return in the next academic year

January

- ADSA notifies Registrar, LC Director, Academic Computing regarding tentative plan for students returning
- Students participate in CCE EVOS and are assigned to rotations to begin in either Block 1 or Block 2 or Block 3, as indicated by the TRAC/Student

February 1

- Students planning **May** return need to notify ADSA that thesis has been submitted, and date of planned defense

April

- ADSA is notified that students have passed their defense and are cleared for **May** return to SOM
- ADSA notifies CSAEB, Dr. Hatem, Registrar, Financial Aid of planned return via email
- when students have submitted final revised thesis with signatures and a few additional paperwork items, surveys, they are released from GSBS

June 1

- Students planning **September** return need to notify ADSA that thesis has been submitted, and date of planned defense

August

- ADSA is notified that students have passed their defense and are cleared for **September** return to SOM
- ADSA notifies CSAEB, Dr. Hatem, Registrar, Financial Aid of planned return via email
- when students have submitted final revised thesis with signatures and a few additional paperwork items, surveys, they are released from GSBS

October 1

- Students planning **January** return need to notify ADSA that thesis has been submitted, and date of planned defense

December

- ADSA is notified that students have passed their defense and are cleared for **January** return to SOM
- ADSA notifies CSAEB, Dr. Hatem, Registrar, Financial Aid of planned return via email
- when students have submitted final revised thesis with signatures and a few additional paperwork items, surveys, they are released from GSBS

October 15, 2017

RETURN TO THE CLINICAL YEARS
OVERVIEW FOR MD/PHD STUDENTS

1. THE BASICS

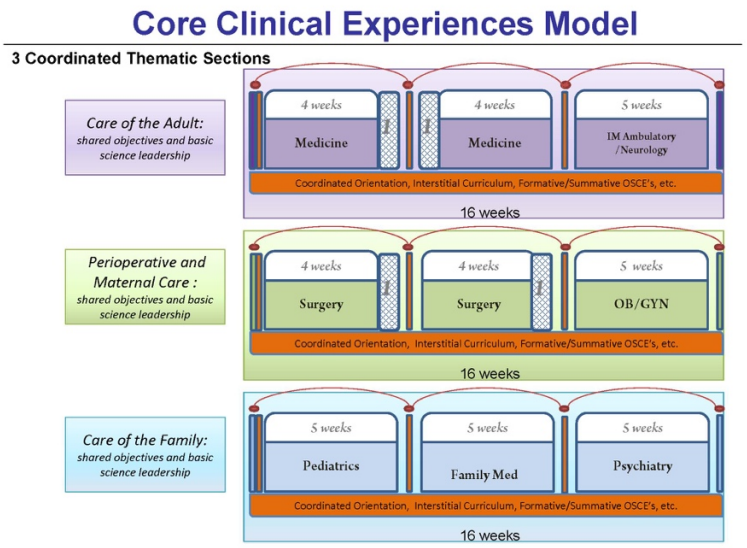
Your schedule during the clinical years (CCE) will be exactly the same as MD candidates in their clinical years, but there are a **few minor differences in graduation requirements**, and there may be some unique questions. This document will attempt to address some of these issues. Individual meetings with your Learning Communities Mentor can address those issues, so please reach out to your LC Mentor soon to plan your return!

A. Overview and Schedule of the CCE year

i. Overview of the CCE year will be covered **in CiM #3 on 1/29/18, 2-5pm**, and is required for FOM2 students; if you have taken this before, you should still consider coming if you are able, as the information may have changed slightly from your year 2. A refresher is good!

ii. Schedule of CCE year:

1. *Transition to Core Clinical Experiences*
2. *Three, 16-week thematic sections:*
   a. *Care of the Adult: Internal Medicine (10), Neurology (3)*
   b. *Perioperative and Maternal Care: Surgery (8), Ob-Gyn (5)*
   c. *Care of the Family: Psychiatry (5), Pediatrics (5), Family Medicine (5)*
3. *Each clerkship has an exam*
4. *Each Thematic Section has a joint orientation and a joint OSCE at the end.*
5. *Four Flexible Clinical Experiences, 1 week each, 2 during Care of Adults, and 2 during Perioperative and Maternal Care*
6. *Nine days of required interstitial curriculum*
7. *Complete all online annual regulatory training at least 1 week before first CCE day)*
8. *CCCA (Comprehensive Core Clinical Assessment)*



B. Preparing for your return

i. Make sure you have completed your clinical hours before you return! You cannot return if this is not complete and signed off by MD/PhD program

ii. Knowledge base and Clinical Problem Solving:
   1. *Monthly MD/PhD review course*
   2. *MD/PhD BootCamp!*
   3. *Connect with CAA regarding Clinical Skills sessions and tutoring if needed*
   4. *Consider reading NEJM CPC cases weekly from here on out*

iii. Additional Clinical Experience
   1. *MD/PhD clinical skills sessions – Dr. Hatem*
   2. *Contact LC Mentor to consider some DCS2 sessions*

iv. Logistics, Tools of the Trade:
   1. *To have and utilize a Smart Phone or Personal Digital Assistant (PDA)*
   2. *White coat, diagnostic kit, stethescope*
   3. *Clinical IS Access: try to log in, make sure you have access (this should have been initiated for you)*
   4. *EPIC training: required, you should have received an emailed link*

v. Submit your thesis!
   1. *You will not be allowed to return to the SOM if you have not submitted your signed, completed thesis! There will be no exceptions!*

C. Choosing a specialty: what should you be thinking of in the CCE years?

i. What are the patient characteristics? Do I enjoy treating their medical conditions?
ii. Is there variety and what is the "bread and butter"?
iii. Where do physicians see the patients?
iv. Broad-based (generalist) or focused and in-depth (specialist)?
v. How much continuity of care is there?
vi. Am I fascinated by the intellectual aspects?
vii. Are there procedures, and do I like them?
viii. How are patient outcomes defined?

ix. Is there time pressure?
x. Who sets the schedule?
xi. What is the relative emphasis on "teamwork" vs individual decision-making?
xii. How long are the days? How predictable are the hours?
xiii. What is the income potential?
xiv. Are there geographical restrictions or freedoms?
xv. Is malpractice an issue?
xvi. How competitive is it to get a residency and then a job?
xvii. How do other physicians and providers view the field?
xviii. Could I see myself as a colleague of the providers?
xix. Would I like getting up in the morning and going to work?

2. FAQS

A. What if I would like to postpone a clerkship within a thematic section?

i. Requests to postpone a clerkship for academic reasons must have supporting e-mail from CAA/Assistant Dean for Academic Achievement indicating the reason for the delay
ii. You will be enrolled in MDP740C for the A block that you will postpone, if it's the first block back
iii. Deferring clerkships has very significant downstream implications for your 4th year
    1. *You may not be able to reschedule the clerkship until mid way into your 4th year*
    2. *Many away rotations at other schools have a prerequisite that you must have completed all required clerkships to do an elective at their institution*
    3. *This could impact your ability to do 4th year away rotations in your chosen field before applying to residency*

B. What if I'm considering a field that is not one of the core 7?

i. Plan one or more FCE experiences in that field
ii. Do rotations in your potential field in May through August of Advanced Studies year

C. Are the Graduation Requirements different for MD/PhD's?

i. The Graduation requirements listed below are for ALL students taking their Clerkships in AY 14-15 and later, or if they are admitted in AY 12-13 or later
ii. MD/PhD students are ***exempt from ABTS***
    1. *PhD students can apply the following PhD program credits to their MD schedules:*
        a. *MDP-740A or B can be used to meet the required ABTS course.*
        b. *PhD students can choose to add ABTS-413 'Designing Solutions to Research Problems' to their MD schedule instead of taking the required ABTS-414 course.*
        c. *MDP-741 can also be used to meet 12 (Type C) elective credits.*
    2. *PLEASE NOTE:* ***Your PhD credits do not apply towards the 9 credit minimum enrollment requirements for either the fall or spring semesters since you already completed the course credit.***
iii. ECPS in year 4 (requirement for all students in the Class of 2014 and later)
iv. Capstone: you do not need to do a Capstone, but will need to present your research on Capstone day. Please discuss with Dr. Lane and Anne Michelson.
v. You need 24 elective credits to graduate (12 can be type C and for research); 12 must be Type A/B, and 8 must be A or B1
vi. Subinternship required
vii. Completion of all Flexible Clinical Experiences

viii. Completion of all required Interstitials
ix. Completion of all Transitions courses, including the Transition to Internship
x. Completion of surveys/program evaluations as required by UMMS
xi. Successful completion of the Comprehensive Clinical Skills Assessment
xii. Passage of Step 1, Step 2CK and Step 2CS
xiii. ACLS certification
xiv. Certification for Graduation

D. When should I take the Step 2 board exams?

i. Your MD/PhD colleagues have typically felt that taking Step2CK and CS in the summer of year 4 is too early; use your judgment, speak with your mentor and make a plan that works for you.
ii. Many MD/PhD students take these exams around early to mid-October of year 4 and do well.

E. **Will I be compared to current MD students who are going right into year 3?**

i. Probably yes; your evaluators may not know that you have been away from clinical medicine for a while; share with them your journey and accomplishments with the PhD, if you feel comfortable with that

F. **Is coming back in January discouraged?**

i. The MD/PhD program will support 8 semesters of enrollment; 4 semesters preclinical and 4 semesters clinical; **anything beyond this amount of enrollment will require student payment of tuition/fees**
ii. The fall semester is longer than the spring semester, allowing more time for rotations
iii. Students returning in May can complete their CCE year by December (assuming completion of 1 thematic section before PhD); this gives plenty of additional time for AS rotations (3 full semesters)
iv. Students returning in September will complete their CCE year by the following April (assuming completion of 1 thematic section before PhD); this is a standard timeline for completion of CCE
v. Students returning in January are slightly disadvantaged:
    1. *Returning at a time that MD students are seasoned in clinical rotations*
    2. *4 semesters of clinical time will be completed in December;* ***Spring during final year will be taken as LOA, or student pays tuition if continued enrollment is desired***

TOP 10 WAYS TO EXCEL ON THE INTERNAL MEDICINE CLERKSHIP

1. Find out what your residents and preceptors expect of you. Meet and try to exceed their expectations. Follow through on every assigned task.
2. Be actively involved in the care of your patients to the greatest extent possible. Go the extra mile for your patients. You will benefit as much as they will.
3. Go the extra mile for your team. Additional learning will follow. The more you put in, the more you will gain.
4. Read consistently and deeply about the problems your patients face. Raise what you learn in your discussions with your team and in your notes. Educate your team members about what you learn whenever possible.
5. Learn to do excellent presentations as early as possible. This will make you more effective in patient care and gain the confidence of your supervisors to allow you more involvement in patient care.
6. Ask good questions.
7. Speak up—share your thoughts in teaching sessions, share your opinions about your patients' care, constructively discuss how to improve the education you are receiving and the systems around you.
8. Actively seek feedback and reflect on your experiences.
9. Keep your goals focused on the right priorities, in the following order: patient care, learning, and personal satisfaction. You should always strive to meet all three goals.
10. Always be enthusiastic. Be caring and conscientious and strive to deliver outstanding quality to your patients as you learn as much as you can from every experience.

Clinical Years Planning Grid

	FALL SEMESTER						SPRING SEMESTER		
CCE ACADEMIC YEAR	1A	1B	1C	2A	2B	2C	3A	3B	3C
17-18									
18-19									

	FALL SEMESTER								SPRING SEMESTER				
AS ACADEMIC YEAR	MAY E1	JUN E2	JUL M1	AUG M2	SEP M3	OCT M4	NOV M5	DEC M6	JAN M7	FEB M8	MAR M9	APR M10	MAY M11
17-18													
18-19													
19-20													