Graduate Study and Research

HISTORY

Lehigh began awarding graduate degrees in 1882. The first recipient, T.H. Hardcastle, of the Class of 1880, wrote his thesis on Alexander Pope, entitled it The Rights of Man, and read it aloud at commencement in June 1882.

The first Ph.D. was granted in 1893 to Joseph W. Richards, Class of 1886. Richards, who had a background in metallurgy and electrochemistry, taught at Lehigh until his death in 1921.

Women were admitted to the graduate program in 1918 when the faculty and the board of trustees agreed to grant the degrees of M.A. and M.S. to women, provided they attended classes in the late afternoon and on Saturdays "so that the general character of campus life shall not be affected." Three women received graduate degrees in 1921, the first women to complete graduate work at Lehigh. In 1929, the rule was changed, and women were admitted on much the same basis as men.

In 1936, the Graduate School was established to administer the graduate program. The Ph.D., which was temporarily discontinued in 1894, was reinstated in nine departments: chemistry, chemical engineering, civil engineering, geology, history, mathematics, mechanical engineering, metallurgical engineering, and physics. Tomlinson Fort, professor of mathematics, was selected in 1938 as the first dean of the Graduate School.

In 1995, graduate programs were decentralized and are now administered by the individual colleges of the university, as described below.

CREDIT HOURS

Each course is designated a credit value of the course in terms of semester hours ("credit hours").

COURSE NUMBERING

The course numbering system specifies which courses can be applied to the program of study as the student progresses toward the undergraduate or graduate degree. In general, the numbering series is as follows:

- 0-99. Courses primarily for freshmen or sophomores. Not available for graduate credit.
- **100-199**. Intermediate-level undergraduate courses. Not open to freshmen except on petition. Not available for graduate credit.
- 200-299. Advanced undergraduate courses. Courses in the College of Business and specific departments as noted in the listings are open to freshmen and sophomores only with permission. Not available for graduate credit in the major field.
- **300-399**. Advanced undergraduate courses. Same as 200-299, but available for graduate credit in major field.
- **400-499**. Graduate-level courses, open to undergraduates only by petition.

COLLEGE OF ARTS AND SCIENCES

Robert A. Flowers, Herbert and Ann Siegel Dean

R. Michael Burger, Associate Dean for Research and Graduate Programs, Professor of Biological Science

The College of Arts and Sciences offers graduate degrees in the humanities, social sciences, mathematics, and natural sciences. The master of arts, master of science, and the doctor of philosophy degrees are given in most of the traditional academic departments and in some interdisciplinary programs. Advanced degrees may be obtained in the departments of biological sciences, chemistry, earth and environmental sciences, English, history, mathematics, physics, political science, psychology, statistics, and an interdisciplinary degree in Environmental policy.

Although degree requirements vary from department to department, most require a combination of formal coursework and independent research. Students work closely with a faculty adviser in formulating and carrying out their research programs. Students admitted to a traditional department who are interested in an interdisciplinary approach may design a program of study and research which draws on faculty and facilities in other areas of the college or university.

Certificate programs (http://catalog.lehigh.edu/

coursesprogramsandcurricula/ interdisciplinarygraduatestudyandresearch/graduatecertificates/) are also available in many areas of study.

For the most up to date information, interested students should check the CAS graduate website (https://cas.lehigh.edu/graduate (https://cas.lehigh.edu/graduate/)) or contact the Office of Research and Graduate Programs, College of Arts and Sciences, 9 West Packer Ave., Bethlehem, PA. 18015, 610-758-4280 or email to incasgrd@lehigh.edu.

COLLEGE OF BUSINESS

Manoj K. Malhotra, Dean

Xiaosong (David) Peng, Associate Dean

The College of Business is accredited by AASCB International; the Association to Advance Collegiate Schools of Business.

There are six departments in the college: Accounting, DATA (Decision and Technology Analytics), Economics, Perella Department of Finance, Management, and Marketing.

Information on the college's graduate programs may be obtained by visiting the College of Business graduate website (https:// business.lehigh.edu/graduate/).

Specialty Master's Degrees

The College of Business offers STEM-designated specialty master's degrees in Applied Economics (https://business.lehigh.edu/academics/graduate/masters-programs/ms-applied-economics/), Business Analytics (https://business.lehigh.edu/academics/graduate/masters-programs/ms-business-analytics/), and Management (https://business.lehigh.edu/academics/graduate/masters-programs/ms-business-analytics/), and Management (https://business.lehigh.edu/academics/graduate/masters-programs/ms-management/). A dual degree program (https://business.lehigh.edu/academics/graduate/masters-programs/ dual-degree/) for these 3 programs is available and allows the completion of two degrees in two years. Lehigh undergraduate students may opt for a 4+1 program (https://business.lehigh.edu/academics/graduate/masters-programs/ms-applied-economics/accelerated-program/) that would allow the M.S. in Applied Economics degree to be completed in an accelerated mode.

The College of Business, the P.C. Rossin College of Engineering and Applied Science, and the College of Arts and Sciences offer a master of science degree in Financial Engineering (https:// business.lehigh.edu/academics/graduate/masters-programs/ ms-financial-engineering/), which provides a strong education in advanced finance and quantitative financial analysis tools. Students will be prepared to create innovative solutions for real financial problems using state-of-the-art analytical techniques and computing technology. Lehigh undergraduate students may opt for a 4+1 program (https://business.lehigh.edu/academics/graduate/mastersprograms/ms-financial-engineering/accelerated-program/) that would allow the M.S. in Financial Engineering degree to be completed in an accelerated mode.

Master's of Business Administration (MBA)

The master of business administration (MBA) allows full-time or part-time study. The one-year, full-time MBA program (https:// business.lehigh.edu/academics/graduate/masters-programs/one-yearmba/) is available with concentrations in business analytics, financial management, marketing, and supply chain management. The parttime FLEX MBA program (https://business.lehigh.edu/academics/ graduate/masters-programs/flex-mba/) offers courses on campus or **online** in a synchronous format and is available with concentrations in business analytics, corporate entrepreneurship, finance, marketing, international business, public health, project management, and supply chain management.

In addition, the College of Business and the P.C. Rossin College of Engineering and Applied Science offer an MBA and Engineering (https://business.lehigh.edu/academics/graduate/masters-programs/ flex-mba/mba-engineering/) degree. Students in this program will have the opportunity to concentrate in both a business area and an engineering area during their studies.

The College of Education and the College of Business offer a joint master's degree in MBA and Educational Leadership (https:// business.lehigh.edu/academics/graduate/masters-programs/flex-mba/mba-educational-leadership/), which will develop skills in business disciplines and prepare educators for roles in school administration.

Doctor of Philosophy (Ph. D.)

The STEM-designated doctor of philosophy degree in Business and Economics (https://business.lehigh.edu/academics/graduate/phd-program/business-and-economics/) is also available. This full-time program can be completed in 5 years. All students accepted into the Ph.D. program are offered funding packages, subject to satisfactory progress, that guarantee four academic years of tuition remission and a monthly stipend (9-month per year) to cover living expenses. Though not guaranteed, almost all students in the past also received funding in their fifth year.

Contact Us

College of Business, Graduate Programs Office Business Innovation Building, Suite 201 201 E. Packer Avenue, Bethlehem, PA. 18015 Phone 610-758-4450 / Email business@lehigh.edu

COLLEGE OF EDUCATION

Robin Hojnoski, PHD, Acting Dean

Bridget V. Dever, PHD, Associate Dean for Research

L. Brook Sawyer, PHD, Associate Dean for Graduate Studies

The College of Education is a nationally recognized graduate college. Our distinction resides in our ability to function as a community of scholars and teachers. The diversity of our partnerships, the quality of our research and teaching, and the invigorating and supportive learning environment distinguish us as leaders among graduate colleges of education.

The College of Education offers a master of education, a master of science in education, the educational specialist, post-baccalaureate certificates in various concentrations, the doctor of education, and the doctor of philosophy. There are five academic programs within the college including: Counseling Psychology, Educational Leadership, School Psychology, Special Education, and Teaching, Learning and Technology. The focus of these programs is to prepare students for leadership roles in groundbreaking, cross-disciplinary inquiry that shapes educational practices nationally and internationally. While the College of Education does prepare individuals for leadership roles in school systems, we also prepare individuals for a variety of positions in business and industry, healthcare, private practice, and communitybased organizations. We embrace the philosophy that a top quality education should provide the instruction, resources, and experience necessary to create a new type of educator; one who understands the nature of learning, social equity and cultural diversity; values collaboration and teamwork; and embraces societal challenges.

In addition to these five core academic programs, there are three other units within the College of Education:

CENTENNIAL SCHOOL

Centennial School is an Approved Private School, governed by Lehigh University and funded by the Commonwealth of Pennsylvania. Centennial School meets the educational needs of students with emotional disturbance and autism as defined under the Individuals with Disabilities Education Act (IDEA). With an emphasis on evidence based practices, Centennial School effectively uses an apprenticeship model to train graduate students in special education and other school-based professions such as school psychology, counseling, and educational leadership. The close partnership between Centennial and the College of Education provides Lehigh graduate students with unique research opportunities and fulfillment of practicum and internship requirements. centennial.coe.lehigh.edu/ (http:// centennial.coe.lehigh.edu/)

THE CENTER FOR PROMOTING RESEARCH TO PRACTICE

The center's mission is to generate new knowledge that will truly impact the lives of individuals with or at risk for disabilities and to enhance the translation of new knowledge into practice. All too often research that is created for these individuals remains at the development level and is not disseminated into best practices. The Center is focused on conducting and disseminating applied research and assuring research outcomes get into the hands of parents and practitioners as quickly as possible. https://ed.lehigh.edu/research/center-promoting-research-practice (https://ed.lehigh.edu/research/center-promoting-research-practice/)

Lehigh University Autism Services is a clinic housed in the Center for Promoting Research to Practice. The mission of the clinic is to develop and disseminate research-based practices that improve the well-being of children with autism and their families and to serve the local community. The clinic provides intervention programs for young children with autism spectrum disorders (diagnosis to age 5) and their families. https://ed.lehigh.edu/research/lehigh-university-autismservices

GLOBAL PROGRAMS

The Global Programs provides online graduate education and training to students in the U.S. and worldwide within Lehigh University's College of Education. The Global Programs offer graduate degree programs, non-degree graduate certificates, and summer institutes via online courses and in-person throughout the academic year. Global initiatives include identifying research opportunities globally, facilitating partnerships with domestic and international professional organizations, and organizing customized professional development programs at K-12 international schools worldwide. For more information, visit: https://ed.lehigh.edu/about/global-programs

Information on the various degree programs can be obtained by contacting the College of Education, 111 Research Dr., Bethlehem, PA 18015, 610-758-3231 or visiting our website: http://ed.lehigh.edu/.

COLLEGE OF HEALTH College Leadership

Elizabeth A. Dolan, Dean

Won Choi, Associate Dean for Research and Graduate Education Micheal Gusmano, Associate Dean for Academic Affairs Erica Hoelscher, Associate Dean for Faculty and Staff

CONTACT INFORMATION

Health | Science | Technology Building College of Health Administrative Suite 124 East Morton Street 610.758.1800 | incoh@lehigh.edu website: health.lehigh.edu (https://health.lehigh.edu/) social: LehighUhealth

GRADUATE PROGRAMS

College of Health graduate programs equip students to understand and appropriately improve the health and well-being of populations and communities locally, nationally, and globally. Students investigate and address the multiple determinants of health through technologyand data-driven research and community partnership in all College of Health graduate programs. We empower our graduate students to shape the future by improving the health of populations.

- Ph.d. population health
- master of Public health (mph)
- graduate certificate in global population health
- · graduate certificate in population health
- 4+1 accelerated master of public health (mph)
- +1 master of engineering in health systems engineering (with the p.c. rossin college of engineering & applied science) (http://catalog.lehigh.edu/coursesprogramsandcurricula/ engineeringandappliedscience/industrialandsystemsengineering/ #graduatetext)
- flex mba with public health concentration (with the college of business) (http://catalog.lehigh.edu/coursesprogramsandcurricula/ businessandeconomics/businesseconomicsgraduatecourses/)

P.C. ROSSIN COLLEGE OF ENGINEERING AND APPLIED SCIENCE Stephen P. DeWeerth, dean Derick Brown, associate dean for undergraduate education

Kristen Jellison, associate dean for faculty development

Mayuresh Kothare, associate dean for research

Mark Snyder, associate dean for graduate education

Susan Perry, assistant dean for academic affairs

The P.C. Rossin College of Engineering and Applied Science offers numerous opportunities for graduate study (https:// engineering.lehigh.edu/academics/graduate/programs/), both at the master's as well as the doctoral level. Both research-focused, as well as course-only options exist. Degree programs span both disciplinary areas within the academic departments, as well as interdisciplinary areas (https://catalog.lehigh.edu/coursesprogramsandcurricula/ interdisciplinarygraduatestudyandresearch/). Many programs can be taken part-time or through distance education. See this page for more details: https://engineering.lehigh.edu/academics/graduate/ programs (https://engineering.lehigh.edu/academics/graduate/ programs/).

In cooperation with the College of Business, students can also pursue a Master of Business Administration and Engineering (MBA&E) degree.

Certificate programs (https://catalog.lehigh.edu/

coursesprogramsandcurricula/

interdisciplinarygraduatestudyandresearch/

graduatecertificatesengineering/) are also available in multiple areas of study.

Graduate study in the P.C. Rossin College of Engineering and Applied Science is most often related to the college's extensive research and scholarship activity. Students pursuing researchbased graduate degrees are expected to engage in analytical or experimental research as part of their programs of study. This activity involves students in the process of creating new knowledge under the direction of the college's distinguished faculty and brings them into contact with some of the most modern and advanced experimental techniques. Many college research programs are supported by contracts, fellowships, and grants from industry and from federal, state, and local governments. This funding not only provides financial support for outstanding students but also allows them to deal with some of the more complex and pressing problems facing our society in the 21st century.

Many faculty members and graduate students in the P.C. Rossin College of Engineering and Applied Science are associated with interdisciplinary research centers and institutes as well their own departments. The opportunity for interdisciplinary study allows them to cross departmental lines in specific technological areas and to work with faculty and graduate students from other departments. Information on current research activities can be found at URL https:// engineering.lehigh.edu/research (https://engineering.lehigh.edu/ research/), as well on on departmental pages.

Further information on the graduate programs may be obtained through the Office of Graduate Studies and Research, P.C. Rossin College of Engineering and Applied Science, 19 Memorial Drive West, Bethlehem, PA 18015, or at engineering@lehigh.edu.