

The **Capstone Scholarship and Discovery (CSD)** course represents the key principles of the University of Massachusetts Medical School (UMMS) Learner-centered Integrated Curriculum (LInC). For undergraduate medical students (non-dual degree), it is a four-year longitudinal curricular experience that is a graduation requirement for all classes beginning with students entering in 2012. Through this course, each student completes an individualized scholarly project that puts into practice one or more of the UMMS core competencies (Physician as Professional, Scientist, Communicator, Clinical Problem Solver, Advocate, and Person), allowing students to build on a personal passion as it relates to medicine. Students earn four credits upon completion of the CSD course. The CSD course is required for graduation; “credit” or “no credit” is assigned for the course.

This summary document defines how the CSD for MD PhD students will be implemented.

MD PhD Capstone

The Capstone course will help trainees prepare for their future careers as physician scientists. The Capstone will also help to address a major challenge for MD PhDs: balancing the clinical and research components of their training. This is pivotal, because successful physician-scientists are those who can balance these worlds simultaneously.

OVERVIEW

- **Capstone Scholarship and Development Course (CSD):** Rachel Gerstein, PhD, Course Co-Leader; Eustathia Lela Giannaris, PhD, Course Co-Leader; Christina Hermos, MD MMSc, Course Co-Leader; Carolina Ionete MD PhD, Course Co-Leader; Yunsheng Ma, MD PhD MPH, Course Co-Leader; Sarah McAdoo MD MPH, Course Co-Leader; Colleen Burnham, MBA, Program Manager.
- **Office of Undergraduate Medical Education:** Melissa Fischer, MD, MEd, Associate Dean for Undergraduate Medical Education; Sonia Chimienti, MD, Associate Dean for Student Affairs.
- **MD PhD program:** Gyongyi Szabo, MD, Associate Dean and MSTP Director; Silvia Corvera, MD, MD PhD Program Co-Director, Anne Michelson, MBA, Graduate Programs Administrator.

Summary: MD PhD students will participate in career development and skill-building activities primarily under the direction of the MSTP Program Co-Directors. Given the intensive training that these students receive with respect to scientific scholarship, a separate Capstone project (in addition to their PhD dissertation) is not required. To fulfill the curricular requirement of the Capstone Course, they will participate in Capstone Presentation Day during their AS year by presenting their thesis work with an emphasis on integration of their work and its clinical utility and implications.

Note: This change will be in effect as of December 1, 2017 for all MD PhD students (current and incoming). Students that started Medical School before Fall 2012 are exempt.

PROGRAM OUTLINE

1st year (FOM1)

Students take MDP 740 or CTS604, focus on Medical School coursework, and identify possible areas of research focus. This section of the Capstone will be overseen and reviewed by the MD PhD mentor. No formal capstone reporting will be required, as the MSTP will implement new mechanisms that promotes individualized student development. (Current students may have taken MDP740 A)

Summer between FOM1 and FOM2

Students complete 4 or 8 week rotations with research groups. Rotations are overseen by the Principal Investigator of the laboratory in which the rotation takes place and the MSTP.

2nd year (FOM2)

Students take MDP 740 or CTS604 (if they did not do so during their first year). Students will continue Medical School coursework and develop ideas for thesis research. This section of the Capstone will be overseen by the MD PhD mentor. No formal capstone reporting will be required, as the MSTP will implement new mechanisms that promotes individualized student development. (Current students may have taken or be taking MDP740)

****GSBS RESEARCH YEARS (SCHOOL OF MEDICINE LOA FOLLOWING THE FIRST THEMATIC SECTION OF THE CCE)****

3rd Year (CCE); return to CCE

Students rotate in clinics full-time and participate in additional CCE year educational opportunities. During this period, they will keep in contact with Thesis advisor and collaborators. This section will be overseen by the MD PhD Program Advisor. Students will be required to meet with their Thesis Advisor to discuss progress in preparation for AS year Capstone Presentation Day participation.

4th Year (AS)

Students prepare for Capstone Presentation Day and complete their Capstone Month. This activity will be overseen by the Thesis Mentor with support from MD PhD Program Advisor as well as the student's Capstone Course Co-leader (House Affiliate).

Students will pick either option 1 or option 2 for their presentation:

Option 1: Discuss the student's **Thesis project**, with emphasis on translation to "lay language". It is expected that this presentation builds on the Thesis Project, and integrates new data that has been published since the time of the thesis defense. In addition, the presentation must consider the potential relevance to clinical practice of either the specific project or the long-term goals of the research team.

Option 2: Discuss the student's Thesis **topic** (and related topics) with an emphasis on clinical relevance and translational potential.

Students Participate in Capstone Presentation Day | March (Match Week)

Students elect to present either a poster or a short podium presentation.

- Evaluation will be given by Thesis Mentor (required), MD PhD Program Advisor as well as Capstone Faculty Committee members and peer colleagues. (In the event of scheduling conflicts, the Thesis Mentor may designate a colleague or invite the MSTP Program Advisor to serve as the evaluator).
- Grading is credit/no credit, and is assigned by the Capstone Course Co-leaders.

Reflection on the Capstone course

Students write a short reflection piece, answering a series of prompts or questions, designed to engage students in self-reflection, "lessons learned" and looking to the future, based on their experience in the Capstone Course; this will be required and is to be completed by April of the AS year.

Credits: 4 Credits total for the Capstone Course. Awarded after successful completion (April AS year). 3 Credits are awarded upon successful completion of MDP740A, MDP745 or CTS 604, and 1 credit is awarded at completion of the requirements during AS Year.

RESOURCES for the MD PhD Capstone Student

- myIDP
- Capstone Course website <http://www.umassmed.edu/oume/capstone-course/>
- Mentors and Advisors
- House Librarians and the Library website, https://libraryguides.umassmed.edu/Med_Student_Guide
 - Literature review
 - writing and presentation skills
- MSTP, GSBS and SOM Leadership
 - finding advisors
 - planning for their future careers as physician scientists
- CSD Leadership
 - information about Capstone requirements specific to MD PhD students
 - logistics and planning for Capstone Presentation Day