Graduate Programs in
Health Services and Outcomes Research
2022 – 2023 Student Handbook

Last Updated: June 6 2022

Northwestern | FEINBERG

Health Services and Outcomes Research

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Welcome!

Dear Students,

Welcome to the **Master of Science in Health Services and Outcomes Research** program! This handbook was developed to serve as a resource for you during your studies. In addition to this student guide, you should read and become familiar with The Graduate School's policies, procedures, and resources, which can be accessed online at https://www.tgs.northwestern.edu/resources-for/current/index.html.

Courses that satisfy the Master's degree are listed in this student guide. Before registering for your courses, it is important that you communicate with the program and your mentors to plan your course selections. Additionally, we encourage you to attend other seminars and meetings sponsored by the Center for Health Services and Outcomes Research and the Institute for Public Health and Medicine. You will find information about our weekly research seminars in this guide, and students may also consult http://planitpurple.northwestern.edu/ for seminars, presentations, and meetings sponsored by other Feinberg School of Medicine and Northwestern University departments.

Please feel free to contact me or our program's administrative team whenever you have questions.

We are glad to have you in our program. Best wishes for your success!

Megan McHugh, PhD
Director, Graduate Program in Health Services and Outcomes Research
Associate Professor, Department of Emergency Medicine and Center for Health Services and Outcomes Research

Program Mission and Objectives

The Master of Science in Health Services and Outcomes Research offers research training to healthcare professionals and others who want to build their research acumen and contribute new knowledge to the fields of health services and outcomes research. The program is designed to prepare graduates for academic faculty positions or leadership positions in research organizations in the public or private sector. A unique strength of this program is the experiential-based training and applied nature of the research assignments. The curriculum emphasizes the following areas:

- Health economics and healthcare financing
- Biostatistics
- Quantitative methods in health services and outcomes research
- Qualitative methods and analysis
- Writing and peer review for publication
- Ethical issues in health services research
- Grant writing

After completing the program, students will possess the knowledge and skills to:
- Conduct methodologically sound, relevant health services and outcomes research studies;
- Create new knowledge aimed at improving health services or outcomes; and
- Pursue funding opportunities to support their research.

Program Committees

There are two standing faculty committees that oversee various aspects of the Master's program. Each committee invites a master's program graduate to participate each year. The **Admissions Committee** meets quarterly to review program applications, make admissions decisions, and identify academic advisors for incoming students.

The **Curriculum Committee** meets several times a year to review the existing curriculum, student evaluations of each course, and to discuss recommendations for revisions to courses, new course development, and the capstone experience. Standing faculty members on the curriculum committee are:

Seema Shah, JD
Geneva Wilson, MPH, PhD
Dustin French, PhD
Carol Haywood, PhD
Emily Lattie, PhD
Megan McHugh, PhD
Neil Jordan, PhD
David Liss, PhD
Salva Balbale, PhD
Alexander Lundberg, PhD
Julie Johnson, MSPH, PhD

Nondiscrimination Statement

Northwestern University does not discriminate or permit discrimination by any member of its community against any individual on the basis of race, color, religion, national origin, sex, pregnancy, sexual orientation, gender identity, gender expression, parental status, marital status, age, disability, citizenship status, veteran status, genetic information, reproductive health decision making, or any other classification protected by law in matters of admissions, employment, housing, or services or in the educational programs or activities it operates. Harassment, whether verbal, physical, or visual, that is based on any of these characteristics is a form of discrimination. Further prohibited by law is discrimination against any employee and/or job applicant who chooses to inquire about, discuss, or disclose their own compensation or the compensation of another employee or applicant.

Northwestern University complies with federal and state laws that prohibit discrimination based on the protected categories listed above, including Title IX of the Education Amendments of 1972. Title IX requires educational institutions, such as Northwestern, to prohibit discrimination based on sex (including sexual harassment) in the University's educational programs and activities, including in matters of employment and admissions. In addition, Northwestern provides reasonable accommodations to qualified applicants, students, and employees with disabilities and to individuals who are pregnant.

Any alleged violations of this policy or questions with respect to nondiscrimination or reasonable accommodations should be directed to Northwestern's Office of Equity, 1800 Sherman Avenue, Suite 4-500, Evanston, Illinois 60208, 847-467-6165, equity@northwestern.edu.

Questions specific to sex discrimination (including sexual misconduct and sexual harassment) should be directed to Northwestern's Title IX Coordinator in the Office of Equity, 1800 Sherman Avenue, Suite 4-500, Evanston, Illinois 60208, 847-467-6165, TitleIXCoordinator@northwestern.edu

A person may also file a complaint with the Department of Education's Office for Civil Rights regarding an alleged violation of Title IX by visiting www2.ed.gov/about/offices/list/ocr/complaintintro.html or calling 800-421-3481. Inquiries about the application of Title IX to Northwestern may be referred to Northwestern's Title IX Coordinator, the United States Department of Education's Assistant Secretary for Civil Rights, or both.

Students in the Program

Students in the Health Services and Outcomes Research graduate program include those pursuing the Master of Science degree, those pursuing one of the graduate certificates, and 'Non-degree Special Students' who take several courses for professional development. All students are admitted through The Graduate School's admission process. Students enrolled in the Master's degree program typically have an MD, PhD, or a master's degree plus 2-3 years of research experience. Certificate students may have slightly less professional experience, e.g. some may have no terminal degree but have several years of relevant research experience.The majority of graduates go on to academic faculty positions.

The HSOR program is a free-standing master's program, and as such does not provide student funding. Many students in the program have obtained external funding to support their education, such as a research fellowship or career development grant. Others utilize education benefits offered through their employers, or take out student loans. Students may be interested in reviewing Northwestern's resources on fellowships and external funding:
http://www.tgs.northwestern.edu/funding/fellowships-and-grants/external-fellowships.html

Program Administrative Contacts

Institute for Public Health and Medicine

The Master's program is administered by The Graduate School of Northwestern University and based in the Center for Education in Health Sciences in the Institute for Public Health and Medicine. Faculty teaching in the master's program are members of the Institute's Center for Healthcare Services and Outcomes Research (CHSOR). The mission of CHSOR is to "generate impactful research about the delivery, equity, safety and quality, efficiency, and effectiveness of healthcare in order to inform and shape healthcare policy, enhance healthcare practice, and improve the health of populations."

Address of Center for Education in Health Sciences and Center for Healthcare Services and Outcomes Research:
633 N St. Clair Street, 20th Floor, Chicago, IL 60611

HSOR Administrative Contacts

Megan McHugh, PhD	Director, Health Services and Outcomes Research Graduate Program; Associate Professor, Emergency Medicine and Center for Health Services and Outcomes Research	megan-mchugh@northwestern.edu 312-503-5618
Ryan Splitt	Program Assistant, Health Services and Outcomes Research	ryan.splitt@northwestern.edu 312-503-3194
Rebecka Mock	Program Coordinator, Health Services and Outcomes Research	rebecka.mock@northwestern.edu 312-503-1744

Emily McElroy	Program Administrator, Center for Education in Health Sciences	emily.mcelroy@northwestern.edu 312-503-5522
Neil Jordan, PhD	Director, Center for Education in Health Sciences, Institute for Public Health and Medicine Associate Professor of Psychiatry and Behavioral Sciences and Preventive Medicine	neil-jordan@northwestern.edu 312-503-6137

IPHAM Newsletter

To receive announcements about events and opportunities within the Institute for Public Health and Medicine, visit this page to subscribe to the weekly IPHAM Bulletin: https://www.feinberg.northwestern.edu/sites/ipham/about/ipham-bulletins.html

The Graduate School

Our program is administered through The Graduate School (TGS) at Northwestern University (https://www.tgs.northwestern.edu/index.html).

The Graduate School's central administrative location is 633 Clark Street, Evanston, IL. The School maintains a location on the Chicago campus in Abbott Hall, 710 N. Lake Shore Drive, Room 332.

Dean's Office and Student Services Contacts

Teresa Woodruff, PhD	Associate Provost for Graduate Education and Dean of The Graduate School	tgsdean@northwestern.edu 847-491-8502
Angela Ray, PhD	Associate Dean for Academic Affairs	tgs-adaa@northwestern.edu 847-467-3267
Hank Seifert, PhD	Associate Dean for Student Affairs	tgs-adsa@northwestern.edu 312-503-9788
Kate Veraldi	Senior Director, Student Services	k-veraldi@northwestern.edu 847-467-4108
Kristine Emrich	Assistant Director, Student Services	kristine.emrich@northwestern.edu 847-491-8469
Bianca West	Student Services Assistant	gradservices@northwestern.edu

Students can contact the TGS Student Services team at gradservices@northwestern.edu with questions about leaves of absence, awarding of diplomas, or academic progress requirements.

Technology Support

Technology support at Northwestern is organized at the university and school level. Most IT areas for students, such as those relating to CAESAR and Canvas, are handled by the university's central IT department, NUIT. Students with appointments in Feinberg School of Medicine should contact Feinberg IT about their workstations, software, and local IT services.

Technology Help Desk Info

NUIT Support	University-wide IT Services Contact re: Email, Canvas, CAESAR, student systems. NUIT supports TGS students' requests.	www.it.northwestern.edu/supportcenter **847-491-4357** (1-HELP on campus) or email consultant@northwestern.edu
Feinberg IT Support	Feinberg's IT Department is physically located in Abbott Hall. They support Feinberg faculty, fellows, residents, and staff.	fsmhelp@northwestern.edu **847-491-4357** "1-HELP" + Select **Option 5** for Feinberg
Zoom Support	Virtual meeting platform for synchronous class meetings	24/7 Live Support can be found by selecting "Contact Support" here: https://support.zoom.us/hc/en-us Additional support can be found here: https://support.zoom.us/hc/en-us/articles/201362003

Steps for New Students

Review the Program Schedule

All incoming students should carefully review the upcoming academic year schedule for the hybrid executive program. Course dates and times in the HSOR program follow a non- traditional meeting pattern, so it is imperative that students familiarize themselves with the schedule and hold all program residency dates and class meeting times on their calendars. Students are responsible for making necessary arrangements with their employer. If students have a conflict with the program schedule, students are responsible for contacting the course instructor for arrangements.

Northwestern NetID and E-mail

Your NetID is your electronic identity at Northwestern. It is a unified login for many systems and services, including e-mail, Canvas, CAESAR, the online University directory, access to the campus wireless network, and off-campus access to the university's secure network.

You are assigned a NetID by the admissions office when your account is created in the University database. You should immediately activate your NetID using the directions and activation code sent by The Graduate School following your admission. If a student already has a NetID through another appointment at NU, access to student systems and functionality will be added to the existing NetID account.

Your Northwestern e-mail is the default address for all academic correspondence such as course announcements, tuition invoices, and university communications. You are expected to check the account regularly. You may forward your Northwestern email to another account.

Enter Emergency Contact Information

On or shortly after the incoming student matriculation date (see academic calendar), log in to CAESAR and follow instructions to lift the "Emergency Contact Hold" on your new account: http://www.northwestern.edu/ses/students/emergency-information/registration-hold.html
Enter and confirm 1) the phone number for the university to notify you in case of campus emergencies, 2) your current address, and 3) your emergency contact.

Health Record Information

Students enrolled half-time (2.0 or 2.5 course units a quarter) or full-time (3 or more units a quarter) must submit proof of immunization to the University Health Service within one month of accepting admission. Nearly all HSOR master's students will enroll in 2.0 course units in one or more quarters, so we encourage all entering master's students to submit the 'Admission Health Record for Non-Healthcare Students' within 30 days after starting courses. The Health Record PDF form is found here on the Health Service website: http://www.northwestern.edu/healthservice-chicago/new-incoming-students/entrance-health- requirements/non-healthcare-students/index.html

Student Health Insurance Program – Waive or Accept Coverage

All degree-seeking students (master's or PhD students) are required to enroll in or waive coverage of the university's Student Health Insurance Program. If a student does not waive coverage during open enrollment, they will be automatically enrolled and billed for the quarterly premium. To opt-out, new students should complete the Health Coverage waiver form during the advertised open enrollment period. Certificate and non-degree students are NOT required to have insurance or waive coverage.

Official Transcripts

The Graduate School requires all new students to submit their official transcripts by mail by the end of their first quarter of enrollment. Students should request that their previous academic institutions mail transcripts to:

> **The Graduate School**
> **Northwestern University**
> **633 Clark Street,**
> **Evanston, IL 60208-1113**

Questions about transcript requirements should be sent to tgsadmission@northwestern.edu.

Pick Up Wildcard Student ID

Wildcard is Northwestern University's photo identification card. It is a student's library card and campus shuttle pass, and the ID provides numerous discounts at local vendors.

Students should obtain their Wildcard at their earliest convenience upon arriving to campus. You can upload your ID photo online beforehand, or you will be asked to have your photo taken in the Wildcard office. Obtain your card by bringing your government-issued photo ID to the Wildcard office in **Abbott Hall, Room 100, 710 Lake Shore Drive (M-F, 8-5pm)**.

Find further details at: http://www.northwestern.edu/wildcard/get-a-card/index.html

Set Up Two-Step Verification

Northwestern IT is enabling Duo Multi-factor Authentication (MFA) for all University Canvas, Zoom, and Panopto accounts This critical security update adds an extra layer of identity verification and is an essential step that further protects individuals and the University.

Access Your Canvas Account

Before you start classes, use your NetID to log in to Canvas, the university's course management system. From your Canvas homepage, click on "Account" at the top left to add your picture to your Canvas profile.

Technology Requirements

In order for students to fully participate in remote classes and complete assignments, HSOR students are required to have the technologies outlined below.

PC or Mac Computer

Laptops are recommended for use during in-class software lab work. The computer should meet the following hardware requirements:
- Microsoft® Windows® 7, 8.1 or 10 (32 or 64 bit)
- Apple Mac OS X 10.6 or higher
- Intel or Intel compatible Pentium 4 class 2 GHz processor or higher
- At least 4GB of RAM (8GB or more strongly recommended)
- Built-in webcam, 720p or higher with microphone – or – USB webcam
- Recommended: Audio headset

Software

All HSOR master's and methods certificate students are required to purchase the data analysis and statistical software, **Stata**. Stata IC is suitable for most researchers and faculty, while some who will work with very large datasets may want to purchase State/SE. One-year and perpetual licenses are available. Stata's graduate student purchase page is found here:
http://www.stata.com/order/new/edu/gradplans/student-pricing/

Students should also install and keep the following software up-to-date:
- Firefox (Latest Stable Release): https://www.mozilla.org/en-US/firefox/new/
- Chrome: https://www.google.com/chrome/browser/desktop/index.html
- Adobe Flash Player (Latest Stable Release): https://get.adobe.com/flashplayer/
- Zoom App: https://northwestern.zoom.us/download

VPN Connection (Virtual Private Network) and Eduroam

eduroam is the campus wireless network at Northwestern. This should be your primary network choice when you are on campus. To connect to this network, select **eduroam** from the list of available wireless networks. Your wireless device should connect automatically. Then, enter your **netID@ads.northwestern.edu** and **your netID password when** prompted.

To access digital collections of academic journals and online library books from off campus or outside Northwestern's network, students should set up a VPN connection on their device: http://www.it.northwestern.edu/oncampus/vpn/

Campus Shuttles

Northwestern operates several shuttles for students, faculty and staff. A valid Wildcard must be presented to the driver. The Intercampus shuttle runs throughout the day between the Chicago and Evanston campuses. The Chicago campus stop is outside the Ward Building at 303 E. Chicago Avenue. The trip between campuses takes about 35-50 minutes, depending on traffic. Shuttle homepage: http://www.northwestern.edu/uservices/transportation/shuttles

Parking

Students who want to drive to campus may review the application information and eligibility criteria

on this page: http://www.northwestern.edu/transportation-parking/chicago-parking/permits/application.html Students should email The Graduate School's Student Services team at gradservices@northwestern.edu and request to being the process of obtaining a student parking permit. One must live outside designated campus boundaries to be eligible.

Master's Degree Requirements – The Graduate School

The Master of Science in Health Services and Outcomes Research is conferred by The Graduate School at Northwestern University. The Graduate School's Master's Degree requirements and policies can be found:
http://www.tgs.northwestern.edu/about/policies/masters-degree-requirements.html

To earn the MS in Health Services and Outcomes Research, students are required to successfully complete 10 course units and a Capstone Research Project, which serves as the master's thesis.

Master's Degree Completion

In order to receive a master's degree, The Graduate School requires students to fulfill a set of standard requirements related to coursework, grades, degree timeline, and culminating steps to graduation. To be conferred a master's degree, the student must:

- Meet the minimum residency requirement by completing 9 graded courses at Northwestern.
- Complete all required coursework and program requirements for the degree, including a master's exam or thesis, while maintaining a minimum GPA of 3.0.
- Maintain satisfactory academic progress in regards to academic integrity, research integrity, and degree timeline.
- File for graduation by submitting Application for a Degree and Master's Degree Completion Forms by the official deadlines in the quarter when degree work will be completed.

Academic Policies

Grades and Grading

A minimum GPA of 3.0 is required for all work presented for a graduate degree. Grades given for completed, credit-bearing graduate courses not taken on a pass/no credit (P/N) basis are:

Grade	Grade Points
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
F	0
X	0 Failed to earn credit: missed final examination
Y	0 Failed to earn credit: work incomplete

The following notations are ignored in computing the grade point average:

P: Pass with credit
N: No grade, no credit
K: In progress
S: Satisfactory: noncredit course
U: Unsatisfactory: noncredit course
W: Withdrawn by permission
NR: No grade reported by instructor
X, Y, NR, F: Do not count toward the accumulation of residency credit required for a degree.

A student whose overall grade average is below B (3.0 GPA) or who has more than three incomplete (Y or X) grades is not considered to be making satisfactory academic progress and will be placed on probation by TGS. The Graduate School notifies the student and the Program Director by email when the student is not making satisfactory progress. When a student is placed on probation, he or she is given two quarters (excluding summer quarter) in which to resume satisfactory academic standing. If a student cannot re-establish satisfactory academic standing during the two probationary quarters, the student will be excluded (dismissed) from The Graduate School.

Degree Timeline

The Graduate School requires students to complete all work for a master's degree within five years from the date they initially register for courses. HSOR MS students typically take one or two years to complete the degree, but are permitted to take longer than two years. Students should notify the program in writing if they intend to extend their degree timeline beyond three years.

Academic Progress Review

The HSOR program reviews students' academic progress annually each winter quarter. The program will send a communication informing each student of his or her standing in the program. Students will be made aware of any issues with academic or research progress and informed of means of remediation. Students can also review their progress toward degree completion by logging into the Graduate Student Tracking System at gsts.northwestern.edu.

Academic Integrity

Academic integrity is fundamental to every facet of the scholarly process and is expected of every student. Integrity involves firm adherence to academic honesty and to ethical conduct consistent with the values based on standards that respect the intellectual efforts of both oneself and others. Academic dishonesty is a serious matter for graduate students committed to intellectual pursuits and will be adjudicated in accordance with the formal procedures outlined by The Graduate School.

The University's standards of academic integrity are violated when a student engages in actions including, but not limited to:

- Cheating in the classroom or on examinations;
- Submitting identical or similar papers for credit in more than one course without prior permission from the course instructors;
- Intentional and deliberate misuse of data in order to draw conclusions that may not be warranted by the evidence;
- Fabrication of data;
- Omission or concealment of conflicting data for the purpose of misleading other scholars;
- Use of another's words, ideas, or creative productions without citation in either the text or in footnotes;
- Paraphrasing or summarizing another's material in such a way as to misrepresent the author's intentions;
- Use of privileged material or unpublished work without permission.

The Office of the Provost's resources on academic integrity can be found:
http://www.northwestern.edu/provost/policies/academic-integrity/principles.html

Academic Progress Review

The program reviews students' academic progress each winter. Students will receive an email from the program regarding their current academic standing. Students can also review their progress toward degree requirements using the Graduate Student Tracking System at:
https://gsts.northwestern.edu/site/login

MS Curriculum and Courses

The master's curriculum is comprised of 10 required course units: 10 required core courses (equal to 9 units) and one required elective unit. The numbers in parentheses after each course indicate the course units assigned (0, 0.5, or 1.0).

- ☐ **HSR 425** Introduction to Quantitative Methods in HSOR (1.0)
- ☐ **HSR 433** Health Economics and Healthcare Financing (1.0)
- ☐ **HSR 456** Applied Qualitative Methods and Analysis for Health Researchers (1.0)
- ☐ **HSR 460** Ethical Issues in HSR (0.5)
- ☐ **HSR 461** Topics in HSR: Methods and Measurement (0.5)
- ☐ **HSR 462** Topics in HSR: Grant Writing (0.5)
- ☐ **HSR 465** Intermediate Quantitative Methods in HSOR (1.0)
- ☐ **HSR 302** Introduction to Biostatistics (1.0)
- ☐ **HSR 421** Intermediate Biostatistics (1.0)
- ☐ **PUB_HLTH 445** Writing for Peer Review and Publication (1.0)
- ☐ **HSR 500** Capstone Project (1.0)*
- ☐ Elective Course (1.0)

*See Capstone Project section (page 17) for further information.

The master's degree can be completed in one year of full-time coursework or over two years of part-time coursework. Courses are offered once a year in the quarter in which they appear in the tables below.

Full-time, One-year Master's Course Plan

Summer	**HSR 456:** Applied Qualitative Methods & Analysis for Health Researchers (1.0) **HSR 461**: Topics in HSR: Methods and Measurement (0.5) **HSR 302**: Intro to Biostatistics (1.0)
Fall	**HSR 425**: Intro Quantitative Methods in Health Services & Outcomes Research (1.0) **HSR 421**: Intermediate Biostatistics (1.0) **HSR 433**: Health Economics and Healthcare Financing (1.0)
Winter	**HSR 465**: Intermed. Quantitative Methods in Health Services & Outcomes Research (1) **HSR 460**: Ethical Issues in Health Services Research (0.5) **PUB HLTH 445**: Writing and Peer Review for Publication (1.0)
Spring	**HSR 462**: Topics in HSR: Grant-Writing (0.5) **HSR 500**: Capstone Project (1.0) [Elective] **HSR 470**: Federal Policy making and Healthcare Reform (1.0)

Typical Part-time Master's Course Plan

Year 1

Summer	**HSR 461**: Topics in HSR: Methods and Measurement (0.5) **HSR 302**: Intro to Biostatistics (1.0)
Fall	**HSR 425**: Intro Quantitative Methods in Health Services & Outcomes Research (1.0) **HSR 421**: Intermediate Biostatistics (1.0)
Winter	**HSR 465**: Intermed. Quantitative Methods in Health Services & Outcomes Research (1.0) **HSR 460**: Ethical Issues in Health Services Research (0.5)
Spring	***Possible elective**, e.g. HSR 470: Health Policy (1.0)

Year 2

Summer	**HSR 456:** Applied Qualitative Methods & Analysis for Health Researchers (1.0)
Fall	**HSR 433**: Health Economics and Healthcare Financing (1.0) ***Possible elective**
Winter	**PUB HLTH 445**: Writing and Peer Review for Publication (1.0) ***Possible elective**
Spring	**HSR 500**: Capstone Project (1.0) **HSR 462**: Topics in HSR: Grant-Writing (0.5)

<center>**Core Course Descriptions**</center>

Students with previous training in epidemiology and quantitative methods may be eligible to waive some required courses. Students must provide the program director with 1) information on their previous training (e.g., a transcript with the course name highlighted and a syllabus or summary of course content) and 2) a proposal of courses to replace those that are waived.

HSR 302: Introduction to Biostatistics (Summer) (1.0 unit)
The course focuses on the understanding of the concepts of descriptive and inferential statistics and the application of statistical methods in the medical and health fields. The topics include descriptive statistics, basic probability concepts, probability distributions, estimation, hypothesis testing, correlation, and simple linear regression.

HSR 461: Topics in Health Services Research: Research Methods and Measurement (Summer) (0.5 units)
The course consists of lectures and discussions on a variety of topics including theories and models, developing a research question, and conducting literature reviews. The course also covers the development and use of health measurement instruments.

HSR 433: Health Economics and Healthcare Financing (Fall) (1.0 unit)
This course examines selected topics in health economics that have major implications for healthcare delivery, healthcare financing and clinical and public health research. Essential economic theories and methods for exploring each topic will be discussed along with examples drawn from the existing research literature on the application of these theories and methods. Specific topics include: consumer behavior and health demand with a special focus on the analysis of secondary data; principles of price and quality competition; principles of health insurance; and methods for economic evaluations.

HSR 456: Applied Qualitative Data Analysis (Summer) (1.0 unit)
This course focuses on the qualitative research methods and analytic approaches that are often used in health services research, including in-depth and semi-structured interviews, focus groups, and participant observation. This course prepares the researcher to choose appropriate applications of qualitative methods, to conduct a variety of qualitative studies, and to interpret the meaning of events from the participant's point of view, using multiple methods. In this era of patient-centered care, such insights are vital to our understanding of patients' and providers' experiences, and for identifying factors that affect health outcomes, interventions, and policies.

HSR 425: Introduction to Quantitative Methods in Health Services & Outcomes Research (Fall) (1.0 unit)
This course introduces descriptive and analytic epidemiology, and how to apply these methods to the study of health services & outcomes research. Key epidemiological concepts such as association, bias and confounding will be covered, as well as the main epidemiologic study designs. Topics include overview of research design; basic measurement of health services data; defining and measuring appropriate health outcomes; constructing research questions; conducting univariate analyses; and interpreting results. Practical computer-lab sessions will provide training in importing data into statistical software; cleaning data; creating new variables; descriptive analysis; and univariate analysis.

HSR 421: Intermediate Biostatistics (Fall) (1.0 unit)
This course builds upon the material learned in Introduction to Biostatistics. Specifically, the course will focus on multivariate methods of analysis for epidemiologic and clinical studies including correlation, linear regression, logistic regression, Cox proportional hazards regression, and life table analysis.

HSR 465: Intermediate Quantitative Methods in Health Services & Outcomes Research (Winter) (1.0 unit)
This course provides the student with an opportunity to learn and practice more advanced epidemiologic methods in the context of health services and outcomes research. The following topics will be included: Epidemiologic research strategies and how to apply these to various research questions, review of univariate analysis (e.g., odds ratios, chi-sq tests), issues in effect estimation (precision, selection bias, misclassification bias), Methods for dealing with covariates (stratified analysis, effective modification, confounding), introduction to multivariate analysis, interpreting research findings to guide decision-making. Includes practical computer-lab sessions.

PUB HLTH 445: Writing and Peer Reviewing for Publication (Winter) (1.0 unit)
This course is an intensive, hands-on, advanced course in writing for publication in biomedical journals and how to be successful peer reviewer. The student will be expected to prepare an article, respond to 2 peer review cycles, and at the conclusion of the course, be ready to submit to a journal.

HSR 460: Applied Ethical Issues in Health Services Research (Winter) (0.5 units)
This course will provide an overview of core ethical concepts relevant to researchers conducting health services research. Ethical research issues related to working with large data sets, quality improvement, safety, electronic data sources, and comparative effectiveness research are examples of topics that will be discussed.

HSR 462: Topics in Health Services Research: Grant Writing (Spring) (0.5 units)
The course will consist of lectures and discussions covering on a variety of topics related to grant writing including development of various components of a grant proposal and identifying potential funders.

HSR 500: Capstone Project (1.0 unit) (*Also see Capstone Project section*)
Students completing the Capstone Project should enroll in HSR 500 in one of the final quarters of the degree, when they are ready to draft the manuscript for their project. While enrolled in HSR 500 the student should complete the manuscript draft, submit to his or her capstone advisory group for feedback, and revise and prepare the manuscript to submit for publication.

Elective Courses

One elective is required for the master's degree. The program currently offers one elective in the executive hybrid format: HSR 470: Federal Policy Making and Healthcare Reform (1.0).
Students may also choose to take an elective offered by other programs at Northwestern (e.g., courses offered for the Master of Public Health) or at another university if a course cannot be pursued at Northwestern. Any plans to take courses from an outside program should be discussed in advance with advisors and the program director. The list below contains several electives that have been of interest to HSOR students, but is not comprehensive.

HSR 470: Federal Policy Making and Healthcare Reform (Spring) (1.0 unit)
This course has three objectives: (1) to improve students' knowledge of current health policy issues, (2) to introduce students to the policy making process and the roles of various policy actors, and (3) to prepare students to participate in the policy process.

PUB_HLTH 323: Health Equity (Fall) (1.0 unit)
This course provides an overview of social, economic, and political inequities in the United States and their impact on the health of the poor, uninsured, elderly, racial and ethnic minorities, migrants, gendered and sexual groups, rural residents, people with mental and physical disabilities and other vulnerable and socially disadvantaged populations. Past and current policies and trends in health /medical care programs and services at the local and national levels will be discussed. Class topics and discussions include: social and income inequalities; access (or lack of) to health care, including preventive services and other social resources; roles of government and the legislative process; quality care; legal and ethical issues; and implications of the Affordable Care Act (ACA) and recent Supreme Court rulings, among others.

PUB_HLTH 438: Survey Design and Methodology (Fall) (1.0 unit)
This course focuses on methodological issues regarding the design, implementation, analysis, and interpretation of surveys and questionnaires in Public Health research. Various types of self-report data will be discussed, including knowledge, attitudes, behaviors, and patient- reported outcomes. Issues will include formatting and layout, wording of items and response scales, multilingual translations, sampling, timing of assessments, interviewer training, participant recruitment, data analysis, and respondent and staff burden.

PUB_HLTH 431: Medical Decision Analysis and Medical Decision Making (Winter) (1.0 unit)
This course covers the quantitative analytic techniques intended to inform decision makers at the bedside as well as at the policy-making level. Topics include probability, Bayes' theorem, sensitivity and specificity of diagnostic tests, Bayesian decision analysis, utility assessment, cost-effectiveness analysis, and expert systems.

PH 444 Advanced Decision Analysis (Spring) (1.0 unit)
This course covers advanced decision-analytic methods useful in medical decision modeling. Included are the probabilistic theory of hazard rates and modeling of age-dependent mortality, Markov modeling, stochastic tree modeling, techniques for multi-way sensitivity analysis such as probabilistic sensitivity analysis and information-value analysis, and software of stochastic tree modeling. Medical decision-analytic literature is reviewed and theoretical underpinnings of models are explored. A project using decision analysis software is required.

PUB_HLTH 425: Introduction to GIS and Spatial Analysis for Public Health (Spring) (1.0 unit)
This course is an introduction to GIS and the collection, maintenance, and analysis of spatial data for health. It combines practical ArcGIS skills with study of the theory and applications of spatial data and spatial analysis in general and specifically as it relates to population health.

HSIP 401: Introduction to Health Measurement Science (Winter) (1.0 unit)
This course will focus on methodological issues regarding the design, implementation, analysis, and interpretation of health measures. Various types of measurement approaches will be discussed, including physiologic, psychometric, and economic approaches. Students will learn and understand the principles of measurement of clinical data, including information from performance-based tests, biomarkers, clinical interview, and self-report.

HSR 498: Independent Study (0.5 credits) and HSR 499: Independent Study (1.0 unit)
Students will develop (with guidance) a course of study that advances their knowledge in a particular area related to health services or outcomes research. To register for an independent study, you must fill out the [Independent Study Form a](#)nd get approval from the Program Director at least two months in advance of the start of the quarter.

Capstone Research Project

The Capstone Project serves as a culminating experience and summative product of students' experiences in the Master's program. The Capstone Project provides an opportunity for students to demonstrate their research development, data collection, management, analysis, interpretation, and dissemination skills. By completing the Capstone Project, students will:
(1) develop, conduct, and complete an original and independent health services and/or outcomes research study, and
(2) report the results in a completed manuscript that is ready to submit for publication.

Students may be eligible to waive the Capstone Project if they can satisfy one of the following criteria:
1. Are funded as a post-doctoral fellow by a T32 or equivalent research training award.
2. Can demonstrate experience in leadership and scientific oversight in the conduct of an empirical health services and outcomes research study, after enrollment in the Master's degree program. For the research project to quality, the student must have: conceptualized the study idea, prepared a protocol, obtained IRB approval, collected data, and performed analysis, all of which culminated in a manuscript suitable for publication in a peer-reviewed journal. The project must be prepared under the guidance of an experienced research mentor/advisor.

Students interested in obtaining a waiver for the Capstone Requirement must seek approval from the Program Director.

Graduate Certificates

The Health Services and Outcomes Research graduate program offers two certificates designed to provide targeted analytical training and topical instruction to researchers and clinicians who would like to expand their work in the field of health services and outcomes research, but who may not be able to pursue the full MS degree. A total of five courses must be successfully completed to earn a certificate. Certificates can be completed in one or two years. The Methods certificate is offered in the executive hybrid format, making it accessible to students anywhere in the country. The Contemporary Issues certificate can only be pursued by students living in Chicago, since most courses follow a traditional meeting format.

HSOR Methodology Certificate

The Methodology Certificate is primarily suited for researchers and clinicians who wish to expand their knowledge of research methods and design. Through completing this certificate, students demonstrate an understanding of multidisciplinary research methods and an ability to design their own studies.

Required Courses:
- HRS 461: Topics in Health Services Research: Methods & Measurement
- HSR 425: Introduction to Quantitative Methods in Health Services & Outcomes Research
- HSR 465: Intermediate Quantitative Methods in Health Services & Outcomes Research
- HSR 302: Introduction to Biostatistics
- HSR 421: Intermediate Biostatistics

Elective Courses (Choose two):
- HSR 456: Applied Qualitative Methods & Analysis for Health Researchers
- HSR 433: Health Economics and Healthcare Financing
- HSIP 401: Introduction to Health Measurement Science
- PUB_HLTH 425: Introduction to GIS and Spatial Analysis for Public Health
- PUB_HLTH 438: Survey Design & Methodology

HSOR Contemporary Issues Certificate

This certificate sequence aims to equip students with foundational knowledge of the contemporary challenges and areas of inquiry in the field of Health Services and Outcomes Research. The curriculum and courses are designed for pre- and post-doctoral trainees, including methodologists (e.g., statisticians and informatics specialists), who have graduate- level research experience but who would benefit from further training in health services research and outcomes-related content.

Required Courses:
- PUB_HLTH 323: Health Equity
- HSR 460: Ethical Issues in Health Services Research
- HSR 470: Health Policy

Elective Courses (Choose two):
- HSR 462: HSR Topics: Grant Writing
- HSR 456: Applied Qualitative Methods & Analysis for Health Researchers
- PUB_HLTH 301: Behavior, Society, & Health
- PUB_HLTH 303: Environmental Health Sciences
- PUB_HLTH 323: Social Determinants of Health
- PUB_HLTH 390: Introduction to International Public Health
- PUB_HLTH 393: Introduction to Health and Human Rights
- PUB_HLTH 415: Health Promotion
- PUB_HLTH 420: Introduction to Health Management

Note: Descriptions for Public Health courses can be found:
http://www.publichealth.northwestern.edu/current-students/course_descriptions.html

Hybrid Program Format

The hybrid structure of the Health Services and Outcomes Research graduate program includes two class meeting formats: 1) executive-style, mandatory in-person residency classes that take place in Chicago over a few days each quarter and 2) regular class meetings that occur between the in- person residencies. Students living outside of the Chicago area may participate in the regular meetings online, while Chicago- area students are expected to attend these meetings in person. The physical location for all residency classes and class sessionss is the **18**^{**th**} **Floor Theater Classroom, 633 N Saint Clair Street, Chicago, IL 60611**. If the classroom is changed or different, it will be reflected on Canvas.

Due to this nontraditional meeting pattern of HSOR courses, students should closely observe the course schedule published on the [Master's Curriculum page of the HSOR program website](#). Course dates and times are confirmed approximately 9 months in advance. Northwestern academic calendars are found on the [Registrar's website](#).

Grading for HSOR "Extended" Courses

Four (4) Health Services and Outcomes Research courses span across two Northwestern quarters: HSR 461, HSR 456, HSR 433, and HSR 425. These courses begin in one quarter, i.e. the quarter when the student is formally enrolled in the course, and extend into the beginning of the next quarter. Final grades for these courses will appear in the student database as "Y - Incomplete" at the end of the start quarter and will be changed to the final grade a few weeks into the next quarter.

Travel to Campus

The program offers a $750 travel stipend to students who travel from outside the metro Chicago area for the quarterly residency sessions. This stipend is provided in the form of travel expense reimbursement, so students must retain and submit all receipts to the program during or following each residency session. Discount rates are available at nearby hotels for Northwestern affiliates.

Attendance

Residency Classes: All students are required to attend the quarterly intensive residency sessions on our Chicago campus. Full-time students should plan to be available all day for those dates, and part-time students should refer to the detailed residency schedule to make sure they attend all sessions for the classes in which they are enrolled. If an unforeseen event arises that will cause a student to miss residency classes, the student should email the course instructors as early as possible. Most often, due to the participatory nature of these classes, students who miss residencies will be withdrawn from the course or given an incomplete grade, and will be encouraged to join the course when it is offered the following year. If a student will miss a limited portion of a residency class, he or she may inquire about making arrangements to make up that session, but such accommodation is made at the discretion of the course instructor(s).

Regular Meetings: These meetings take place on our Chicago campus and will be virtually accessible for students living outside Chicago. **All students attending a class virtually must have their web cam on during class.** Students on campus are encouraged to attend these meetings in person, but are permitted to connect to class remotely. Each instructor may have his or her own attendance policy, detailed in the syllabus. Students should hold all scheduled course times on their calendar and contact the instructor in advance with any questions about attendance or participation.

COVID-19 Attendance Update: Please note that for Summer 2022, we intend to follow in-person instruction per University guidelines. Any update in instruction type will be communicated by the HSOR administrative team.

Class Recording

All students are advised that the Health Services and Outcomes Research program intends to record all class meetings and other education activities. Such recordings are intended to serve an educational purpose only.

The following notice is given to all students: by attending an online or face-to-face class, you acknowledge and agree to grant Northwestern University the right to digitally record, photograph, or capture your likeness in any media, and to share this media through that course's online Canvas site with the students enrolled in the course, the course instructor and TA, and the program and IT administrative staff that access the Canvas site. You release Northwestern University from any and all liability that may or could arise from sharing classroom recordings in this manner.

If a student wishes to stop the recording during class, the student can make this request and the instructor or TA will pause or stop the recording.

The program will obtain your expressed permission for any other photography or recording activities, i.e., signed release forms will be obtained in order to use your likeness on public websites, printed materials, digital platforms, etc.

Course Registration

The program sends announcements with quarterly registration information several months before the start of each quarter. To enroll in HSOR courses (CAESAR subject listing "HSR"), students should log in to CAESAR (http://www.northwestern.edu/caesar/) and navigate to "Manage Classes". Search for courses using the interface, select desired classes to add to the enrollment 'Shopping Cart', then review the Shopping Cart and click the final enroll/submit button to complete enrollment. How-to guides for navigating CAESAR (searching for classes, viewing your student account, etc.) are available online here. Registration steps for the "NEW Manage Classes" module are available at this page.

Registration period start dates are listed below and in the NU academic calendar. To participate in our program's priority registration cycle for Program in Public Health courses, and to assist our program in course preparation, all HSOR students are asked to enroll for courses by the quarterly deadlines below:

	Registration Opens	Enroll By
Fall Quarter 2022	Thursday, September 15, 2022	**Monday, September 26, 2022**
Winter Quarter 2023	Monday, November 14, 2022	**Friday, December 2, 2022**
Spring Quarter 2023	Monday, February 20, 2023	**Friday, March 24, 2023**
Summer Quarter 2023	Monday, April 10, 2023	**Friday, May 26, 2023**

If a master's student does not want or need to enroll in courses during a particular quarter, the course **TGS 512 Continuous Registration** must be taken to maintain enrollment. This course will maintain a student's email account and access to libraries and student systems and carries a fee of $100. Please contact your funding administrator and notify them when you register for TGS 512.

Non-degree and certificate students are not required to maintain regular enrollment. They may elect to not take any courses during a quarter without enrolling in TGS 512.

For registration questions or assistance enrolling in Public Health courses, email Program Assistant Ryan Splitt (ryan-splitt@northwestern.edu). If needed, changes to enrollment may be made as late as the first week of a quarter, the "Change of Registration" period.

Course Evaluation

Each course in the Health Services and Outcomes Research program is evaluated through the University Registrar's Course and Teacher Evaluation Council (CTEC). Students receive automated notifications each quarter when the evaluations open (usually 2-3 weeks before the end of the quarter) and additional reminder emails near the end of the quarter. Course evaluation forms for each course can be accessed through Canvas and/or CAESAR.

The CTEC evaluation system **closes permanently at the end of the evaluation period**, i.e. there is no way to submit a late evaluation. Please watch for automated reminders and complete your evaluation before the end of the quarter. The program strongly encourages all students to complete each course evaluation. Feedback from evaluations informs changes to the content and format of future courses. Your evaluation of the course and faculty is completely anonymous; your identity cannot be linked with your responses. Your answers to several CTEC "core questions" are reported throughout the University and will be available for other students to view in CAESAR before future quarters. Only students who submit all CTEC evaluations one quarter will be able to view other courses' CTEC evaluations the next quarter.

CTEC evaluations for courses HSR 461, 456, 425 and 433 open after the final residency session and close a couple weeks after on Sunday evening. Students will receive e-mail announcements about these extended evaluation periods.

Enrollment Status and Leaves of Absence

"Full-time" enrollment is taking three (3) or more course units in a quarter. Taking between 0.5 and 2.5 course units is "part-time" enrollment. This distinction has bearing on a student's eligibility for certain student services (e.g., U-Pass Chicago transit card) and affects how tuition is billed. The Graduate School's 2022-2023 full-time tuition rate is $20,020 per quarter (plus a $110 student activity fee), and the part-time rate is $6,882 per course unit. Master's students may enroll full- or part-time. Certificate and non-degree students are almost always part-time.

If a student needs to suspend course enrollment due to work obligations, personal circumstances, or unforeseen events, administrative action should be taken to maintain his or her student record and degree timeline. TGS will discontinue (temporarily suspend) any student who misses registration for one or more quarters (excluding summer quarter). The Graduate School's policies on leaves, withdrawal and readmission can be found here: http://www.tgs.northwestern.edu/academics/leaves-withdrawal-readmission.html

Options for maintaining one's student record are outlined below, items A through D.

A. Continuous Registration status is available for degree-seeking students who interrupt coursework for a limited number of quarters and want to maintain an active student record. The student enrolls in **TGS 512: Continuous Registration**, which is a general course that counts as full-time academic enrollment, maintains student access and account privileges, and carries a quarterly fee of $100. Students enrolled in TGS 512 may work on the capstone research project or outstanding incomplete coursework. The time spent enrolled in TGS 512 counts toward the five-year master's degree timeline.

B. If a student needs to interrupt enrollment for **one quarter or up to a year** due to conflicts with clinical work or personal obligations, the student should apply for the appropriate Leave of Absence through the "Petition for Absence" TGS Form in CAESAR:
- Personal Medical Leave of Absence
- Family Medical Leave of Absence
- General Leave of Absence [Recommended for professional conflicts]

Leaves require review and approval by the program. When a student is on leave:
1. He or she is not considered to be an active student, and the student's netID may be suspended after a period of time, time accumulation is paused in regards to the five-year degree timeline, i.e. quarters on leave do not count toward the five-year master's degree deadline, and
2. He or she must request re-entry from The Graduate School student services team at **least six weeks** before the quarter in which they intend to re-enroll.

C. Childbirth Accommodation is available for active female graduate students and must be requested sixty (60) days before the expected date of childbirth. The childbirth accommodation is not considered a Leave of Absence (as above) and may be taken in addition to the Family Medical Leave of Absence.

D. If a student needs to take more than a year or an unknown amount of time away from the program, he or she should apply to withdraw by notifying the TGS student services team in writing. If a student withdraws while enrolled in courses, some percentage of tuition may be refundable. Withdrawn students are eligible to apply for readmission to The Graduate School: to be readmitted, the student must pay a $250 fee plus the equivalent TGS 512 Continuous Registration tuition for the total quarters spent away from active enrollment.

Tuition Rate for Northwestern Residents and Fellows

The Feinberg School of Medicine offers a reduced graduate tuition rate for medical residents and fellows: $3,200 per course unit taken, up to a cap of $32,000 for a master's degree. Once a student enrolls in and completes the tenth course, no further tuition is charged for required degree coursework. Students who hold faculty appointments are eligible for the Northwestern University faculty tuition assistance benefit, and as such are not eligible for the resident and fellow tuition rate.

Northwestern University Tuition Benefits

Northwestern University offers tuition assistance benefits to its faculty and staff, the amount of which varies by years of service and income. Staff and faculty should apply for the benefit around the end of each calendar year to receive the benefit for the next year. The application is submitted online through myhr.northwestern.edu. When applying mid-year, it typically takes several weeks for the Benefits Department to process and apply the tuition reduction to a student's tuition bill.

Further Education Assistance benefit details and application instructions can be found: https://www.northwestern.edu/hr/benefits/educational-assistance/index.html

Center for Education in Health Sciences Auditing Policy

These guidelines apply to the following Programs:

- Master of Public Health   (MPH, CAESAR subject PUB_HLTH)
- MS in Biostatistics   (MS, CAESAR subject EPI_BIO)
- MS in Health Services and Outcomes Research (HSOR, CAESAR subject HSR)
- MS in Healthcare Quality and Patient Safety   (HQPS, CAESAR subject HQS)

Students in The Graduate School do not have the option to register for courses as auditors.

Support and Dispute Resolution

If a dispute arises between a student and his or her advisors, mentors, or other personnel affiliated with the program, the student is encouraged to follow these steps toward resolution:

As circumstances allow, bring up the matter of disagreement directly with the faculty member/other party in question and try to find a resolution that is agreeable to both parties. As a further means of addressing such disputes, please raise the item of concern with one of the following contacts, which have been designated to treat such matters in a confidential manner and serve in the capacity of ombudsmen:

Megan McHugh, PhD	**Emily McElroy**
Academic Advisor;	Program Administrator,
Program Director	Center for Education

One of these contacts will either assist in their capacity to resolve the issue, or bring the concern to the appropriate authority or group for resolution.

Graduation Procedure

Deadlines to Apply for Graduation can be found in the university academic calendar: http://www.registrar.northwestern.edu/graduation/index.html

In order to receive the Master's degree upon completing the required degree components, the student must:

- Verify whether they have completed all degree requirements or will be on schedule to complete them during their last quarter of enrollment.
- Complete the Application for a Degree form via The Graduate School Forms by the date specified in the current academic calendar (approximately 2-3 months before the end of the quarter in which all degree components will be completed).
- Complete the Master's Degree Completion form via The Graduate School Forms and receive program approval of the form by the date specified in the academic calendar (approximately one month before expected graduation), and
- Have at least a B grade point average and no outstanding incompletes. All grades must be entered and Change of Grade forms submitted in the final quarter by the registrar's specified deadlines.

In order to receive a Graduate Certificate upon completing the required components, the student must:

- Verify with the program that they have completed the required certificate courses.
- Submit the Application for Graduate Certificate form once all Graduate Certificate requirements have been completed, but no later than the time that the student files for graduation (in the final quarter of study). Each course counting toward the Graduate Certificate must be listed. The Application for Graduate Certificate requires approval by the Certificate Program Director and, for students also pursuing a PhD or Master's, the Director of Graduate Study (DGS) of the degree program.

Canvas Learning Management System

Canvas is Northwestern University's Learning Management System. It is used to deliver course content, facilitate online interactions of instructors and students, and to submit assignments and track grades. A Canvas site will appear on the student's homepage once a student has enrolled in that course, and when it has been published by the instructor.

To access Canvas and related resources, visit the Canvas portal: mycourses.northwestern.edu

Writing and Research Resources

The Writing Place – Northwestern's Graduate Writing Center

All Northwestern graduate students have free access to classes and writing coaching offered by The Writing Place. Visit www.writing.northwestern.edu to see the current resources available or to register for upcoming workshops. The Graduate Writing Place's Chicago Campus location is the Galter Health Sciences Library, room LRC 1-423. Resources include regular individual writing consultations (in-person and online) and classes for English as a Second Language.

Galter Health Sciences Library

The Galter Library is located near the Chicago Avenue entrance of the Ward Building, at 303 E. Chicago Avenue, Chicago, IL 60611. A Wildcard is required to create a library account and enter the library. Galter features a computer lab with several current statistical software packages. The Galter Library website features numerous helpful guides and tutorials and provides a portal for searching Northwestern's library holdings and digital subscription services. When off-campus, students should connect by Northwestern VPN to access online books and articles.

Office for Sponsored Research and Northwestern IRB

Northwestern's Office for Sponsored Research webpage contains useful information (policies, templates) for applying for and managing grant funding. Human Subject Protection Training can be completed online at Northwestern's IRB website.

Quick Links to Resources and Webpages

Academic Resources

Academic Calendars: www.registrar.northwestern.edu/calendars/index.html

The Graduate School: http://www.tgs.northwestern.edu

CAESAR – Student Record Database: http://www.northwestern.edu/caesar

CAESAR Tip Sheets and Resources: http://www.northwestern.edu/ses/students/index.html

Canvas Learning Management System: mycourses.northwestern.edu

General Student Resources

NU Student Handbook: http://www.northwestern.edu/handbook

Campus Maps: http://maps.northwestern.edu

Intercampus Shuttles: http://www.northwestern.edu/uservices/transportation/shuttles

Parking: http://www.northwestern.edu/uservices/transportation/parking

NUIT Support Center: http://www.it.northwestern.edu/supportcenter/index.html

Student Financial Services (loans, tuition billing): http://www.northwestern.edu/sfs/

Office of Student Accounts (questions about charges):
    www.northwestern.edu/sfs/about/contact/index.html

Resolving Conflict and Obtaining Support in Situations Involving Harassment:
    http://www.tgs.northwestern.edu/campus-life/dealing-with-conflict.html

Counseling and Psychological Services (CAPS):
    https://www.northwestern.edu/counseling/about-us/what-is-caps/index.html

Child and Family Resources: https://www.tgs.northwestern.edu/campus-life/child-and-family-resources/index.html

Medical School and Health Sciences Webpages

Feinberg School of Medicine: http://feinberg.northwestern.edu

Institute for Public Health and Medicine: https://www.feinberg.northwestern.edu/ipham

Center for Education in Health Sciences: http://www.feinberg.northwestern.edu/cehs

Center for Healthcare Studies: http://www.feinberg.northwestern.edu/chs

Galter Health Sciences Library: http://www.galter.northwestern.edu

Human Subject Protection Training: https://irb.northwestern.edu/training-and-education

Office for Sponsored Research: https://osr.northwestern.edu/