Master of Science Program in the Physical Sciences

Directors

• Mark Oreglia

Program Description

The Master of Science Program in the Physical Sciences Division (MS-PSD) (http://mspsd.uchicago.edu/) at the University of Chicago is a program designed for students who wish to broaden or deepen their knowledge of the physical and mathematical sciences or to acquire new technical skills. It should be especially valuable to those seeking to prepare for further graduate work, including those who wish to prepare for a graduate program in a field outside of their undergraduate major. MS-PSD students have the opportunity to take undergraduate and graduate courses offered by the University of Chicago (except in some of the professional programs), and also to work with faculty members in Astronomy & Astrophysics (http://astro.uchicago.edu/), Biophysical Sciences, (http://biophysics.uchicago.edu/) Chemistry (http://chemistry.uchicago.edu/), Geophysical Sciences (http://geosci.uchicago.edu/), Mathematics (http://www.math.uchicago.edu/), and Physics (http://physics.uchicago.edu/), and to take supplemental coursework in Computer Science (http://www.cs.uchicago.edu/), Computational and Applied Mathematics (https://cam.uchicago.edu/), Financial Mathematics (http://finmath.uchicago.edu/), and Statistics. (http://www.stat.uchicago.edu/)

The MS-PSD program allows students, in consultation with the Faculty Director, to design programs of study to meet individual student needs. This flexibility combined with the rigor of UChicago courses makes the program unique.

Students normally complete the M.S. in Physical Sciences in nine months (three quarters). The program is administered by the PSD Dean of Students office and directed by Professor Mark Oreglia, Professor in the Department of Physics, the Enrico Fermi Institute, and the College.

Courses and Master’s Project

MS-PSD students are required to complete a total of nine courses, including a master’s thesis project. Five of those courses must be graduate-level subjects, and four of these five courses must be taken in the same department. In addition, students must either (1) complete a master’s thesis project, or (2) take two additional graduate subjects in their principal department, for a total of six out of nine courses in that core department. Students choose from quarterly course offerings (https://coursesearch.uchicago.edu/psc/prdguest/EMPLOYEE/HRMS/c/UC_STUDENT_RECORDS_FL/UC_CLASS_SEARCH_FL.GBL) in physical sciences departments. At least four of the courses must be graduate-level courses in a single department or associated with a specific interdepartmental track, such as environmental science, biochemistry/physics, computational methods in physical science, and optics/imaging. To accommodate students who seek to broaden their knowledge of the physical sciences as well as those seeking to transition to a new field, students may be allowed to take as many as three advanced undergraduate courses in fields outside of their undergraduate majors. In all cases the Director must approve the chosen curricula.

For experimentalists, a typical master’s project might consist of performing or assisting with a laboratory research experiment. For theorists, a typical master’s project might consist of performing some numerical simulation experiments. Students normally choose their projects in the winter quarter, carry them out during the spring quarter, and summarize their projects’ results in a required master’s paper.

Questions

Prospective or current students should contact the appropriate dean in the Physical Sciences Division with questions about the program and/or the application process:

Prospective Students:
Laura Rigazzi, Associate Dean of Students for Recruitment and Admission
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Current Students:
Sierra Sterling, Assistant Dean of Students
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