The Interdisciplinary Scientist Training Program

The Interdisciplinary Scientist Training Program (ISTP) is the graduate program of the University of Chicago’s Medical Scientist Training Program (MSTP). The goal of the ISTP is to train the next generation of physician-scientist leaders. Graduates of the MSTP are awarded a MD from the Pritzker School of Medicine (https://pritzker-sites.uchicago.edu) and a PhD from the graduate studies arm of the MSTP, the Interdisciplinary Scientist Training Program (ISTP) (https://pritzker-sites.uchicago.edu/page/interdisciplinary-scientist-training-program).

MSTP students take graduate courses and perform their PhD thesis work under the umbrella of the ISTP. This novel, highly adaptable program allows students full access to the superb graduate programs within the Biological Sciences Division (https://bsdgrad.uchicago.edu), the Physical Sciences (https://psd.uchicago.edu) Division (http://physical-sciences.uchicago.edu), and the Social Sciences Division (https://socialsciences.uchicago.edu). The ISTP allows students to pursue training in one field or to craft a unique course of study that integrates two classical disciplines. Examples of the latter include computational biology and human genetics, structural biology and immunology, or developmental biology and microbiology. Such integrations reflect the evolution of biomedical research in which several disciplines are brought to bear on important questions in human disease.

The first year of the program combines medical and graduate school classes. Students then typically begin their PhD thesis research work and return to the second year of medical school after a successful defense. This structure ensures a focused, intensive research experience and preserves the continuity of clinical training. On average, MSTP trainees complete both degrees in eight years.

Program of Study

The goal of the Interdisciplinary Scientist Training Program is to train the next generation of physician-scientist leaders. Our program is designed to provide all ISTP students with rigorous scientific training that prepares them to excel in their field of interest, while providing the flexibility to forge new connections between traditional scientific areas.

Curriculum

Five weeks prior to the Pritzker start date, incoming students begin an MSTP-only anatomy course, and finish the course with their medical school colleagues in August. During the Autumn, Winter, and Spring Quarters, students take graduate school courses in addition to their medical school courses. Typically, a total of 3-5 graduate school courses will be finished by the end of the first year. Members of the ISTP Curriculum Committee will meet individually with each student every quarter before registration for the coming
quarter. During this meeting the committee will work with the student to determine which courses will best ensure that the student is adequately prepared to embark on their graduate work when they join a lab.

Each ISTP student completes two lab rotations during the summer between their first and second year. These rotations allow students to identify their future PhD mentors in their area of interest.

All first year ISTP students participate in the Topics Journal Club course. This course provides an in-depth primary-literature based examination of basic science courses taken as part of the Pritzker Initiative Curriculum, and allows students to develop an appreciation for the primary literature, learn to critically evaluate articles, learn more about experimental design, learn how to evaluate and present an overview of a field, and become proficient in overall presentation skills.

Specializations
ISTP requires students to choose an area of “specialization.” Specializations, in general, consist of 5 courses: 3-4 that are programmatic, and 1-2 that are elective/basic advanced knowledge courses. However, some specializations require more coursework due to the nature of the research area. All courses will be graduate courses offered by an established PhD program. In addition to the coursework, Specializations require that the student participate in programmatic activities such as Research-in-Progress, Journal Club, Retreats (if available), seminar series, etc. All students must present their research yearly in a program-approved venue.

Self-Designed Specializations
Students who choose not to align with a prescribed Specialization, can design their own program with the approval of the ISTP Curriculum Committee. The self-designed program will include at least 5 graduate-level courses. In addition to the coursework, self-designed specializations must include a plan to participate in programmatic activities of an established graduate program such as Research-in-Progress, Journal Club, Retreats (if available), seminar series, etc. These students will also meet with and be advised by the ISTP Curriculum Committee to ensure that they make suitable course choices each quarter until a Thesis Committee takes over this role.

Breaking from Medical School to Complete Graduate Research
At the University of Chicago, ISTP students have the flexibility to choose to break from medical school to pursue their graduate research either after the first year of medical school or after the Spring Quarter of their second year of medical school. Most students take 3 to 4 years to complete their PhD research and successfully defend their thesis prior to returning to medical school.
Admission

Admission to the ISTP is exclusively through the joint application process with the Pritzker School of Medicine via the American Medical College Application Service (AMCAS). Applicants cannot apply through the UChicago BSD graduate application process.

More Information

Further information can be found at the MSTP program’s web site: https://pritzker.uchicago.edu/mstp

Interdisciplinary Scientist Training Program Courses

**ISTP 30420. Variable Topic Journal Club. 025 Units.**
This course provides an in-depth primary-literature based examination of basic science courses taken as part of the Pritzker Initiative and allows students to develop an appreciation for the primary literature, learn to critically evaluate articles, learn more about experimental design, learn how to evaluate and present an overview of a field, and become proficient in overall presentation skills. The topic for this during the 16-17 academic year is Cell & Developmental Biology.
Instructor(s): S. Horne-Badovinac, M. McNerney Terms Offered: Autumn

**ISTP 30440. Variable Topic Journal Club. 025 Units.**
This course provides an in-depth primary-literature based examination of basic science courses taken as part of the Pritzker Initiative and allows students to develop an appreciation for the primary literature, learn to critically evaluate articles, learn more about experimental design, learn how to evaluate and present an overview of a field, and become proficient in overall presentation skills. The topic for this course during the 16-17 academic year is physiology.
Instructor(s): C. Weber, M. Hofmann-Bowman Terms Offered: Winter

**ISTP 30441. Variable Topic Journal Club. 050 Units.**
The course focuses on grantsmanship, an integral part of a research career.
Instructor(s): M. Clark Terms Offered: Spring
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

- Times was used instead of Trajan.
- Times was used instead of Palatino.

The editor may contact Leepfrog for a draft with the correct fonts in place.