Master’s of Science (M.S.) in Infectious Disease and Immunology

A unique two-year, full-time translational research-intensive program that leads to an advanced career in health-related fields.
INTRODUCING ONE OF A KIND

Master’s Program in Infectious Disease and Immunology

We offer a two-year, full-time research-intensive program that leads to a Master’s degree in Infectious Disease and Immunology. This program is a partnership between Loyola’s Stritch School of Medicine and the Infectious Disease and Immunology Research Institute (InDIRI). Students will receive rigorous training in the fundamentals of the scientific method, and in practical laboratory skills, by performing a research project under the joint direction of two scientific mentors: a basic scientist and a clinician-scientist.

Master’s students will graduate with the ability to:

⇒ Discuss, develop and supervise projects that call for a broad training in the biomedical sciences and focused training in Infectious Disease and Immunology.
⇒ Provide technical expertise in molecular and/or cellular biology and a variety of other areas, such as microbiology, biochemistry, immunological techniques, enzyme assays, and cell culture.
⇒ Act as liaison between researchers and clinical faculty and in situations that require familiarity with clinical presentations within the areas of infectious disease and immunology, as well as treatment of infectious disease.
⇒ Incorporate high standards of ethics into research design and execution and data interpretation.
⇒ Demonstrate strong oral presentation skills in the course of dialogues with colleagues, clients, physicians, and research scientists.
⇒ Have thorough knowledge, within the fields of infectious diseases and immunology, of the biomedical research process including project planning, experimental design, and research protocol development. This knowledge will be beneficial to those pursuing careers in health sciences, government or commercial environments.

(A). A wrinkled colony formed by Vibrio fischeri from Dr. Karen Visick’s research  
(B). A cervical cancer cell stained for tubulin (red), acetylated tubulin (green) and DNA (blue) from Dr. Edward Campbell research  
(C). A human T cell (left cell) recognizing antigens on target cells (right side) from Dr. Makio Iwashima research
Who Should Apply:
College Graduates with the undergraduate major in microbiology, infectious diseases, immunology, human biology, cell biology, biochemistry, medicine, pharmaceutical science, clinical laboratory science, genetic epidemiology and clinical immunology.

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<th>START DATE</th>
<th>PROGRAM LENGTH</th>
<th>TOTAL CREDITS</th>
<th>ESTIMATED NEW STUDENTS</th>
<th>FACULTY</th>
<th>PROGRAM STARTED IN</th>
<th>TUITION (PER CREDIT HOUR)</th>
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CURRICULUM

Course Work
The Master’s program consists of course work, primarily in the first year, and research leading to a Master’s thesis. Some courses include:

- BMSC 410 Molecular Biochemistry
- BMSC 412 Cell Biology
- IDIM 400 Infections and Immunology
- IDIM 401 Infectious Diseases
- BMSC 402 Statistical methods for the Biomedical Sciences
- CRME 420 Biostatistics
- IDIM 403 Parasitology and Virology
- IDIM 501 InDIRI Seminar

Research
Students will select a laboratory for research following one to three 6-week rotations during the first semester. Students will select laboratories for each rotation in consultation with faculty mentors and the program’s graduate program director. M.S. candidates are expected to undertake an independent, original experimental study resulting in a new and significant contribution to knowledge. The research will culminate in the preparation of a thesis and a final oral examination conducted by the student’s M.S. Thesis Committee.

Our Institute host various events, including monthly seminars to promote a learning environment for the students and faculty members.

- InDIRI Seminar Series
- Quarterly Clinical Luncheon
- Annual Retreat
- Joint Poster Session with Oncology Research Institute
YOUR CAREER

Now in its fifth year, our program has graduated students who have gone on to Doctor of Medicine (M.D.), PhD and M.D./PhD programs, and pursued careers in research. We offer our students a rigorous classroom-based curriculum and a cutting edge translational research project, which will prepare them for an advanced career in the following fields:

- Medicine
- Nursing
- Clinical Laboratory Science
- Biotechnology
- Translational Research
- Forensic Medicine
- Pharmaceutical Research
- Product Development
- Science Writing
- Health Care Policy

A Bright Future

“Being part of a welcoming Loyola community with superior peers and mentors who are committed to your success as a scientist and a person. I like that the PI I work with makes time to work with me one on one to help me develop superior skills that will be imperative to my success in the future. The classes offered are unique and provide a strong foundation for students interested in moving their career toward medicine, basic science, or business with strong science applications. I’m glad I made the decision to come here.”

—— Alex, 2nd year student

“I really like the translational research aspect that InDIRI has to offer. It helps give students perspective of the types of research that is of interest these days. The program offered the translational research as well as taking medical school classes. I thought it’d be the perfect program to help me figure out that I wanted to do. Now I’m a PhD student in Microbiology & Immunology at Loyola University Chicago.”

—— Evann, 2014 grad

“I didn’t have any research experience, and this program allowed me to gain that experience. I liked taking classes with medical students and the faculty is very approachable.”

—— Cecilia, 2014 grad

HIGHLIGHTS

⇒ Students will be guided jointly by two mentors: a basic scientist and a clinician-scientist.

⇒ Medical Center ranked 3rd in State by U.S News & World Report.

⇒ New Translational Research Building is scheduled to open in 2016, as shown in the picture.
HOW TO APPLY

Applications are accepted between November and mid-April. We strongly encourage applicants to apply early, as we review applications in the order we receive them. To apply, please visit our website: http://ssom.luc.edu/indiri/graduate-program/how-to-apply/

Requirements

- Complete application online, with no application fee
- A statement of purpose
- Three letters of recommendation
- GRE score (code 1412)
- Official transcripts (For international students, all transcripts must be evaluated by the Education Credential Evaluators (https://www.ece.org/) and the evaluation must be included with the application.)
- TOEFL score for non-native English speakers without proof of a degree taken in English (code 1412)

The Process

An Admissions Committee makes admissions decisions based on the quality of the entire application package. Therefore, we do not list specific GPA and GRE requirements. Student should address potential weaknesses within the application as a (small) part of her/his statement of purpose. The admissions committee begins review of applications by Dec. 15 each year. Completed applications received after Dec. 15th will be reviewed by the committee and applicants who meet our requirements will be interviewed as space permits.

As this is a research-intensive Master’s program, students who show clear evidence of research potential will be given the highest priority for admission.
At A Glance
Loyola University Chicago, a private university founded in 1870 as St. Ignatius College, is one of the nation’s largest Jesuit, Catholic Universities and the only one located in Chicago.

- Total enrollment: 15,902
- 80+ undergraduate majors and 80+ minors
- 140+ graduate, professional, and graduate-level certificate programs
- More than 4,000 faculty and staff members
- 14:1 Undergraduate student/faculty ratio

In 2014, Loyola University Chicago was ranked:
- No. 3 Medical Center in Illinois State by U.S. News
- No. 56 Microbiology in U.S University by HappySchools
- No. 59 U.S. National University by Washington Monthly’s
- No. 71 Medical School by U.S. News
- No. 106 U.S. National University by U.S. News

WHY STUDY AT LOYOLA?

- The Institute has a collaborative faculty who has their primary appointments in various departments, Academic and Clinical Departments, Programs and Institutes throughout the Stritch School of Medicine at Loyola University Chicago, and the Loyola Medical Center Hospital.
- The program integrates basic science and clinical research.
- The first semester curriculum provides a broad background in the biomedical sciences and provides the opportunity to interact and establish friendships with students from all basic science departments and programs on campus.
- Small class sizes allow for personal attention during the coursework phase of your program.
- Students develop a translational project at the interface of basic science and the clinic, under the direction of a clinician-scientist and a basic science mentor.
- Weekly seminars by from world-class scholars allow you to meet and interact frequently with leading scientists and clinicians in immunology, microbiology, virology and infectious disease.
- State of the art facilities provide you the tools for cutting edge laboratory work.
- Graduates from our program will be prepared for advanced careers in health-related fields.
LOYOLA AND CHICAGO

A hub of commerce and culture, Chicago serves as an expanded campus for Loyola students. Chicago is the third most populous city in the United States, famous for its thriving economy, impressive architecture, notable politicians, groundbreaking music, and innovative environmental policies. Loyola and its students enjoy Chicago's exceptional cultural and economic resources. In addition to providing an unparalleled setting for educational opportunities, Chicago is also one of the most prestigious cities in the world in terms of recreation and entertainment.

Welcome to Loyola! Welcome to Chicago!
The following message contains some very important information. Please read it before you use this brochure. This brochure was last updated in July 2015. It contains information on the Master’s program that the Infectious Disease and Immunology Research Institute intends to run for students who are planning to join in the 2016-17 academic year. The institute has made every effort to ensure that the information provided is both helpful and accurate, and that it is kept as up-to-date as possible – however, this information is subject to change. For this reason it is particularly important that you should check the website for updates (LUC.edu/indii) or contact the institute using the contact details provided within this publication.

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