Loyola University Stritch School of Medicine

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 focused training in Infectious Disease and Immunology and broad training in the biomedical sciences.
- 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, and 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

(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 an undergraduate major in microbiology, infectious diseases, immunology, human biology, cell biology, biochemistry, medicine, pharmaceutical science, clinical laboratory science, genetic epidemiology and clinical immunology.

<table>
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<tr>
<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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<tr>
<td>FALL</td>
<td>2 YR.</td>
<td>24</td>
<td>10</td>
<td>50</td>
<td>2010</td>
<td>$1,096</td>
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CURRICULUM

Course Work
The Master’s program consists of course work, primarily in the first year, seminar attendance, and research leading to a Master’s thesis. Some courses include:
Year 1 (Three Six-Week lab rotations during first semester)
- Biochemistry and Molecular Biology (Fall)
- Cell Biology (F)
- Ethics in Biomedical Science (F)
- Methods In Biomedical Science (F)
- Bioinformatics (Spring)
- Statistical Methods for the Biomedical Sciences (S)
- Oral Presentation Skills (S)
- Infections and Immunology (S)

Year 2
- Infectious Diseases (Fall)
- Infectious Disease Case Study (F)
- Biostatistics (F)
- Current Literature (F)
- Pillars of Immunology (Spring)
- Parasitology and Virology (S)

Research
Students in their first semester will select a total of three six-week laboratory rotations in consultation with the InDIRI (Infectious Disease and Immunology Research Institute) graduate program director.

After completion of the three six-week rotations, students in consultation with the InDIRI graduate program director will select a research laboratory.

InDIRI M.S. candidates will undertake an original independent 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.
YOUR CAREER

Now in our eighth year, we are proud of our graduated students who have been accepted and are pursuing professional graduate degrees in Doctor of Medicine (M.D.), Ph.D., and M.D./Ph.D. programs, and have gone on to careers in research and industry.

We offer our students a rigorous classroom-based curriculum and 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

“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, InDIRI graduate

“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, InDIRI graduate

“Faculty at Loyola are invested in mentoring students, and the InDIRI program is a unique opportunity for students to work closely with both a research mentor at the bench and a clinical mentor to develop a translational project. I gained technical skills in the lab and the foundation for a career in research, while also gaining an appreciation for clinical medicine through courses at the medical school and discussion of patient cases with clinicians. The InDIRI program is excellent for those deciding whether to pursue a career in medicine or research, or for those who wish to combine both interests.”

Alex Nelson, InDIRI graduate

HIGHLIGHTS

- Students will be guided jointly by two mentors: a basic scientist and a clinician-scientist.
- Personalized guidance and professional development for career advancement.
- New Translational Research Building opened in 2016. (photo)
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 online application (online application is free)
- Personal 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 or IELTS scores less than 2 years old are required for non-native English speakers without proof of a degree taken in English. (code 1412)

The Process

An admissions committee will make decisions based on the quality of the entire application package. Therefore, we do not list specific GPA and GRE requirements. If needed, a student should address potential weaknesses within their 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 founded in 1870 as St. Ignatius College is one of the nation’s largest Jesuit, Catholic Universities and the only one located in Chicago.

Loyola Graduate School: Inception 1926
- Graduate School total enrollment: 1,500
- 27 PhD Programs, 37 master’s program, 7 dual degree programs, 16 advanced bachelor’s/master’s programs and a professional doctorate program
- Six hundred graduate faculty members

WHY STUDY AT LOYOLA?

The Institute’s collaborative faculty hold primary appointments in various academic and clinical departments, programs and institutes at the Loyola Medical Center, and Loyola University Stritch School of Medicine.

- 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 the program.
- Under the direction of a clinician-scientist and a basic science mentor, students will develop a translational project at the interface of basic science and the clinic.
- Weekly seminars presented by world-class scholars will allow for frequent interaction with leading scientists and clinicians in the fields of 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.

2017/2018, Loyola University Chicago ranked by

U.S News and World Report:
- No.3 Medical Center in Illinois
- Six nationally ranked specialties: Cardiology and Heart Surgery, Pulmonology, Gastroenterology and GI surgery, Nephrology, Orthopaedics, and Urology; and three high performing specialties: Cancer, Nephrology, & Geriatrics.
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 November 2018. It contains information on the Infectious Disease and Immunology Research Institute Master's program for students who plan to join in the 2019 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.

CONTACT US

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https://www.luc.edu/gpem/