

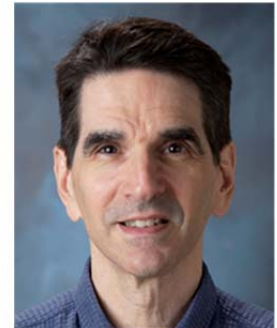
## Loyola University Chicago Medical Center

### Master of Science in Physiology

Physiology is the basis of medicine. As such, the Master of Science in Physiology (MSP) Program at Loyola University Chicago Medical Center is designed for college graduates who are interested in strengthening their understanding of medical physiology with the intent of enhancing their academic credentials to succeed in future medical or dental school programs. Our MSP Program is a non-thesis, full-time nine month curriculum running from early-September to late-May. MSP students will pursue intensive studies in graduate cell physiology, physiological biochemistry, organ system medical physiology, neurophysiology, basic human anatomy, introduction to pathophysiology, and clinical bioethics. The Program also includes a course on Professional Development to help each student with their applications to future biomedical programs. Each student in the MSP Program will be assigned a faculty advisor to guide them throughout the program, as well as with their post-graduate applications. We also provide assistance for students interested in local volunteer community programs to further explore various medically-related career paths and as part of their future applications to professional biomedical programs. Our courses are designed specifically for MSP students and are classroom taught by medical school faculty professors who have extensive experience teaching medical students at Loyola University, Stritch School of Medicine. Successful completion of the MSP Program will provide the student with a strong foundation for success in future professional biomedical programs.



Pieter de Tombe, Ph.D.  
Professor and Chairman



Stephen L. Lipsius, Ph.D.  
Professor  
MSP Program Director

#### M.S. in Physiology Program:

- The MSP Advantage
- Student Experiences
- Admissions Requirements
- Curriculum
- Faculty
- Program Costs

### **The MSP Advantage:**

- The MSP Program is based on the premise that physiology is the basis of medicine. As such, the MSP Program is designed to enhance the student's fundamental understanding of medical physiology and thereby better prepare them for future medical or dental school programs.
- The MSP Program also will provide the student with the opportunity to engage in graduate level medically-relevant courses and thereby enhance the student's academic credentials for applications to future biomedical programs.
- The MSP Program courses are classroom taught by medical school professors with extensive experience teaching medical students at the Stritch School of Medicine.
- The MSP Program will matriculate only 25-30 students. This small class size provides each student with a more personalized educational experience.
- The MSP Program is unique in that we offer a **Pathophysiology** course taught by an MD, board certified cardiologist; a **Professional Development** course designed to enhance the students ability to prepare resumes, develop interview skills and provide opportunities for students to interact with professionals in medical fields, and a **Clinical Bioethics** course that will enhance the student's understanding and appreciation of contemporary medical ethical issues and the application of medical ethics in their future professional biomedical careers.
- Each MSP student is assigned a faculty advisor who will help guide them through the program as well as help them with future applications to professional programs.
- The MSP Program will provide assistance to students seeking to gain volunteer experience to further explore medically-related career opportunities.
- Students interested in attending medical school will be guaranteed an admissions interview at the Loyola University Chicago, Stritch School of Medicine by achieving a GPA of 3.5 or higher in the MSP Program and whose most recent MCAT score is 30 or higher. MCATs taken after completion of the MSP Program must be taken within one year of completion of the Program.

## **Student Experiences:**

The following comments are from recently graduated MSP students about their experiences in the Program.

### MSP Student; Ravi Nakrani



"The MSP program at Loyola has given me many tools and resources to help prepare me for medical school, but more importantly I am taking away renewed enthusiasm about my goals and the new challenges ahead. The program creates an environment similar to their medical school by sharing faculty and curricula content with the medical school, and with the small class size we are better able to take advantage of these resources. This experience has been tremendously valuable and I would recommend it to anyone seeking a professional career in medicine."

### MSP Student; Solomon Tong:



"When I decided to pursue a career in medicine, I needed a transition from my background in business and economics. The MSP program has been more than I could have asked for. The curriculum has supplemented my undergraduate studies with both challenging and valuable classes. In addition, this program has done an excellent job replicating the culture and environment of medical school. Most importantly, the caring faculty has been very intentional about helping me get to the next step in my career."

### MSP student; Miysha Shaw



"The MSP program at Loyola University Chicago has been an excellent experience for me. Being a non-traditional student, I was cautious that I would have difficulty succeeding in advanced-level courses; however, the small class size paired with dedicated and supportive professors ensure that I get a thorough and intense education. The professors present clinically relevant information throughout each lecture, and are driven to ensure students understand the content with full confidence. Additionally, the Loyola faculty members have made themselves available to discuss my personal goals, and have given me resources and guidance to help me reach them. I am very appreciative to be challenged and supported equivocally by the MSP faculty and Loyola University Chicago. I feel very secure that the program is preparing me for a successful career upon graduation."

### MSP Student; Omar Faruque:



"I really like the MSP program because the professors and administrators are very supportive. I've learned a lot and am getting a solid foundation for medical school. The small class size is a big plus. Everyone in the program gets along and we work together to succeed in our courses. We've also established a tradition of holding monthly "family dinners" where everyone prepares a dish from a chosen culture and shares it with the others. This is a great time to relax and bond with fellow classmates. I hope future MSP students will continue on with this tradition."

### MSP Student; Dinah Thibeault



From day one, I have been impressed not only with how friendly and helpful the professors and staff are, but also with how committed and dedicated my classmates are. I love how targeted the curriculum is to what we will be learning in medical school. Since we have most of the same professors as the medical students, the lectures are tailored to understanding the clinical relevance of the topics covered. In addition, having a small class of people with similar goals creates a focused and supportive atmosphere where I find my desire to pursue medicine constantly renewed.

### **Admission Requirements:**

The MSP Program is designed for highly motivated students seeking to enhance their understanding of human physiology and improve their academic credentials for future professional biomedical programs. Candidates for the MSP Program will be required to have the following minimum requirements:

- Baccalaureate degree from an accredited U.S. college or university with an undergraduate cumulative GPA of 3.0 or better.
- One year of biology, one year of general chemistry, one year of organic chemistry, one year of physics and one year of mathematics, preferably calculus.
- Official MCAT scores with a minimum score of 28; GRE scores >50th percentile (verbal plus quantitative) or DAT scores with a minimum score of 16. Only scores obtained within the last three years will be considered.
- Official transcripts from ALL undergraduate and graduate institutions attended.
- A personal statement that expresses your motivation and future plans for a professional biomedical career as well as your experiences that have contributed to your chosen career path. This would include any relevant clinical, employment, teaching, or research experiences.
- Two letters of recommendation appropriate for acceptance into a Master degree program. Pre-med committee letters are acceptable.
- Applicants must agree to an Illinois State criminal background check. Self-disclosure of these types of issues is in the best interest of applicants.
- All applicants will be required to fill out an online application to the Loyola University Chicago Graduate School.

APPLY HERE: (<http://www.stitch.luc.edu/depts/physio/ms.cfm>)

Deadline for receipt of applications is August 1, 2012. Students must commit to their acceptance into the Program by August 15, 2012 to secure a seat in the Program. We use a rolling admissions process and therefore encourage applicants to apply early.

Updated materials such as transcripts and letters of recommendation can be sent to: Graduate and Professional Enrollment Management, 820 N. Michigan Ave., Lewis Towers, Room 800, Chicago, IL 60611.

**The Master of Science in Physiology (MSP) Program at Loyola University Medical Center is separate and significantly different from the Master of Arts in Medical Sciences (MAMS) program offered at the Loyola University undergraduate campus. When applying for the MSP Program online, click on “Cell and Molecular Physiology” in the drop down menu.**

The graduate and medical programs at Stritch School of Medicine are separate programs. Therefore any material submitted to Stritch School of Medicine must be re-submitted to the graduate program.

Further information or questions can be directed to our Program Coordinator, Samantha Dumm at: [sdumm@lumc.edu](mailto:sdumm@lumc.edu) or 708-216-1017.

### **Curriculum:**

#### **Semester One (Fall)**

Cell Physiology (PIOL 417; 3 credits)

Biochemical Physiology (PIOL 420; 3 credits)

Function of the Human Body I (PIOL 421; 4 credits)

Professional Development (PIOL 500; 1 credit)

Clinical Bioethics (BEHP 401; 1 credit)

#### **Semester Two (Spring)**

Fundamentals of Neurophysiology (PIOL 450; 3 credits)

Function of Human Body II (PIOL 422; 4 credits)

Basic Human Anatomy (PIOL 430; 2 credits)

Introduction to Human Pathophysiology (PIOL 460; 3 credits)

The MSP Program consists of 8 courses (total 24 credit hours) designed specifically for MSP students. Each course is classroom taught by Stritch School of Medicine faculty. Function of the Human Body (I & II) is taught over two semesters. The Introduction to Pathophysiology also requires a library research paper related to a specific topic in pathophysiology. In addition to lectures, each physiology course consists of small group discussions of clinical case studies related to lecture topics, as well as scheduled review sessions with the lecturing faculty member.

Students must achieve an overall grade of B to successfully complete the Program. Students falling below a B average in the first semester of the Program will be placed on

academic probation and will receive counseling from their advisor and the program director. Students receiving a grade of C or less in any two courses will be dismissed from the Program. There is no remediation of individual courses.

**Faculty:**

Each course in the MSP program is run by a Course Director as follows:

Stephen L. Lipsius, Ph.D., Professor of Physiology  
MSP Program Director  
Course Director: Function of the Human Body I & II  
slipsiu@lumc.edu

Samuel Cukierman, MD, Ph.D., Associate Professor of Physiology  
Course Director: Cell Physiology  
scukier@lumc.edu

Mark G. Kuczewski, Ph.D., Professor of Medical Ethics  
Course Director: Clinical Bioethics  
mkuczew@lumc.edu

John McNulty, Ph.D., Professor of Physiology  
Course Director: Basic Human Anatomy  
jmcnulty@lumc.edu

Gregory Mignery, Ph.D., Professor of Physiology  
Course Director: Biochemical Physiology  
gmigner@lumc.edu

Toni Pak, Ph.D., Assistant Professor of Physiology  
Course Director: Professional Development  
tpak@lumc.edu

Erika Piedras-Renteria, Ph.D., Associate Professor of Physiology  
Course Director: Fundamentals of Neurophysiology  
epiedra@lumc.edu

Allen M. Samarel, MD., William B. Knapp Professor of Medicine and Physiology  
Course Director: Introduction to Pathophysiology  
asamare@lumc.edu

### **Program Costs:**

#### **Tuition:**

\$1,520 per credit hour (24 credit hours) = \$36,480.

#### **Mandatory Fees:**

Matriculation Fee: \$100

Activity Fee: \$50/semester

Health Services Fee: \$150/semester \*

Fitness Center: \$142/semester

#### **Health Insurance:**

Proof of Health Insurance or \$2032/year

#### **Optional Fee:**

Student Parking: \$238.33

\* this fee may increase for 2012-13