

MIT Department of Physics

Peter Fisher, Department Head Professor of Physics

August 27, 2020

Dear Physics first-year graduate students,

This letter addresses the topic of our subjects 8.391 and 8.398, their in-person components in the fall of 2020, and who should register for one or both of these subjects.

For graduate students entering in Fall 2020, the Department will offer two options for partial in-person instruction: 8.391 (Pre-Thesis Research) and 8.398 (Selected Topics in Graduate Physics). This year, all first-year graduate students are required to register for at least 18 units of 8.391 and/or 8.398.

8.391, Pre-Thesis Research:

Many first-year graduate students register for 12 units of 8.391 even before they have identified a research supervisor. The Department considers the work of meeting with potential supervisors, attending group meetings of research groups being considered, and working on sample problems or doing directed reading at the suggestion of a possible supervisor all to be activities that constitute part of pre-thesis research. From the time they identify a supervisor, all graduate students are required to enroll in 8.391 (or 8.392, in the spring and summer terms) each term until they pass their oral exam, after which enrollment is in 8.THG, Thesis Research.

8.398, Selected Topics in Graduate Physics:

Students may also enroll in 8.398 for either 12 units or 18 units. 8.398 is a seminar specifically for first-year graduate students, with a weekly guest lecture on the research being carried out in the Department; it is aimed at introducing students to a spectrum of the Department's research activities. Lecturers will assign weekly readings to introduce students to their research area; those taking the course for 18 units will have a short writing assignment as well.

<http://web.mit.edu/physics/>

Building 4-304

T 617 253-4801
77 Massachusetts Avenue

E fisherp@mit.edu
F 617 253-8554

Cambridge, MA 02139-4307

Registration requirements

All first-year students should enroll in 18 units of 8.391, or 18 units of 8.398, or a combination of these two subjects totaling at least 18 units.

We expect all first-year graduate students who are on campus (including those living off-campus in the MIT area) to attend meetings of 8.391 and/or 8.398 in person. Note that in-person attendance is a legal requirement for new international students (except those who are registered and living outside the US).

Please see the updated document *Registration Choices for New International Graduate Students*, a copy of which accompanies this letter.

We hope this letter and the accompanying detailed explanation about registration options are helpful to you as you consider your selection of courses for the academic year.

Stay safe,



Peter Fisher

Physics Department Head



Nergis Mavalvala

Physics Associate Department Head

Recommended registration for incoming international graduate students MIT Physics, Fall 2020 (v3; 8/26/2020)

Context:

A standard registration for Physics grad students is 36 academic units; in the first two to three years, this generally means two full-time classroom subjects of 12 units each, plus 12 units of Pre-Thesis Research. There is not a formal maximum number of units a student is allowed to enroll in, but in practice virtually all students register for either 36 units (as described above) or 48 units (may include three classroom subjects, or two subjects plus more units of research credit if determined to be appropriate by a supervisor).

Students can receive credit for Pre-Thesis Research (8.391 in the fall; 8.392 in the spring and summer) even before they have identified a supervisor and embarked on ongoing research. We consider meeting with potential supervisors, attending group meetings of research groups being considered, and working on sample problems or doing directed reading at the suggestion of a possible supervisor all to be activities that count towards credit in one of these subjects. The specific combination of activities is determined between the student and supervisor.

In fall 2020, new international graduate students are required to enroll in at least 18 units of coursework that has an in-person teaching component in order to be eligible to obtain a visa to enter the US. Once they have satisfied this requirement, they are then allowed to add one or two 12-unit subjects that are taught fully remotely.

New international grad students who had already qualified for a visa to attend either a bachelor's or master's program in the US are not required to adhere to the regulation requiring at least 18 in-person units. US immigration rules consider that such students are transferring an existing visa to MIT; only new visas are subject to the 18 in-person-units rule.

Registration timetable:

All incoming students should register with their academic advisors on Registration Day, Monday, August 31, 2020 [That said, the registration system, <https://registration.mit.edu>, opens on Monday, August 24; registration must be completed by Friday, September 4, and may be completed any time within this window]. New students should have received information about their assigned academic advisor on August 24. It is up to the advisor and student to make contact and plan a mutually agreeable time to meet and discuss subject selections and a general plan for how the student will meet the academic requirements of the program.

Advising resources:

Each incoming student is assigned an academic advisor; students who enter the program not yet having determined who to conduct research with will be assigned a temporary supervisor.

Descriptions of subjects:

8.391/8.392, Pre-Thesis Research:

Students who enroll in 8.391 will be expected to meet regularly with a research supervisor.

These may be one-on-one meetings, or may be small-group meetings with more than one student. We will be asking supervisors to document the frequency, dates and times of all in-person meetings. Note that students who are registered at MIT but reside outside the US (example: new international student who decides to stay in the home country for the first term, or who is unable to obtain a visa on time to arrive for a sufficient portion of the first semester) may enroll in 8.391 and conduct advising meetings with the supervisor via Zoom.

The content and structure of these advising meetings are up to the supervisor, but topics to be addressed in regular meetings may include:

- Choice of subjects for the current term and plans for following terms;
- Mapping future registration that shows how the student will meet the academic requirements of the program (these include completing the Written Exam, and satisfying [specialty](#) and [breadth](#) requirements) [Note: the student is also expected to discuss topics in the first two bullet points with the academic advisor.]
- Student's research interests and supervisors to consider (if the current supervisor is an assigned, temporary appointment)
- Research reading and problems assigned by the supervisor
- Early discussions on possible career paths

8.398, Selected Topics in Graduate Physics:

All new students have the option of enrolling in either 12 or 18 units of 8.398. ***This subject is a weekly seminar for all first-year grad students with research talks and information on best practices for graduate students*** delivered in person by a series of MIT Physics faculty, Pappalardo Postdoctoral Fellows, and a small number of advanced graduate students. The goal of 8.398 is to familiarize students with the research currently being conducted in the department, to provide a structure for navigating the new tasks for life in a rigorous PhD program, and to build community among the cohort of first-year grad students.

Each weekly seminar will be both streamed live and will be recorded so that any first-year student living away from campus will be able to receive content and, ideally, participate in seminar discussions. A list of weekly topics and presenters will be available at the beginning of the academic year. Weekly readings are to be completed before each session.

Recommended registration:

All first-year students should enroll in 18 units of 8.391, or 18 units of 8.398, or a combination of these two subjects totaling at least 18 units. Note that in-person attendance of at least 18 units of 8.391 and/or 8.398 is needed to comply with legal requirements for a new US student visa.

If a new international student residing in the US has already committed to working with a particular supervisor, but that supervisor is unable to come to campus for in-person meetings for any reason, then the student should NOT register for 8.391 this term. Instead, the student should register for 18 units of 8.398.

In addition to 8.391 and/or 8.398, new international students should register for one or two 12-unit subjects (which may be taught fully remotely). Students must register for at least 36 units in total.

MIT Department of Physics

Deepto Chakrabarty, Associate Department Head Professor of Physics

September 2, 2020

Dear Physics First-Year Graduate Students,

The Department's previous letter of August 27, 2020 regarding 8.391/8.398 stated the following:

All first-year students should enroll in 18 units of 8.391, or 18 units of 8.398, or a combination of these two subjects totaling at least 18 units.

We expect all first-year graduate students who are on campus (including those living off-campus in the MIT area) to attend meetings of 8.391 and/or 8.398 in person. Note that in-person attendance is a legal requirement for new international students (except those who are registered and living outside the US).

For those on-campus students not bound by the legal requirement, we are offering a mechanism to request a waiver of in-person attendance. If you would like to make this request, please complete the form [here](#). A member of the staff will then follow up with you.

Sincerely,



Deepto Chakrabarty
Associate Department Head