

GRADUATE STUDY

NORTHWESTERN

ENGINEERING

Northwestern | McCORMICK SCHOOL OF
ENGINEERING

WE ARE WHOLE-BRAIN THINKERS

SEEING SIMPLICITY IN THE COMPLEX,
THE COMPLEXITY OF THE SIMPLE.

WE ARE WHOLE-BRAIN ENGINEERS,

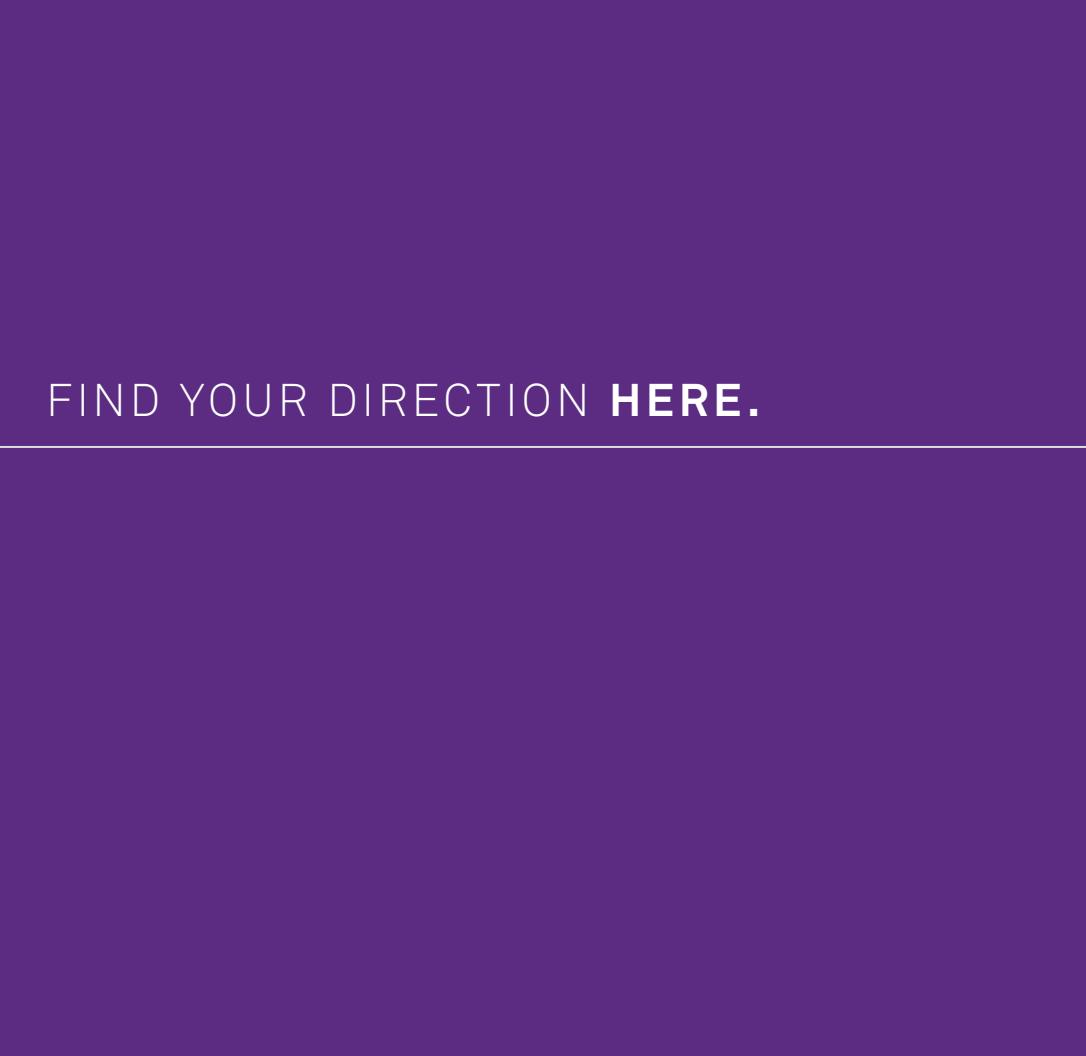
BIG-PICTURE THINKERS, REAL-TIME
COLLABORATORS, ALL-OUT INNOVATORS.



WE ARE TAKING THE WORLD IN A WHOLE NEW DIRECTION.

Driving progress through **innovation** and **leadership**.

Turning research into patented processes and
life-changing inventions. Bringing products to market
with smart **risk-taking and entrepreneurship**.



FIND YOUR DIRECTION **HERE**.



GRADUATE STUDY AT NORTHWESTERN ENGINEERING

WHOLE-BRAIN THINKING.

EMPOWERING OUR STUDENTS WITH ADVANCED ANALYTICAL AND PROBLEM-SOLVING SKILLS

Analysis. Logic. Synthesis. Math. All are elements of “left-brain” thinking, all critical to engineering success. To lead today in a world of change, engineers require more. They need “right-brain” skills. Intuition. Metaphorical thinking. Creative problem solving. At Northwestern Engineering, we celebrate whole-brain thinking and empower our students to become whole-brain engineers.

Master’s and PhD program students at Northwestern Engineering take the concept to new heights. They conduct interdisciplinary research and collaborate with peers and faculty in other highly

ranked departments and beyond. They develop leadership skills inside and outside the classroom and lab. And, they expand their career opportunities through career-focused initiatives and cross-school partnerships that expand their perspectives and strengthen business management skills.

Whatever direction our graduate students take, all develop the highly advanced analytical and problem-solving skills required to change the world for the better in material ways and to lead others to do the same.

WHOLE-BRAIN ENGINEERS.

PURSUING ADVANCED DEGREES ACROSS A WIDE RANGE OF PROGRAMS

At every level in every program of study, Northwestern Engineering students constantly advance in their development as whole-brain engineers. Graduate students choose from an array of master's and doctoral programs aligned with their career goals and personal passions. Master's degree programs—full- and part-time—are designed to meet ever-changing industry and research environments. Doctoral candidates work side-by-side with world-class faculty across disciplines researching advanced topics in engineering.

FULL-TIME MS PROGRAMS

Analytics ✕ Biomedical engineering ✕ Biotechnology ✕
Chemical and biological engineering ✕
Civil and environmental engineering ✕ Electrical engineering
and computer science ✕ Engineering design and innovation ✕
Engineering management ✕ Engineering sciences and
applied mathematics ✕ Information technology ✕
MMM (dual degree) ✕ Materials science and engineering ✕
Mechanical engineering ✕ Product design and
development management ✕ Project management ✕
Robotics ✕ Theoretical and applied mechanics ✕

PART-TIME MS PROGRAMS

Engineering management ✕ Executive management
for design and construction ✕ Information technology ✕
Product design and development management ✕
Project management ✕

In addition to the programs listed above, part-time tracks are available for most full-time MS programs.

PHD PROGRAMS

Applied physics ✕ Biomedical engineering ✕ Chemical and
biological engineering ✕ Civil and environmental engineering ✕
Electrical engineering, computer engineering, and
computer science ✕ Engineering sciences and applied
mathematics ✕ Industrial engineering and management
sciences ✕ Materials science and engineering ✕
Mechanical engineering ✕ Technology and social behavior ✕
Theoretical and applied mechanics ✕

WHATEVER DIRECTION OUR GRADUATE
STUDENTS TAKE, ALL DEVELOP THE HIGHLY
ADVANCED ANALYTICAL AND PROBLEM-
SOLVING SKILLS REQUIRED TO CHANGE THE
WORLD FOR THE BETTER IN MATERIAL WAYS
AND TO LEAD OTHERS TO DO THE SAME.



RESEARCHERS AND COLLABORATORS

BREAKING BARRIERS AND CREATING THE FUTURE

Northwestern Engineering's more than 180 faculty systematically confront some of the world's most pressing and complex challenges in systems, materials, health and wellness, energy, and the environment. Our interdisciplinary collaboration is exemplified by ongoing research initiatives with more than 20 other departments in our extended Northwestern family and dozens of other universities and research centers worldwide.

While the majority of University research funding comes from government sources, corporate-sponsored research represents a growing opportunity for professors.



MAJOR CENTERS INCLUDE:

- Northwestern-Argonne Institute for Science and Engineering
- Center for Quantum Devices
- Institute for Sustainability and Energy
- International Institute for Nanotechnology
- Materials Research Science and Engineering Center
- Northwestern Institute on Complex Systems
- Segal Design Institute
- Transportation Center

CAREER-FOCUSED PROFESSIONALS

PREPARING FOR SUCCESS IN BUSINESS, INDUSTRY, AND ACADEMIA

Northwestern Engineering is committed to preparing students for successful careers as leaders and researchers in business, industry, and academia. The Engineering Career Development office identifies and works with students to secure internship opportunities and provides other career advancement services. For doctoral students, Management for Scientists and Engineers, an eight-week summer course drawn from the Kellogg School of Management core MBA curriculum, equips young researchers with the knowledge they need to become better managers and leaders.



ENTREPRENEURS AND INNOVATORS

CHANGING THE WORLD FOR THE BETTER EVERY DAY.

Northwestern Engineering students and faculty drive progress through innovation and leadership, turning research into patented processes and life-changing inventions and bringing products to market through smart risk-taking and entrepreneurship. They typically account for a lion's share of the University's inventions and faculty startups.

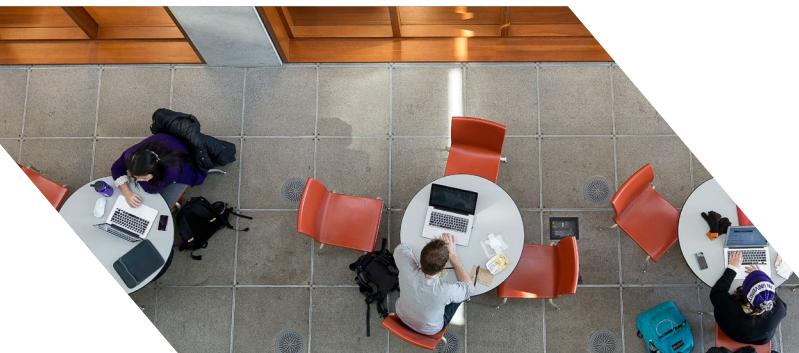
NORTHWESTERN ENGINEERING'S ENTREPRENEURSHIP RESOURCES:

The Farley Center for Entrepreneurship and Innovation provides incubators, mentorships, and seminars and encourages the ongoing development of new, interdisciplinary curricula.

NUvention courses engage interdisciplinary teams from across the University in the entire innovation and entrepreneurial life cycle, including how to transform innovations into viable business.

The Innovation and New Ventures Office (INVO) advises faculty and students on the development of research with commercial potential and provides seminars and educational programs on entrepreneurship and innovation.

The Garage provides an entrepreneurship space for Northwestern students to experiment, collaborate, and get their ideas built.





A COMMUNITY OF LEADERS

GAINING EXPERIENCE INSIDE AND OUTSIDE THE CLASSROOMS AND LAB

The Graduate Leadership Council helps solidify a graduate student community among the eight departments within Northwestern Engineering by organizing social, academic, and professional activities, and facilitates communication with the administration.

Students can also participate in the Graduate Student Association, department-centered student groups, and other student associations that promote interactions among graduate students, provide academic and social programs, and serve as student advocates, including:

Chicago Graduate Student Association (CGSA)

Black Graduate Student Association (BGSA)

Chinese Students and Scholars Association (CSSA)

Graduate Student Association for Latino and Spanish Activities (G-SALSA)

Indian Graduate Student and Scholars Association (IGSSA)

Queer Pride Graduate Student Association (QPGSA)

Turkish Intercultural Club

COLLEAGUES, FRIENDS, AND FAMILIES

LIVING AND LEARNING IN ONE OF THE WORLD'S MOST DYNAMIC METROPOLITAN AREAS

Stretching along the north shore of spectacular Lake Michigan, Northwestern's Evanston campus provides an environment conducive to serious scholarship and rich in rewarding opportunities for every lifestyle. Evanston boasts the amenities of a big city in a manageable suburban setting.

With downtown Chicago only 12 miles away and easily accessible by public transportation or the intercampus shuttle, Northwestern students have easy access to the wealth of professional sports, music, art, and cultural diversity that the nation's third-largest city offers. Northwestern's location also means unsurpassed access to major corporations, research centers, and other organizations eager to engage Northwestern Engineering students in experiential learning, internships, and careers.



GRADUATE APPLICATION INSTRUCTIONS FOR 2018

Northwestern Engineering has prepared this guide to help you navigate the sometimes complex application process for MS or PhD admission. You can also refer to each department's website for more information.

PHD APPLICATIONS

If your ultimate goal is a PhD degree, apply for admission to the PhD program of your choice. Please note that PhD program admission does not require an MS degree; very few of our new PhD students hold an MS degree. Also note that if you are not admitted to a PhD program, you may request admission for self-funded MS study.

MS APPLICATIONS

See below for information on departmental MS programs.

If you are interested in one of the following programs, please refer to the program's website for application instructions and deadlines:

Master of Science in Biotechnology Program (MBP) ▾
Master of Engineering Management (MEM) ▾ Master of Project Management (MPM) ▾ Master of Science in Information Technology (MSIT) ▾ The MMM Program ▾
Master of Science in Analytics (MSIA) ▾ Master of Product Design and Development Management (MPD) ▾
Master of Science in Robotics (MSR) ▾ Master of Science in Engineering Design and Innovation (EDI) ▾ Master of Science in Executive Management and Design Construction ▾



APPLICATION PROCESS AND DEADLINES

The online application websites open in September each year. See The Graduate School website for more details.

You can begin your application in early September. During the process you can save your work and then delay submission of the application and application fee until closer to the deadline.

The application deadline for most PhD programs will be December 15. The deadline for engineering sciences and applied mathematics is January 5.

MS application deadlines vary by program. Please refer to departmental and program websites for specific MS application deadlines.

SUPPORTING MATERIALS FOR APPLICATIONS

TEST SCORES

Applicants can use the ETS system to send GRE and TOEFL scores (if TOEFL is required for you) to Northwestern University (ETS code 1565).

Northwestern will accept scanned copies of score reports with the online application and verify those scores with ETS.

The minimum Internet-based TOEFL scores are 90 for PhD applicants and 80 for MS applicants in most programs. Higher TOEFL scores may be required for some MS programs. Please see departmental websites for that information. A score of 7.0 may also be used from the IELTS.

RESUME/CV AND STATEMENT OF PURPOSE

Please include your resume/CV and statement of purpose with the online application.

TRANSCRIPTS

Applicants upload unofficial transcripts with the online application.

Official transcripts will be required only for new students who enroll at Northwestern. Those will be collected in the summer months.

RECOMMENDATIONS

All recommendations should be submitted through the online process. Two or three recommendations are required depending on the program.

Please do not have your references send hard copies by mail.

ONCE YOU HAVE APPLIED

During the application process, you will work with the departmental graduate program assistant to complete your application file. You will also be able to track your status online in the application system.





ONCE YOU HAVE BEEN ADMITTED

PhD programs: Admitted PhD students have until April 15 to accept or decline the offer of admission. Those residing in the United States are invited to campus in late winter. Northwestern Engineering will help defray expenses for your travel to Evanston.

MS programs: Admitted MS students will receive specific acceptance deadline information from their department or program.

FUNDING

PhD programs: Northwestern Engineering fully funds PhD students with paid tuition, paid health insurance, and a monthly stipend. After admission, PhD applicants will receive a formal PhD funding offer letter.

MS programs: Northwestern Engineering generally does not fund MS students. To help make sure that all of our master's degree students can fund their educations regardless of personal financial circumstances, Northwestern Engineering provides opportunities for access to a variety of federal and private loan and funding options. (See end of the brochure for more financial aid information.)

NEED ASSISTANCE? HAVE A QUESTION?

Please feel free to contact the graduate program assistant for your chosen program or Bruce A. Lindvall, assistant dean for graduate studies:

Bruce A. Lindvall
2145 Sheridan Road, Suite L-261
Evanston, IL 60208-3103
Phone 847-491-4547
b-lindvall@northwestern.edu

APPLICATION CHECKLIST

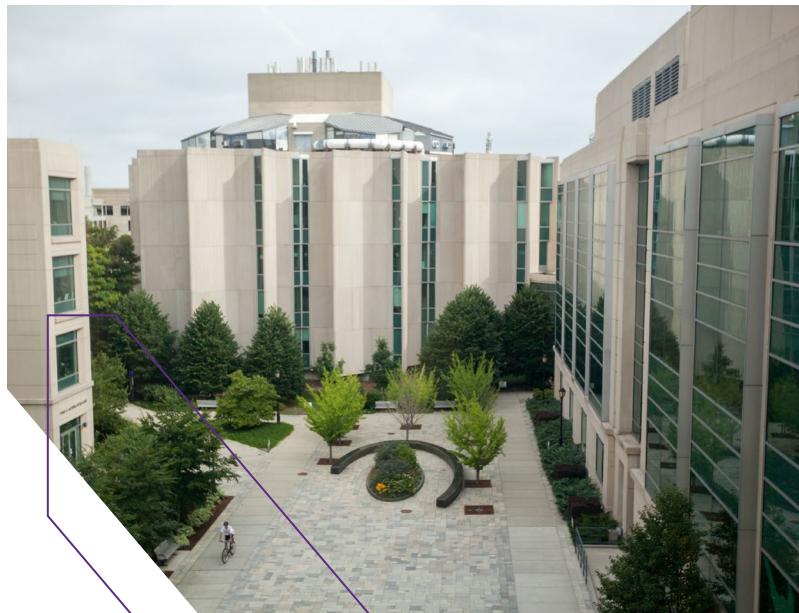
Please check with your specific program for specific instructions.

- Complete online application

INCLUDE WITH ONLINE APPLICATION

- Recommenders' contact information
- Resume/CV
- Statement of purpose
- Unofficial transcripts
- GRE scores
- TOEFL scores (if required; if English was the language of instruction at the institution where you received your bachelor's or master's degree, then the TOEFL requirement is waived.)
- IELTS scores (as an alternative to TOEFL scores)

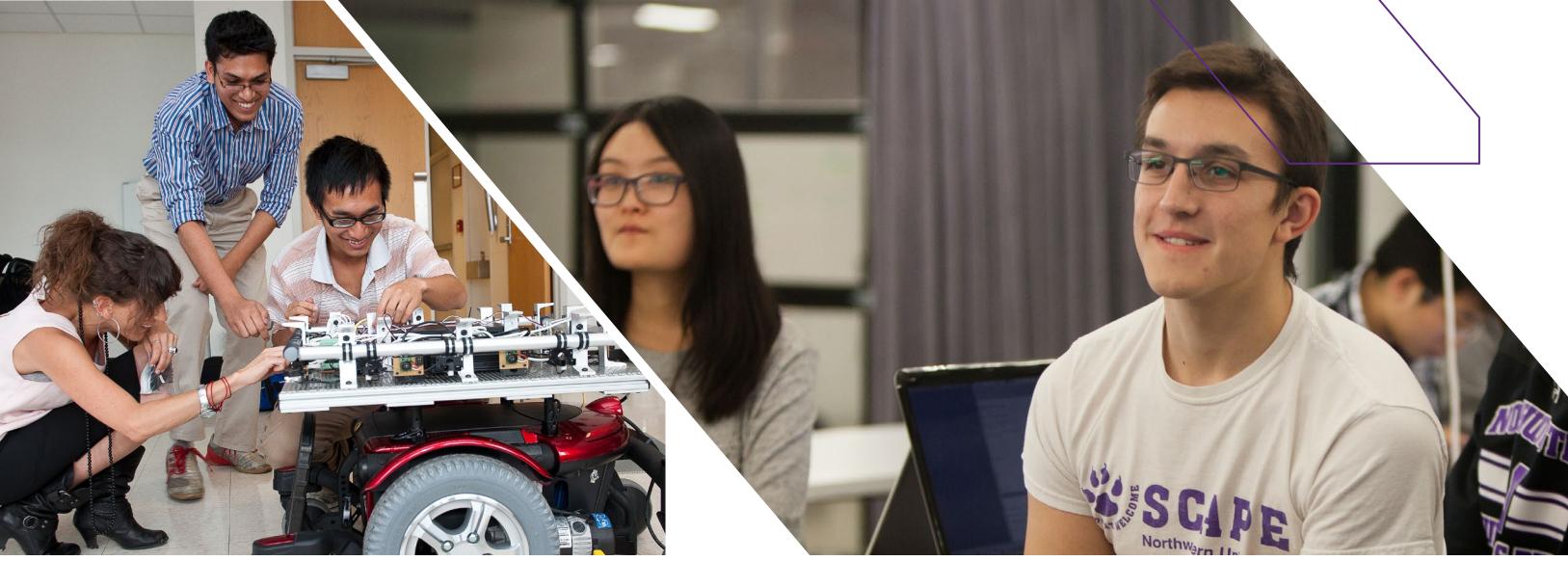
Do not send hard copies of materials that have been submitted electronically. It slows the processing of your application.





MASTER OF SCIENCE IN ELECTRICAL ENGINEERING & COMPUTER SCIENCE

THE DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (EECS), the largest department at Northwestern Engineering with 52 full-time faculty members and 265 graduate students, offers graduate degree programs in electrical engineering, computer engineering, and computer science. The department's internationally renowned and award-winning faculty, many of whom are members of prestigious scholarly societies, are deeply committed to their students. The department has state-of-the-art research equipment and the considerable resources of a prestigious university.



THE CORE DISCIPLINES

COMPUTER SCIENCE

Courses and research in computer science include artificial intelligence, including models of memory and reasoning, knowledge representation, natural language understanding, planning, and problem solving; human computer interaction; distributed interactive systems; theoretical computer science, focusing on algorithm design and analysis; “frictionless” proactive context and task-sensitive information retrieval systems; distributed and real-time systems, networks, performance analysis, prediction and scheduling, Internet, and grid application development; and computer graphics and human computer interfaces for spatial applications, visualization, and computer entertainment.

COMPUTER ENGINEERING

Courses and research in computer engineering include computer systems, computer architecture, distributed and parallel systems, parallel processing, parallel algorithms, computer networks, hardware software interaction, VLSI design, embedded systems, numerical analysis, systems simulation, robotics, neural networks, switching networks, and large-scale systems.

ELECTRICAL ENGINEERING

Courses and research in electrical engineering include solid-state devices; quantum electronics; electronic materials; fiber optics; lasers; optical materials; nanophotonics; spintronics; microwave and electromagnetic theory; computational electromagnetics; communication systems and networks; information theory and coding; detection and estimation theory; control and large-scale systems; digital circuits; digital signal processing; image, speech, acoustic, and tactile processing; computer vision and robotics; ultrasonics; and biomedical electronics.

ADMISSION REQUIREMENTS

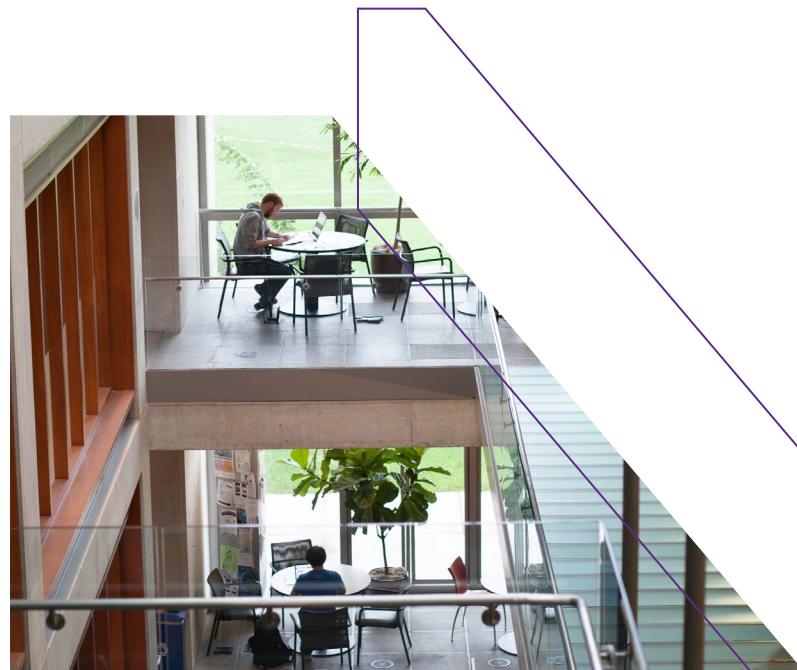
To maintain a proper balance between department resources and the size of the graduate student population, the department limits offers of admission to only the most qualified applicants. Thus the admission process is highly selective and competitive in nature.

Faculty whose research interests fall into the area of specialization of the applicant perform the initial evaluation of each application. A typical applicant is expected to have a BS in electrical engineering, computer engineering, computer science, or a related discipline from a recognized institution. Highly qualified candidates with other academic backgrounds may also be considered.

The specific undergraduate preparation required for graduate study depends on the program and the area of specialization. An applicant who has insufficient undergraduate preparation in a particular area, but is well qualified in every other respect, may be required to take certain undergraduate courses as soon as possible after enrolling at Northwestern. Such students are informed of this requirement at the time of admission.

PROGRAM REQUIREMENTS

At least 12 units of graduate study are required for the MS degree. Typically, one unit of credit corresponds to a one-quarter course. All course work for the MS degree must be taken within the Northwestern University Graduate School and must be completed within five years of enrollment. Every MS student is required to take at least three relevant courses at the 400 level.



In addition to course work, students working toward an MS degree in electrical engineering and computer engineering or computer science must choose one of the following plans and obtain approval from their adviser:

PLAN A (THESIS MS)

Students must write an MS thesis for which they may receive two or three units of research credit 590. This can be counted toward the 12-unit requirement for the MS degree. The student's MS examination committee must approve the thesis.

PLAN B (PROJECT MS)

Students must complete a project and write a project report for which they will receive one or two units of research credit 590, which can be counted toward the 12-unit requirement for the MS degree. The difference between an MS thesis and an MS project is that the thesis normally has substantial original research results, while a project contains results based on existing theory or techniques. The student's MS examination committee must approve the project report.

PLAN C (COURSE MS)

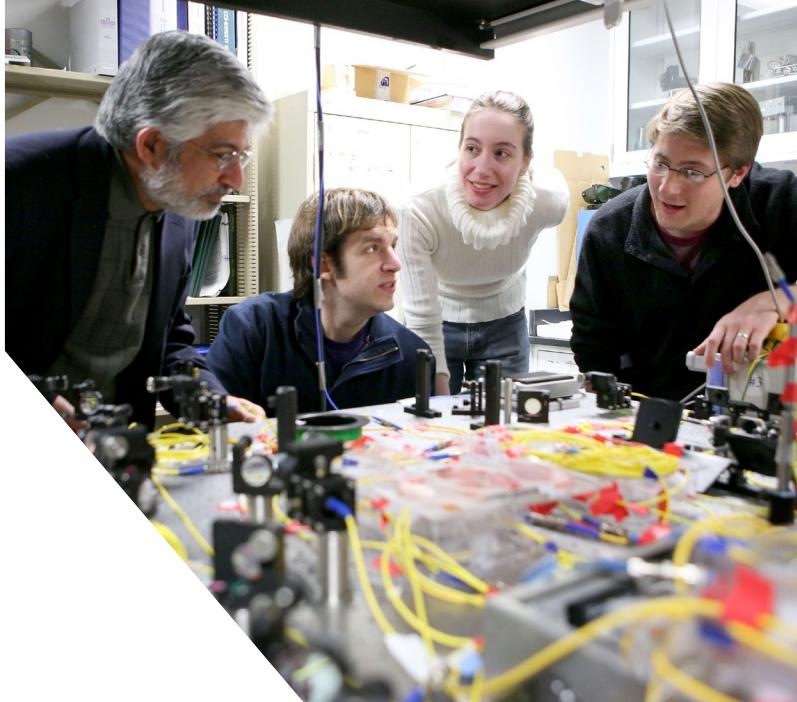
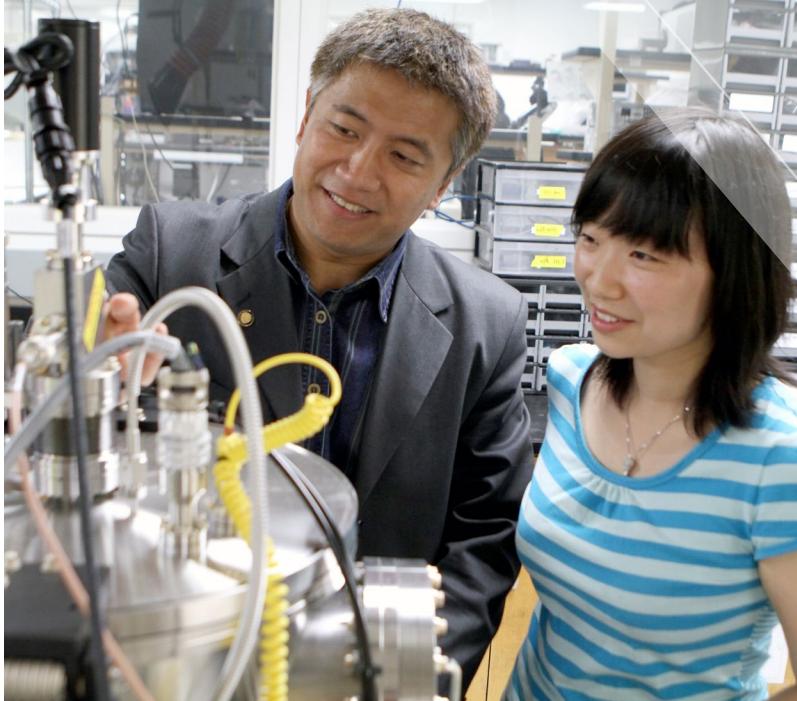
Students must take 12 courses approved by the student's adviser. The choice of courses must represent a coherent program of study that prepares the student for advanced work in a specific field. An MS examination committee evaluates the student's performance in the course work. Not all programs allow this option.

PROGRAM PLANNING

Each student is assigned an initial program adviser who will assist with planning for the first quarters of study. Students are encouraged to find a permanent research adviser by the end of the first quarter. The research adviser serves as the student's primary contact with the department for the remainder of the program and should be chosen to match the student's research interests. Each student completes a study plan, which is approved by the adviser prior to registration and updated with any program changes and grades each quarter.

The normal full-time program of graduate study is three units per quarter. The maximum permitted is four. All students who receive fellowships, research assistantships, or teaching assistantships must register as full-time students.

For the convenience of graduate students who wish to pursue their MS studies in the department on a part-time basis, the department schedules certain courses in the late afternoon. However, it may not be possible to take all required courses for the MS degree in late-afternoon time slots. For further information, contact the associate chair for graduate affairs.



AREAS OF RESEARCH EXCELLENCE

COGNITIVE SYSTEMS (COGSYS)

The cognitive systems division conducts computational research on how minds work and creates systems for education, performance



THE DEPARTMENT HAS STATE-OF-THE-ART RESEARCH EQUIPMENT AND THE CONSIDERABLE RESOURCES OF A PRESTIGIOUS UNIVERSITY.

support, and entertainment that exploit principles of cognitive science and artificial intelligence.

Research areas include:

Agent-based modeling ✕ Analogical reasoning and learning ✕
Auditory user interfaces ✕ Autonomous agents for interactive entertainment ✕ Case-based reasoning and instruction ✕
Cognitive simulation ✕ Design thinking ✕ Embodied conversational agents ✕ Human-computer interaction ✕ Intelligent information systems ✕ Intelligent user interfaces ✕ Qualitative reasoning ✕ Learning by reading ✕ Music cognition ✕ Natural language processing ✕ Sketch understanding ✕ Spatial reasoning and learning ✕ Web-scale knowledge harvesting ✕

FACULTY

Ken Forbus (division head) ✕ Brenna Argall ✕ Larry Birnbaum ✕
Douglas Downey ✕ Darren Gergle ✕ Kristian Hammond ✕
Lawrence Henschen ✕ Michael Horn ✕ Ian Horswill ✕ Bryan Pardo ✕
Christopher Riesbeck ✕ Uri Wilensky ✕ Haoqi Zhang ✕

COMPUTER ENGINEERING

Areas of study in computer engineering and systems fall into five main categories:

Analysis and design of integrated circuits ✕ Computer Aided Design, design verification, integrated circuit synthesis, physical design of integrated circuits, analog and mixed signal circuits

Computer architecture ✕ Application-specific programmable processors, power-aware microarchitectures, reconfigurable architectures, and reliable high-performance processor design

High-performance and parallel computing ✕ Compilers and applications, high-performance storage and parallel I/O, and ultra-scale architectures and software

Embedded systems ✕ Embedded system synthesis; mobile, wireless, and ubiquitous computing; operating systems; and power optimization

Data management and analysis ✕ Data mining and knowledge discovery

FACULTY

Gokhan Memik (division head) ✕ Alok Choudary ✕ Nikos Hardavellas ✕ Russ Joseph ✕ Seda Ogrenci Memik ✕ Morteza Rahimi ✕ Alan Sahakian ✕ Goce Trajcevski ✕ Chi-Haur Wu ✕ Hai Zhou ✕

COMPUTING, ALGORITHMS AND APPLICATIONS (CAA)

This division focuses on algorithms, theory, applications, and software and hardware implementation. Algorithmic research focuses on continuous and discrete optimization, game theory, database algorithms, networking, and VLSI CAD. Theoretical analysis centers on complexity, well-posedness, and convergence rates.

Applications fall into three main categories:

Computational economics, social networks, and computational finance

Bioinformatics, self-assembly, weather and climate modeling, electrical power networks, and medical imaging

Computer science/engineering applications such as security, networking, integrated circuits, and database systems

The division produces both public domain and commercial software for optimization and validates algorithms for networking, security, and VLSI using hardware implementations. A unifying theme in the

division is the use of advanced mathematical analysis and algorithmic thinking to explore novel applications in science, economics, and engineering.

FACULTY

Ming-Yang Kao (division head) ▾ Yan Chen ▾ Jason Hartline ▾
Peter Scheuermann ▾ Allen Taflove ▾ Goce Trajcevski ▾ Hai Zhou ▾

GRAPHICS AND INTERACTIVE MEDIA (GIM)

GIM is an interdisciplinary group involved in the human-centered design of computational media systems. GIM brings faculty from computer science, communication science, design, learning sciences, psychology, and radio/television/film to study not only the machine itself but also human users and their closed-loop interactions with the machine. Students in GIM combine computer science with theoretical and experimental techniques from the behavioral sciences and the arts to build systems with more effective closed-loop behavior. Areas of study include:

Audio processing ▾ Musical and linguistic prosody, sound-source separation, audio search engines

Computer graphics ▾ Computational photography, procedural animation and motion synthesis, human and machine perception, digital archiving

Design and human-computer interaction (HCI) ▾
Computer-supported cooperative work (CSCW), computer-mediated communication (CMC), computer-supported learning environments

Interactive art and entertainment systems ▾
Game design, interactive narrative, character modeling

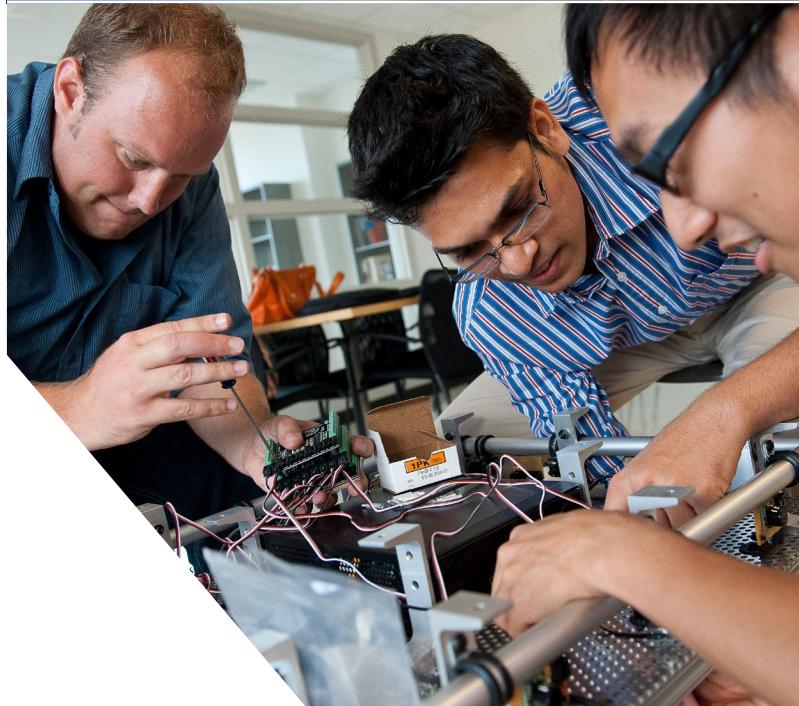
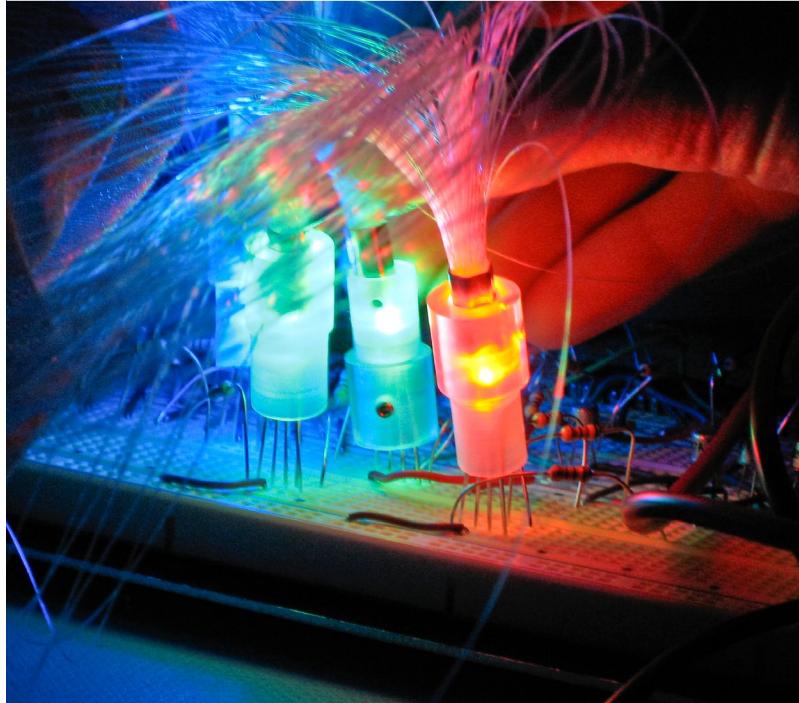
Virtual humanoids and embodied conversational agents (ECAs) ▾
Gesture and non-verbal communication, behavioral modeling, social modeling, simulation, and understanding of affect and emotion

FACULTY

Ian Horswill (division head) ▾ Larry Birnbaum ▾ Darren Gergle ▾
Kristian Hammond ▾ Michael Horn ▾ Aggelos Katsaggelos ▾
Andrew Ortony ▾ Bryan Pardo ▾ Jack Tumblin ▾
Uri Wilensky ▾ Haoqi Ahang ▾

SIGNALS AND SYSTEMS (SIGSYS)

Networks, communication, and control focus on communications, telecommunications and communication networks, and control theory. Specific areas of study include mobile wireless multi-user communication, estimation and detection, wireless networks, resource allocation in communication networks, data network protocol design, network performance modeling and analysis, nonlinear and robust control, and stochastic hybrid systems.



Signal processing focuses on the digital representation and algorithmic manipulation of speech, audio, tactile, image, and video signals. Specific topics within this general area include image and video processing, recovery and compression, multimedia signal processing; computer vision; perceptual models for visual, acoustic, and tactile signal analysis; filter design and rank-order operators; image and video transmission; medical and biomedical signal processing; and medical imaging and algorithms for medical instrumentation.

FACULTY

Alan Sahakian (division head) \x Breonna Argall \x Randy Berry \x Arthur Butz \x Randy Freeman \x Dongning Guo \x Abraham Haddad \x Michael Honig \x Aggelos Katsaggelos \x CC Lee \x Wei-Chung Lin \x Thrasos Pappas \x Jack Tumlin \x Chi-Haur Wu \x Ying Wu \x Horace Yuen \x

SOLID STATE & PHOTONICS (SSP)

Solid state engineering focuses primarily on the science and technology of semiconductors for quantum structures and devices operating from the ultraviolet up to far infrared. Quantum devices are fabricated using the most advanced semiconductor synthesis technologies (MOCVD, MBE, gas source MBE, etc.) as well as micro-fabrication techniques (high-precision photolithography, e-beam evaporation, RTA, reactive-ion-etching, etc.), and are fully tested at each step in the fabrication process using advanced characterization techniques (diffraction, SEM, TEM, photoluminescence, Hall, etc.) Most research at Northwestern is performed within the Center for Quantum Devices in a “clean room” environment similar to those found in industry.

Quantum devices are in high demand by today’s applications: ultraviolet lasers and photodetectors are used for astronomy, space communications, and the monitoring of engines and heat sources; red, green, and blue (RGB) solid-state lasers are used for high brightness full-color displays and optical data storage (CD, DVD); high power lasers and VCSELs are used for medical applications and fiber optical communications; infrared lasers, photodetectors, and focal-plane-arrays are used for chemical analysis and night vision.

Optical systems and technology focuses on micro-cavity lasers, nanostructures, quantum and nonlinear optics, integrated optics, fiber optic and infrared waveguide devices, fiber optic communications, computational electromagnetics, and imaging through turbulence. Special emphases include applications of novel quantum amplifiers in optical communications, imaging, and cryptography; devices for terabit per second WDM and TDM optical networks; and applications of computational techniques in integrated and nonlinear optics.

FACULTY

Selim Shahriar (division head) \x Koray Aydin \x Matthew Grayson \x Seng-Tiong Ho \x Prem Kumar \x Chang Liu \x Hooman Mohseni \x Manijeh Razeghi \x Horace Yuen \x

SYSTEMS

Areas of study in computer engineering and systems fall into four main categories:

Programming language design and implementation

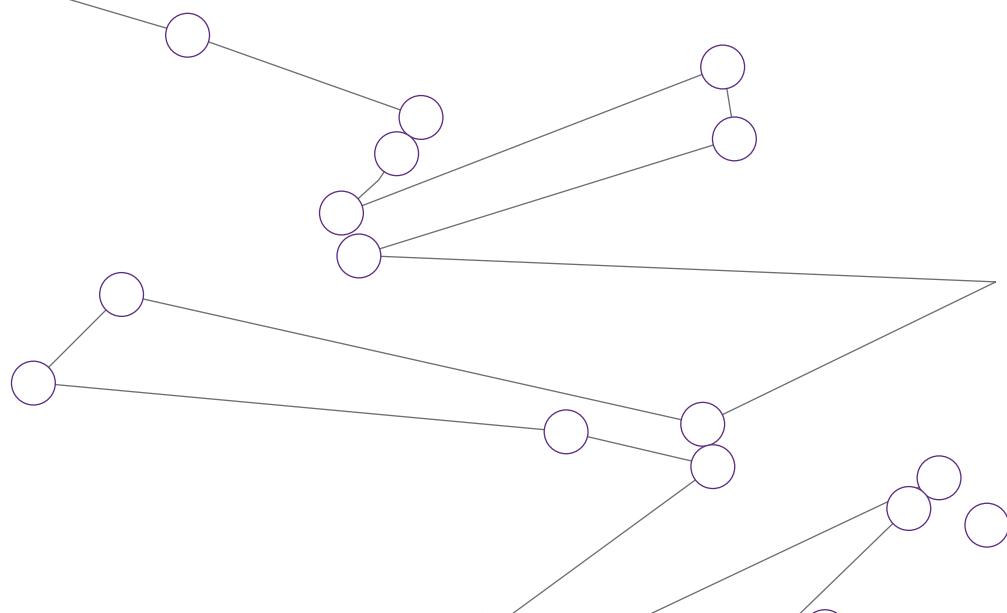
Data management and analysis \x Data mining and knowledge discovery, moving objects databases, parallel and distributed database systems, and physical database design

Security \x Network security, secure architectures, and secure software

Distributed systems and networks \x Autonomic computing; network measurement and performance analysis; network protocols and security; peer-to-peer and overlay networks; resource virtualization; and wireless, ad-hoc, and sensor networks

FACULTY

Fabian Bustamante \x Yan Chen \x Peter Dinda \x Jennie Duggan \x Robby Findler \x Aleksandar Kuzmanovic \x Peter Scheuerman \x Goce Trajcevski \x





FINANCIAL AID FOR MASTER'S DEGREE PROGRAM STUDENTS

Faculty and staff of the McCormick School of Engineering and Applied Science understands that financing a master's degree can play an important role in deciding which school you will attend. To help make sure that all of our master's degree students can fund their educations regardless of personal financial circumstances, Northwestern Engineering provides opportunities for access to a variety of federal and private loan and funding options.

The Office of Student Financial Services assists current and incoming students with these funding processes and also provides sound debt management services. You may contact the office by phone at 847-491-8950 or by e-mail at gradfinaid@northwestern.edu.

Also, note that if your ultimate goal is to pursue a PhD, you may enter PhD programs without having completed an MS degree.

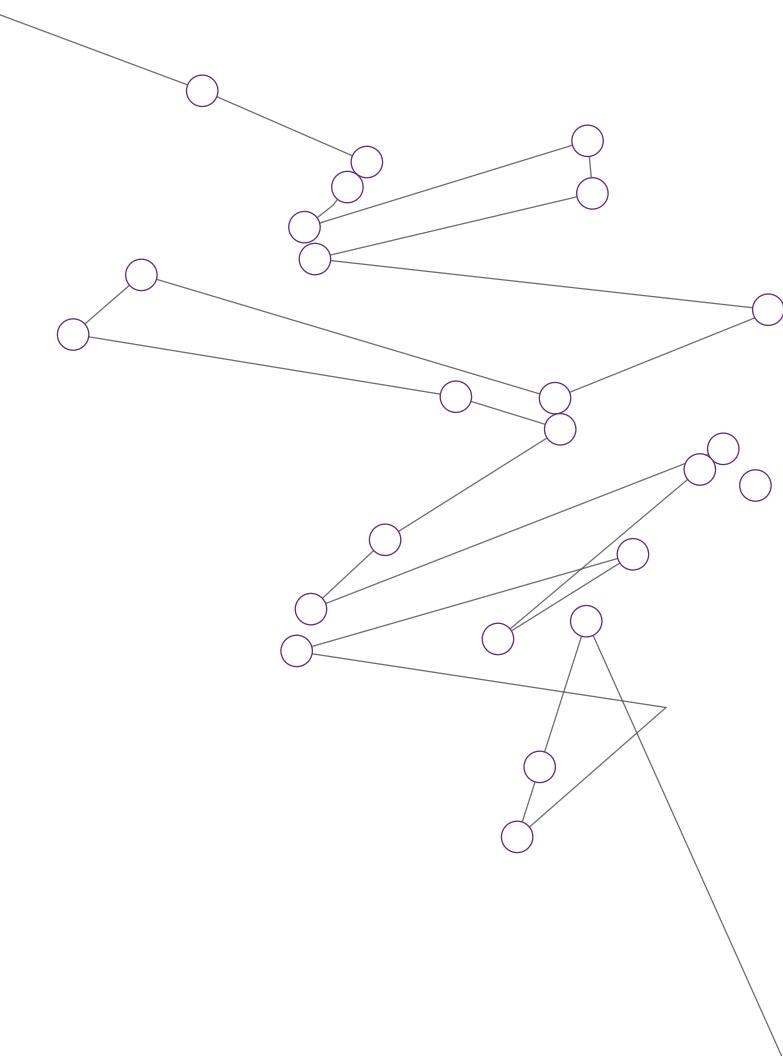
LOANS

Northwestern loan procedures, deadlines, and downloadable forms are available at:

[http://www.northwestern.edu/sfs/financial_aid/
student-loans/index.html](http://www.northwestern.edu/sfs/financial_aid/student-loans/index.html)

Private student loan comparison for students not eligible for federal loans is available at:

[http://www.northwestern.edu/sfs/financial_aid/
student-loans/private-alt/index.html](http://www.northwestern.edu/sfs/financial_aid/student-loans/private-alt/index.html)



Financial literacy, federal loan programs, loan forgiveness provisions, and repayment calculators are available at:

<http://www.northwestern.edu/financial-wellness/>

Northwestern Financial Wellness has also partnered with the non-profit organization American Student Assistance (ASA) to offer SALT, a free online program designed to help students and alumni manage their money and student loans. Learn more at:

<http://www.northwestern.edu/financial-wellness/money-101/salt.html>

TUITION

Tuition, fees, billing, and payment information is available at:

<http://www.northwestern.edu/sfs/>

SCHOLARSHIPS

Information about private outside scholarship assistance may be found at:

<http://petersons.com>

Please feel free to follow up with the Office of Student Financial Services or Bruce A. Lindvall, assistant dean for graduate studies at McCormick, at b-lindvall@northwestern.edu or at 847-491-4547, if you have questions about financing your MS degree.

