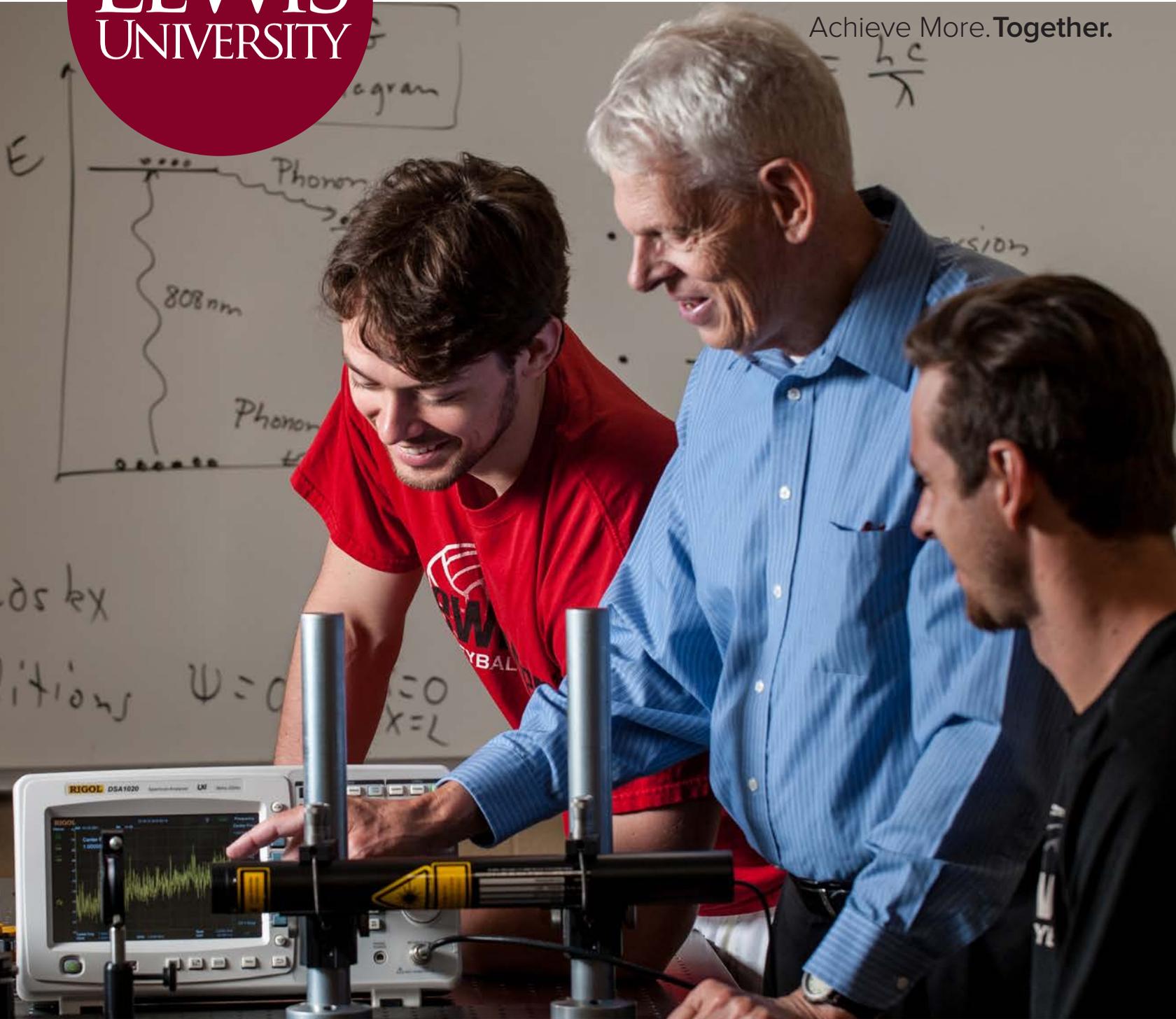




Achieve More. Together.



# CHEMISTRY, CHEMICAL PHYSICS & PHYSICS

GRADUATE PROGRAMS IN THE PHYSICAL SCIENCES



# Expand your marketability. Improve your job prospects with an advanced degree.

In today's marketplace, you need to stand out to get the job you want. Especially when the job you're pursuing gives you the potential to affect millions of people's lives in a multitude of ways. And one of the best ways to do so is with an advanced degree. Statistics show that students earning higher-level degrees see better offers and success rates than their undergraduate counterparts, and are more likely to land a job in their preferred industry. They will also continue to fill most senior positions, as well as teaching positions in colleges or career and technical schools. But first, you need a reputable school that can provide you with that advanced degree.

At Lewis University, our graduate science programs are designed to give you the tools and problem-solving skills that lead to a successful career. You will learn on state-of-the-art laboratory equipment in our Leadership in Energy and Environmental Design (LEED) certified science center, with faculty who are experts in their fields. Lewis has the equipment, the faculty and the resources to help bring you the potential for an amazing career upon graduation from one of the following programs:

- Chemistry (M.S.)
- Chemical Physics (M.S.)
- Physics (M.S.)

## Balance work and education while earning your degree.

We know that juggling work, family and education can be challenging. So we offer adult and graduate programs in evening, online, accelerated and blended (online and on-campus) formats at conveniently located campuses\* throughout the Chicago region – all designed with you in mind. Many graduate and certificate programs are available online or in a face-to-face classroom format.

*\*Class locations and offerings differ among programs.*



## Questions?

Call **(815) 836-5610** or  
e-mail [grad@lewisu.edu](mailto:grad@lewisu.edu)

**Samantha Brain '17, Chemistry (M.S.)**  
*Graduate Assistant, Lewis Chemistry Dept.*

"I've grown a lot as a scientist and as an individual while going through Lewis' Master of Science in Chemistry program. I've learned a lot about myself, my time-management skills and how my 'failures' are important learning opportunities. And I love that I have the chance to actually make a difference in the world through opportunities to work on real-world issues and sustainability projects. Many of the experiences I've enjoyed are ones that I most likely would not have gotten at a larger school."

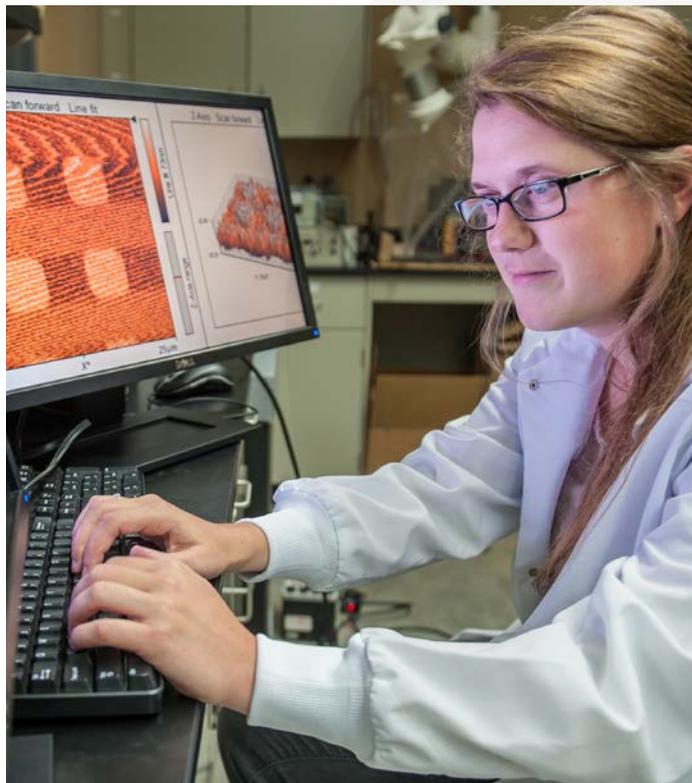
# MASTER OF SCIENCE IN Chemistry

## Acquire the skills to solve real-world problems through the research and testing of chemical compositions.

Prepare to take on a senior research or upper-management role.

Cleaning up our water supply. Devising new window coatings to protect airplane pilots from being blinded by lasers. Molding the minds of the next generation. These are just a few examples of how you can impact the world with an advanced degree in Chemistry. What's more, you have the potential to take a leadership role in these types of projects, as chemists with advanced degrees are expected to enjoy increased opportunities and fill upper-level positions. As a graduate student at Lewis University, you'll gain first-hand experience on cutting-edge assignments that will prepare you for these kinds of positions. That's because you'll work hand-in-hand with faculty to acquire a solid understanding of:

- Solving problems in the synthesis, measurement and modeling of chemical systems
- The reasoning process in chemical science
- Specific chemical systems to understand a broad range of complex systems of scientific and societal interest
- The scientific method to design, carry out, record and analyze the results of experiments
- Creating software that performs required computation while minimizing battery usage and processing lag



## Life after Lewis

Upon graduation from this program, you can potentially bring your new skills to the following areas:

- Chemist
- Chemical Engineer
- Materials Scientist
- Environmental Scientist
- Teacher

### **Amy Mlynarski '17, Chemistry (M.S.)**

*Teaching Assistant, Lewis Chemistry Dept.*

“Lewis’ Graduate Chemistry program has so much to offer. Because the classes are smaller, the professors can interact with you personally and get to know you a lot better. That means they learn exactly how to push you out of your comfort zone and show you what you’re truly capable of. It’s given me a lot more confidence in what I know and feel I can handle which is going to benefit me greatly in my career.”

# Curriculum

## Degree Requirements

Degree Offered: **Chemistry (M.S.)**

Total Credit Hours Required: **30**

### I. CORE COURSES (15 CREDIT HOURS)

CHEM-50100	Chemical Thermodynamics
CHEM-50200	Strategic Organic Chemistry
CHEM-52000	Advanced Analytical Chemistry
CHEM-60100	Kinetics and Reaction Mechanisms
CHEM-60500	Applied Spectroscopy

### II. SKILLS AND RESEARCH (9 CREDIT HOURS)

CHEM-59600	Introduction to Research
CHEM-69600	Graduate Seminar <i>(Multiple enrollments for a total of 2 credit hours)</i>
CHEM-69800	Master's Thesis <i>(Multiple enrollments for a total of 6 credit hours)</i>

### III. ELECTIVES (6 CREDIT HOURS)\*

CHEM-60000	Physical Inorganic Chemistry
CHEM-60200	Advanced Biophysical Chemistry
CHEM-62100	Materials Chemistry
CHEM-62300	Supramolecular Chemistry
CHEM-65200	Computational Chemistry
CHEM-68000	Special Topics in Chemistry
CHEM-68500	Readings in Chemistry

*\*Up to 6 hours of graduate coursework in other related disciplines may be chosen with the approval of your advisor and graduate program director.*

## Admission Requirements

In order to be accepted into this program, you must possess:

- A baccalaureate degree from a regionally accredited institution of higher education.
- A minimum undergraduate GPA of 3.0 on a 4.0 scale.
- A completed application for graduate admission with \$40 application fee.
- A professional resumé.
- Official transcripts from all educational institutions attended.
- Two-page statement of purpose.
- Two recommendation forms or letters.
- Undergraduate coursework in discrete mathematics, programming and algorithms (Students without sufficient coursework will still be considered for admission but may need to complete up to 13 credit hours of foundation courses).
- International students are required to have a TOEFL test score greater than 550 (computer-based 213; Internet-based 79).

*\*Provisional admission may be granted for those who do not meet these requirements*

## Provisional Admission

Under certain circumstances, students who don't meet the GPA requirement for full admission may request to be admitted to the program on a provisional basis. If provisionally admitted, you must complete the first 9 semester hours of graduate study with a GPA of 3.0 or higher. After 9 hours of completed coursework, your application will be reviewed again for full admission.

# MASTER OF SCIENCE IN Chemical Physics

## Discover the influence you can have on people's everyday lives by addressing energy needs and other important issues.

Develop your leadership skills and provide a guiding hand toward a brighter tomorrow.

From chemistry to physics. From nanotechnology to materials. A Master of Science in Chemical Physics from Lewis University will allow you to profoundly affect the world by designing materials for energy production and utilization, tackling basic issues in surface interactions or exploring complex issues in biochemistry. That's because our faculty are experts in their fields, working hand-in-hand with you and sharing their real-world experience. At the same time, they utilize an interdisciplinary approach, exposing you to a variety of projects and ideas so you'll have the potential to enjoy the greater opportunities an advanced degree affords and take on a leadership role in your career. You will:

- Demonstrate an understanding of the fundamental scientific principles and apply acquired knowledge of physical and chemical properties
- Apply acquired knowledge to the development of new materials, new theories and effects and devices
- Present scientific data in research publications, articles, posters and oral presentations

### James Hofmann '17, Chemical Physics (M.S.) Teaching Assistant, Lewis Physics Labs

"I've found the relationship with the professors to be the best thing about the Chemical Physics program. It's no longer them telling you what's right or wrong, but the two of you trying to figure out a research issue together. Even though it's a lot of hard work, it's rewarding to delve into the material with them."

## Admission Requirements

In order to be accepted into this program, you must possess:

- A baccalaureate degree in Chemistry, Physics or Chemical Physics from a regionally accredited institution of higher education or in a major in a related field.
- A minimum undergraduate GPA of 3.0 on a 4.0 scale.
- A completed application for graduate admission with \$40 application fee.
- Official transcripts from all institutions of higher education attended.
- A one- to two-page personal statement describing your background and how this degree will relate to your career goals.
- Three letters of recommendation.

*\*Provisional admission may be granted for those who do not meet these requirements*

## Provisional Admission

Under certain circumstances, students who don't meet the GPA requirement for full admission may request to be admitted to the program on a provisional basis. If provisionally admitted, you must complete the first 9 semester hours of graduate study with a GPA of 3.0 or higher. After 9 hours of completed coursework, your application will be reviewed again for full admission.



# Curriculum

## Degree Requirements

Degree Offered: **Chemical Physics (M.S.)**

Total Credit Hours Required: **30**

### I. CORE COURSES (15 CREDIT HOURS)

CHEM-50100	Chemical Thermodynamics
CHEM-60100	Kinetics and Reaction Mechanisms
CHEM-60500	Applied Spectroscopy
PHYS-54100	Quantum Mechanics
PHYS-54200	Condensed Matter Physics

### II. SKILLS AND RESEARCH (9 CREDIT HOURS)

CHEM-59600	Introduction to Research OR
PHYS-59600	Introduction to Research
CHEM-69600	Graduate Seminar <i>(Multiple enrollments for a total of 2 credit hours)</i> OR
PHYS-69600	Graduate Seminar <i>(Multiple enrollments for a total of 2 credit hours)</i>
CHEM-69800	Master's Thesis <i>(Multiple enrollments for a total of 6 credit hours)</i> OR
PHYS-69800	Master's Thesis <i>(Multiple enrollments for a total of 6 credit hours)</i>

### III. ELECTIVES (6 CREDIT HOURS)\*

CHEM-50200	Strategic Organic Chemistry
CHEM-52000	Advanced Analytical Chemistry
CHEM-60000	Physical Inorganic Chemistry
CHEM-60200	Advanced Biophysical Chemistry
CHEM-65200	Computational Chemistry
CHEM-62100	Materials Chemistry
CHEM-62300	Supramolecular Chemistry
CHEM-68000	Special Topics in Chemistry
CHEM-68500	Readings in Chemistry
PHYS-50600	Mathematical Methods for the Physical Sciences
PHYS-51800	Applied Modern Optics
PHYS-64000	Advanced Quantum Mechanics
PHYS-64200	Semiconductor Physics and Devices
PHYS-68000	Special Topics in Physics
PHYS-68500	Readings in Physics

*\*Up to 6 hours of graduate coursework in other related disciplines may be chosen with the approval of your advisor and graduate program director.*

## Life after Lewis

Upon graduation from this program, you can potentially bring your new skills to the following areas:

- Chemist
- Chemical Engineer
- Materials Scientist
- Environmental Scientist
- Teacher

# MASTER OF SCIENCE IN Physics



## Learn how great an effect you can have in advancing engineering, computing and other areas.

Increase your demand through an advanced degree.

From pondering the origins of the universe to designing better electronic memory devices, Lewis University's Master of Science in Physics will give you the skills to impact the world in extraordinary ways. By teaming with faculty who are real-world experts with strong industry connections, you'll gain practical experience working with companies to solve real-world problems. Upon graduation, you'll have the credentials people look for and enjoy increased opportunities, including the potential to take on a position as a research associate or at a teaching institution. You will learn to:

- Demonstrate in-depth knowledge and comprehension of the core concepts of physics
- Exhibit a functional knowledge of all basic areas of physics, including mechanics, electricity and magnetism, thermodynamics and quantum mechanics
- Display quantitative, qualitative and technical skills central to physics
- Conduct scholarly activities in an ethical manner
- Produce and defend a research project

# Curriculum

## Degree Requirements

Degree Offered: **Physics (M.S.)**

Total Credit Hours Required: **30**

### I. CORE COURSES (12 CREDIT HOURS)

PHYS-50500	Classical Mechanics
PHYS-53000	Statistical Mechanics and Thermodynamics
PHYS-64000	Advanced Quantum Mechanics

### II. SKILLS AND RESEARCH (9 CREDIT HOURS)

PHYS-59600	Introduction to Research
PHYS-69600	Graduate Seminar <i>(Multiple enrollments for a total of 2 credit hours)</i>
PHYS-69800	Master's Thesis <i>(Multiple enrollments for a total of 6 credit hours)</i>

### III. ELECTIVES (9 CREDIT HOURS)

PHYS-50600	Mathematical Methods for the Physical Sciences
PHYS-51800	Applied Modern Optics
PHYS-54100	Quantum Mechanics
PHYS-54200	Condensed Matter Physics
PHYS-54300	Nuclear and Particle Physics
PHYS-61800	Advanced Modern Optics
PHYS-64200	Semiconductor Physics and Devices
PHYS-68000	Special Topics in Physics
PHYS-68500	Readings in Physics
CHEM-68500	Readings in Chemistry

*\*Up to 9 hours of graduate coursework in other related disciplines may be chosen with the approval of the advisor and graduate program director.*

## Life after Lewis

Upon graduating from the program, you can bring your new skills to the following areas:

- Nuclear Physics
- Geophysics
- Astronomy
- Astrophysics
- Engineering Physics
- Teaching
- Computer Science

## Admission Requirements

- A baccalaureate degree in Physics from a regionally accredited institution of higher education or in a major in a related field.
- A minimum undergraduate GPA of 3.0 on a 4.0 scale.
- A completed application for graduate admission with \$40 application fee.
- Official transcripts from all institutions of higher education attended.
- A one- to two-page personal statement describing your background and how this degree will relate to your career goals.
- Three letters of recommendation.

## Provisional Admission

Under certain circumstances, students who don't meet the GPA requirement for full admission may request to be admitted to the program on a provisional basis. If provisionally admitted, you must complete the first 9 semester hours of graduate study with a GPA of 3.0 or higher. After 9 hours of completed coursework, your application will be reviewed again for full admission.

# Apply Now!

## Applying to Lewis University is simple:

- Complete the Graduate Application at [lewisu.edu/apply](http://lewisu.edu/apply).
- Submit the necessary transcripts and/or supporting documents listed in the Admission Requirements section of your program of interest.
- Mail the \$40 application fee.

Start taking your career to the next level today!

## Why more graduate students choose Lewis

Take a closer look at Lewis and you'll find we're more than a place to get your next degree. We're a respected, state-of-the-art institution of higher learning that's been recognized by renowned publications. That's because we employ a values-based, ethically focused approach to education from faculty who are experts in their fields. They understand your need to balance work, family and education and work with you to accomplish your educational goals while providing the support you need. See for yourself:

- State-of-the-art laboratory equipment, such as a fluorescent microscope and 96-well plate reader, in a LEED certified science center with more than 31 environmentally friendly features, including its innovative design, indoor environmental quality, solar powered pathway lighting, water efficiency and more
- Utilize work done for your employer as your research project
- Recognized as a Top 25 Regional University in the Midwest by *U.S. News & World Report*
- Named #1 best private college value in Illinois by Great Value Colleges
- Small, interactive classes help you grow with your peers, led by dedicated faculty who are experts in their field with real-world experience
- Employer tuition discount and deferral plans make Lewis one of the most affordable private universities in the Chicago area

## Let us talk with you about funding your education

We're dedicated to making your degree as affordable as possible. That's why Lewis offers transfer-friendly credit policies, employer tuition discounts and tuition deferral plans. You might also qualify for Federal Stafford Loans, veterans' benefits or scholarships. Put all those pieces together and you'll find that we're one of the most affordable private Universities in the Chicago area. To apply for financial aid:

- Submit your application for admission at [lewisu.edu/apply](http://lewisu.edu/apply).
- Complete the Free Application for Federal Student Aid (FAFSA) at [fafsa.ed.gov](http://fafsa.ed.gov) and use 001707 for Lewis' school code.
- If your FAFSA application is selected for verification, Lewis will request additional documentation (IRS tax transcript, verification of child support, etc.). The IRS Data Retrieval process provides the easiest way to meet these requirements.
- Within two weeks upon acceptance to Lewis and completion of the FAFSA, notification of financial aid eligibility will be mailed to your address on file. Simply follow the steps outlined in the packet.
- If you're awarded financial aid, you must complete the Entrance Counseling and Direct Stafford Loan Promissory Note (MPN) upon receiving your Financial Aid Award Letter.

If you have any questions about the types of financial aid you may qualify for, contact our Financial Aid office at (815) 836-5135 or [fnaid@lewisu.edu](mailto:fnaid@lewisu.edu).

## Questions?

Call **(815) 836-5610** or e-mail [\*\*grad@lewisu.edu\*\*](mailto:grad@lewisu.edu)

# Lewis University

*Mission Statement:* Guided by its Catholic and Lasallian heritage, Lewis University provides to a diverse student population programs for a liberal and professional education grounded in the interaction of knowledge and fidelity in the search for truth. Lewis promotes the development of the complete person through the pursuit of wisdom and justice. Fundamental to its Mission is a spirit of association which fosters community in all teaching, learning, and service.

## A Welcoming Campus

The Lewis main campus in Romeoville, Illinois, is a picturesque 410-acre setting which houses 1,300 students in 12 residence halls, all within walking distance of well-equipped classrooms, the library, the JFK Recreation and Fitness Center, the Student Union, and the Sancta Alberta Chapel. Lewis suburban campuses are located in Oak Brook, Tinley Park, and Hickory Hills. Additionally, classes are offered at numerous sites throughout the Chicagoland area and in Albuquerque, N.M. Illinois campuses are easily accessible to corporate offices in Chicago and the suburbs, making it easy for students to complete professional internships.

## Enrollment

Lewis currently has 6,500 undergraduate and graduate students. Many are from the Chicago region, with international students representing nearly 30 different countries.



## Outstanding Academic Choices

Located in the Midwest, Lewis University is a comprehensive, Catholic university, where the traditions of liberal learning, values and preparation for professional work come together with a synergy that gives the university its educational identity and focus. Founded in 1932, Lewis is a dynamic, coeducational university offering nearly 80 undergraduate majors and programs of study, 35 graduate programs, and certificates of advanced study. Lewis is one of many schools sponsored by the De La Salle Christian Brothers, an international Roman Catholic teaching order.

## Experienced Faculty

Lewis has more than 200 full-time faculty members who take their students' personal and professional success to heart. The majority hold terminal degrees in their fields. Many are experienced practitioners. The student/faculty ratio is 13:1.

## Accreditation

Lewis University is accredited by, and a member of, the Higher Learning Commission.

*Information contained herein is subject to change without notice. Lewis University reserves the right to revise, supplement, or rescind its contents at any time.*



**Convenient Campus Locations Close to Home and Work**

**Main Campus**

One University Parkway  
 Romeoville, IL 60446  
 (815) 836-5610  
[grad@lewisu.edu](mailto:grad@lewisu.edu)

**Hickory Hills Campus**

9634 S. Roberts Road  
 Hickory Hills, IL 60457  
 (708) 233-9768

**Oak Brook Campus**

1111 W. 22nd Street  
 Suite 700  
 Oak Brook, IL 60523  
 (630) 573-1740

**Tinley Park Campus—  
 North Creek Executive  
 Center**

18501 Maple Creek Drive  
 Tinley Park, IL 60477  
 (708) 444-3180

**For More Information**

[grad@lewisu.edu](mailto:grad@lewisu.edu)

(815) 836-5610

Fax (815) 836-5578

*Note: Not all programs are offered at all campuses. See your counselor or academic advisor for details.*



**Office of Graduate Admission**  
 One University Parkway  
 Romeoville, IL 60446-2200  
 (815) 836-5610