

Northwestern | McCORMICK SCHOOL OF
ENGINEERING
Civil and Environmental
Engineering

**Master of Science
Civil and Environmental Engineering
Student Handbook**

2018-2019
September 2018

Also available online

<http://www.mccormick.northwestern.edu/civil-environmental/current-students/forms-documents.html>

Name: _____

Program: M.S. in _____

Campus Address: _____

Phone: _____

E-mail: _____

Faculty Adviser: _____ Office/Email: _____

*******Important Notice to All Advisees*******

Please bring the following information with you when you meet with your adviser:

- *your career goal*
- *your academic plan - 3 or 4 quarters M.S. program*
- *your interest in thesis or non-thesis (some program does not have this option)*
- *questions you want to ask - academic or professional*

Academic Time Table

based on a 3-quarter program

What	When	How
Academic adviser assignment	CEE Orientation	Assigned by area coordinators
Plan for fall quarter courses	CEE Orientation break out sessions	Meet with your adviser, discuss course selection, adviser approve plan
Learn GSTS and CAESAR	CEE Orientation	Read MS CEE Student Handbook
Fall Registration	NU Orientation week till the end of first week of class	Fall course selection must be inputted to GSTS and approved by adviser in GSTS before registration hold is removed. Once registration hold is removed, students are ready to register via CASESAR
Job/internship search	As soon as you can	Register with McCormick Office of Career Development (MCD) adviser, register with McCormick Connect (http://www.mccormick.northwestern.edu/career-development/mccormickconnect.html). Networking with profession, alumni, etc.
	Fall quarter	Attend professional seminar available in the department. See announcements on presentation on job search resources, resume writing, etc. in CEE. Prepare resume and practice interview Start looking for jobs or internships
	October	Participate in CEE Fall Career Fair, http://www.mccormick.northwestern.edu/civil-environmental/career-opportunities/career-fair.html
	January	Participate in CEE Winter Career Fair
Curriculum Plan	By October 31	Submit curriculum plan for the entire degree program to GSTS (upload your plan in pdf). Plan must be signed by academic adviser.
Winter quarter advising	Start at about the 5 th week of fall quarter	Make an appointment to meet your adviser to discuss courses you plan to take in the winter quarter.
Winter quarter registration	Start at about 9 th week of fall quarter	Have your course selection approved by your adviser.
Spring quarter advising	Start at about the 5 th week of winter quarter	Make an appointment to meet your adviser to discuss courses you plan to take in the spring quarter.
Spring quarter advising	Start at about 8 th week of winter quarter	Have your course selection approved by your adviser.
Spring graduation		
AFD	early spring quarter	Submit Application for a Degree form via CAESAR
Degree completion	late spring quarter	Form signed by at least two faculty adviser due at TGS. Check with Academic Coordinator

Important Dates

Academic Year 2018-2019

Event	Date
CEE Orientation	9/18/2018
TGS Graduate Student Orientation	9/17/2018
Fall Registration	9/24/2018 – 10/3/2018
McCormick New Graduate Student Luncheon	9/25/2018
Fall quarter 2018 classes begin	9/27/2018
Society of Women Engineers Career Fair	10/18/2018
CEE Fall Career Fair	10/20/2018
Deadline for official transcripts to be received by TGS	10/26/2018
Last day to drop a class for Fall	11/2/2018
Submit curriculum plan for the entire degree program , approved by your adviser, to GSTS (upload your plan in pdf).	10/31/2018
Application for a Degree via CAESAR for fall 2018 graduation	11/2/2018
Winter Registration begins	11/12/2018
Thanksgiving vacation	6 pm 11/21/2018 – 11/25/2018
M.S. completion form due to TGS for fall 2018 graduation	12/7/2018
Fall quarter classes end	12/8/2018
Fall quarter final exam	12/10 – 12/15/2018
Winter break	12/15/2018 – 1/6/2019
McCormick MS/PhD Recognition and Hooding Ceremony	12/15/2018
Winter quarter 2019 classes begin	1/7/2019
Last day to add or change a course	1/11/2019
Martin Luther King Day observance (no classes)	1/21/2019
Tech Expo Engineering Career Fair (McCormick Career Development Office)	1/17/2019
CEE Winter Career Fair	1/26/2019
Application for a Degree via CAESAR for winter 2019 graduation	2/8/2019
Last day to drop a class for Winter	2/15/2019
Spring registration begins	2/25/2019
M.S. completion form due to TGS for winter 2019 graduation	3/15/2019
Winter classes end	3/16/2019
Winter quarter final exam	3/18 – 3/23/2019
Spring break	3/23 – 3/31/2019
Spring quarter classes begin	4/1/2019
Last Day to add or change a course	4/5/2019
Summer registration begins	4/8/2019
Application for a Degree via CAESAR for spring 2019 graduation	4/12/2019
Last day to drop a class for Spring	5/10/2019
M.S. completion form due to TGS for spring 2017 graduation	5/17/2019
Fall 2019 registration begins	5/20/2019
Memorial Day observance (no classes)	5/27/2019
Spring classes end	6/8/2019

Event	Date
Spring quarter final exam	6/10 – 6/15/2019
CEE Graduation Reception for graduates and families – by invitation August 2018 to June 2019 graduates	6/20/2019
Commencement	6/21/2019
McCormick M.S. Recognition	6/22/2019
Summer classes begin	6/24/2019
Independence Day observance (no classes)	7/4/2019
Application for a Degree via CAESAR for summer 2019 graduation	7/19/2019
M.S. completion form due to TGS for summer 2019 graduation	8/16/2019

Students with Student Visas:

If you plan to graduate in Fall 2019 or beyond, please make sure you maintain full time student status.

Below are the ways you can maintain full time student status.

1. If you are completing a thesis (CivEnv 590), an independent study (CivEnv 499), or a required paper (MS TRN students only registered with CivEnv 504), you need to register for TGS 512 in each academic quarter (except the summer term) until you complete the work.
2. If you still have course(s) to take, but less than 3 courses, to meet the degree requirements, you need to complete a reduced course load form from International Office. You are only permitted to register with a reduced load if that is the last quarter before graduation.
3. Please check Registrar Office website <http://www.registrar.northwestern.edu/calendars/index.html> on deadline to submit AFD and degree completion form.

Preface

This handbook is intended to provide you with a comprehensive guide to the Master of Science degree in Civil and Environmental Engineering (CEE) programs granted by The Graduate School (TGS) at Northwestern University. We hope this handbook will enhance your experience at Northwestern.

This handbook is prepared as a handy reference guide to the degree requirements, programs, policies, and procedures of the Department and The Graduate School. An Academic Time Table on page 3 and Important Dates starting on page 4 are provided to guide you through various milestones during a 3-quarter (9 – 12 months) program. We hope that you will find the information you need for both planning and understanding your M.S. education.

The Department would also like to emphasize the importance of social and ethical implications of an engineer's work in the betterment of the society. Through student professional organizations, departmental seminars, and many ethnics groups, you can interact with world renowned researchers and engineers, and experience diverse cultures. You can also interact with professionals in the Greater Chicago area through meetings hosted by various professional groups. We hope you will take full advantage of the opportunities presented to you during your stay with us.

We hope you find this handbook a useful resource for your M.S. study. We wish you much success and welcome your suggestions for improvement of the handbook.

Kimberly Gray, Ph.D.

Kay Davis Professor and Chair
Civil and Environmental Engineering

Responsibility for Meeting Degree Requirements

Ultimately, students are responsible for understanding the degree requirements for their specialty area and for planning their course of study accordingly. The Department, Assistant Dean of Graduate Study of McCormick School of Engineering and Applied Sciences, The Graduate School, and the International Office are valuable resources for academic and visa information. Faculty advisers assigned to you will assist you in course selection. However, they are not responsible for ensuring that you meet all the degree requirements including grade point average (GPA) requirement or U.S. Citizenship and Immigration Services requirement. Those are the responsibilities of the student.

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Introduction

Welcome to the Department of Civil and Environmental Engineering (CEE), McCormick School of Engineering and Applied Science (MEAS) at Northwestern University (NU). The faculty, staff, and students at CEE look forward to interacting with you so that you can enjoy the maximum learning, social, and cultural experience Northwestern University can offer you. This handbook is part of our effort to help you achieve this goal from the academic aspect. In addition to academic requirements, this handbook includes an academic time table (based on a 3-quarter to 12-month program) of some milestones such as completion of curriculum plan, advising and registration, internship or permanent position, Application for a Degree (AFD), and degree completion. We hope you will **thoroughly read this handbook at least once**. We also hope that you will refer to it whenever you have an academic related question. Of course, our faculty members are available to address any issue you may have. Please feel free to contact them.

A new edition of the handbook is published annually to coincide with each academic year. Revisions will be made as needed each quarter. The modification will be denoted by vertical lines at the left hand margins for easy referencing. First revision is denoted by single vertical line. Second revision is denoted by double vertical lines. Third revision is denoted by double vertical lines with one being a heavy thickness line. Revision number and dates are shown on the cover page. The handbook and all the forms listed in this handbook are also available online <http://www.mccormick.northwestern.edu/civil-environmental/current-students/forms-documents.html>. All updated versions within an academic year is available ONLINE ONLY.

To assist us in the continuing effort to improve this document, please send your suggestions and comments to Professor Karen Chou, Assistant Chair & Clinical Professor at karen-chou@northwestern.edu.

Missions

Northwestern University

Northwestern is committed to excellent teaching, innovative research, and the personal and intellectual growth of its students in a diverse academic community.

The Graduate School

The mission of The Graduate School at Northwestern University is to cultivate an environment of academic excellence where graduate students and postdoctoral fellows are enabled to learn, discover, and create knowledge that enlivens an understanding of human endeavors and the world in which we live.

[\(http://www.tgs.northwestern.edu/about/\)](http://www.tgs.northwestern.edu/about/).

Department of Civil and Environmental Engineering

We inspire and cultivate innovative leaders and problem solvers prepared to address complex societal-scale challenges in areas of resilient infrastructure, smart and sustainable cities, water and energy security, climate change, mobility of goods and people, and environmental protection. We achieve this mission through:

- 1. Education that advances the intellectual development of our students using modern engineering curricula focused on quantitative and predictive methods, academic and professional mentoring, and service-based learning;*
- 2. Research that leads to new theories and techniques and transforms our ability to design, construct, and manage society's infrastructure, control material behavior, and sustain natural and engineering systems around the world;*
- 3. Cultivation of a diverse community of scholars, who, through motivation to serve society, are prepared to lead management and decision-making both insider and outside of the Civil and Environmental Engineering professions.*

The above mission statements can be found on the websites:

University – <http://www.northwestern.edu/provost/about/index.html>

The Graduate School – <http://www.tgs.northwestern.edu/about/>

Department – <http://www.mccormick.northwestern.edu/civil-environmental/about/mission-vision-statement.html>

Student and Professional Organizations

Student and professional organizations provide networking opportunity and seminars on the state of the art research and design in the civil and environmental engineering profession. The Department of Civil and Environmental Engineering is home to the Student Chapter of American Society of Civil Engineers (NUASCE). Professional organizations of all branches of civil and environmental engineering have local section in Chicago area which hosts monthly meetings. You are encouraged to attend some of these meetings to interact and network with the engineering profession. Following is a list of organizations you may consider participating.



Northwestern University American Society of Civil Engineers Founded in 1852, the American Society of Civil Engineers represents more than 150,000 members of the civil engineering profession worldwide and is America's oldest national engineering society.

ASCE's mission is to provide essential value to our members and partners, advance civil engineering, and serve the public good.

The Mission of NUASCE is *to create a more informed and involved Civil Engineering community by providing opportunities to apply and further refine technical skills, increasing student and faculty interactions, and preparing students to enter the professional engineering industry.* Through NUASCE you will have the opportunity to meet other students with similar interests, network with professionals, and participate in exciting design competitions such as concrete canoe and steel bridge. Most importantly, the student chapter prides itself on creating a strong community of engineers, and they would love for you to join!!! Graduate students are welcome and encouraged to join. For more information, visit their website: <http://asce.mccormick.northwestern.edu>.

Other student organizations:

Civil and Environmental Engineering Graduate Association (CEEGA) – see Prof. David Corr, faculty adviser.

McCormick Graduate Leadership Council (MGLC) Founded in 2006, the MGLC fosters community among all McCormick graduate students. <http://mgc.mccormick.northwestern.edu/>

Graduate Student Association (NUGSA) at Northwestern enhances graduate students' experiences in and out of the classroom and strives to create resources and programs to improve the quality of students' lives. <https://nugsa.wordpress.com/>

Graduate Leadership and Advocacy Council (GLAC) is the voice of graduate students in academic and administrative matters at Northwestern University and a forum for graduate student leaders. <http://sites.northwestern.edu/glac/>

Chicago Area Professional Organizations



Illinois Section American Society of Civil Engineers represents Civil Engineers in Northern Illinois. The Section has five technical groups and the Younger Member Group (YMG). The technical groups are Environmental and Water Resources Institute (EWRI), Geo Institute (GEO), Structural Engineering Institute (SEI), Transportation and Development Institute (T&DI), and Urban Planning and Development (UBD). All groups hold monthly lunch or dinner meeting. YMG usually hosts social event for younger engineers of all disciplines to network and they also sponsor a number of outreach events to pre-college students. A great way to develop your professional network and career advancement. For more information, visit <http://www.isasce.org/>.

American Academy of Environmental Engineers and Scientists <http://www.aaees.org/>

American Chemical Society: <http://www.acs.org>

American Concrete Institute (ACI) <https://www.concrete.org/>

American Geophysical Union: <http://sites.agu.org>

American Institute of Steel Construction (AISC) <http://www.aisc.org/>

American Society for Microbiology: <http://www.asm.org>

Association of Environmental Engineering and Science Professors: <http://www.aeesp.org>

Institute of Transportation Engineers (ITE) <http://www.ite.org/>

Structural Engineers Association of Illinois (SEAOI) advances and advocates excellence in structural engineering and to aid in safeguarding the public. <https://www.seaoi.org/>

Transportation Research Board (TRB) <http://www.trb.org/AboutTRB/AboutTRB.aspx>

Water Environment Federation <http://www.wef.org>

Internship and Career Development

Civil and Environmental Engineering Career Fair

Through the joint effort of NUASCE and EnvEUS, the inaugural **CEE Career Fair** was held in 2013. Since 2014, the Career Fair is organized by the CEE Department. CEE Career Fair focuses on firms that hire civil and environmental engineering graduates for internships and for full time engineering positions. The number of participating companies has gone from six in 2013 to 24 in 2016. Starting in the 2016-2017 academic year, the Department expanded the Career Fair to have a Fall and Winter Career Fairs. **The Fall Career Fair is held in October while the Winter one is held in January.** Watch for the announcement of the event and call for registration and submission of resumes. The Department also maintains a web page <http://www.mccormick.northwestern.edu/civil-environmental/career-opportunities/career-fair.html> where internships and graduate engineer positions are posted when the information is sent to the Department. We suggest you check on the site periodically to see what is being posted.

In conjunction with the fall CEE career fair, the Department holds a **meet-N-greet** where students can meet recent alumni, senior engineers, or senior managers of area engineering firms to discuss careers in

the civil and environmental engineering profession. Get advice from those who have walked the path you are going through now. Besides, another great way to network.

SWE Industrial Day

A McCormick-wide career fair is hosted by the Society of Women Engineers. This career fair is usually held in the third Thursday of October. A McCormick networking mixer is held the evening before. The mixer is an informal meeting with company representatives. Watch Plan-it-Purple to see the exact date and location.

McCormick Office of Career Development (MCD)

MCD <http://www.mccormick.northwestern.edu/career-development/index.html> provides career preparation and employment assistance through a variety of work-integrated learning programs including co-op engineering education, internships, research experience, and service learning. Register with **McCormickConnect** (<http://www.mccormick.northwestern.edu/career-development/mccormickconnect.html>) to receive information on job postings, resume submissions, interview schedules, career events, or meet with a MCD adviser. MCD is located in Room 2.350 in Ford Building.

Northwestern Career Advancement (NCA)

The mission of Northwestern Career Advancement is to foster excellence in career development, preparation, and professional opportunities for undergraduate and graduate students and alumni by providing comprehensive services and programming and by promoting strong partnerships with employers, academic departments, and the university community.
<http://www.northwestern.edu/careers/>

Academic Integrity and Engineering Ethics

Academic Integrity

Northwestern University and the CEE Department expect their students to hold high standard of academic honesty. Behaviors such as cheating on exam, plagiarism, using unauthorized materials for your work are not tolerated. Northwestern Provost Office issues a document ***Academic Integrity: A Basic Guide, September 2016 edition*** (<http://www.northwestern.edu/provost/docs/Academic%20Integrity%20Guide%202016.pdf>) which is a central resource of policies governing academic integrity for all students and faculty at Northwestern. There are four main sections of the Guide:

- Principles regarding academic integrity
- Eight Cardinal Rules of academic Integrity
- Counseling and contacts
- How to avoid plagiarism

The Northwestern University *Student Handbook and Code of Conduct*

(<http://www.northwestern.edu/student-conduct/shared-assets/studenthandbook.pdf>) describes the expectations for behavior and conduct in the Northwestern community and outlines the procedures to be followed when these expectations are not met. Additional resources on academic integrity can be found

in The Graduate School web site <http://www.tgs.northwestern.edu/about/policies/academic-integrity.html>.

We strongly encourage you to familiarize yourself with all these documents. Failure on your part to understand the Academic Integrity Policy will not relieve you from that responsibility.

Engineering Ethics

As civil and environmental engineers, our primary responsibility is to serve the public through all the infrastructure systems we design and maintain. Hence, practicing engineering ethics is extremely important to our career and the public. The public entrusted us to provide a functional infrastructure system and to protect our environment. To guide us with our professional integrity are the Codes of Ethics from the National Society of Professional Engineers (NSPE) and the American Society of Civil Engineers (ASCE). Many states require an ethics exam as part of the Register Professional Engineer (PE) application and require continuing education in ethics as part of the renewal of PE. Below are the ASCE Code of Ethics Canons. They are very similar to the ones provided by NSPE. You can find the complete Code of Ethics at NSPE website <https://www.nspe.org/resources/ethics/code-ethics>.

ASCE Code of Ethics (<http://www.asce.org/code-of-ethics/>)

- Canon 1. Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.
- Canon 2. Engineers shall perform services only in areas of their competence.
- Canon 3. Engineers shall issue public statements only in an objective and truthful manner.
- Canon 4. Engineers shall act in professional matters for each employer or client as faithful agents or trustees, and shall avoid conflicts of interest.
- Canon 5. Engineers shall build their professional reputation on the merit of their services and shall not compete unfairly with others.
- Canon 6. Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession and shall act with zero-tolerance for bribery, fraud, and corruption.
- Canon 7. Engineers shall continue their professional development throughout their careers, and shall provide opportunities for the professional development of those engineers under their supervision.
- Canon 8. Engineers shall, in all matters related to their profession, treat all persons fairly and encourage equitable participation without regard to gender or gender identity, race, national origin, ethnicity, religion, age, sexual orientation, disability, political affiliation, or family marital, or economic status.

Downloading Computer Software & File Sharing

It is incumbent on any person who uses Northwestern University resources, such as computers and associated networks, to ensure that they are not using illegal software. Downloading and using software that was obtained illegally is against University policy. Obtaining software legally means that either you personally, or your adviser through NU, has paid for the correct number of copies of the software for the number of computers you have installed the software on.

It is also against University policy to illegally download copyrighted material, such as movies, videos, mp3's, scientific papers, magazine articles, etc. **Any person who has violated this policy is subject to the disciplinary action determined by the University.**

There are many alternatives to using illegally obtained software. The University provides a limited number of software titles available for students on the IT website at <http://www.it.northwestern.edu>, located under the "Students" tab. Also, many software titles are available either free, or at a reduced cost, for educational purposes. In addition, there are many free alternatives to standard software titles, such as Open Office, that can be used freely and are very robust.

Any questions or concerns about this matter should be directed to your adviser or Department of Civil and Environmental Engineering technical support staff.

Safety Training – Laboratory

Northwestern University and the Department of Civil and Environmental Engineering take the safety of every member in the community very seriously. In that spirit, Northwestern University and CEE require students to take special care while working in the university laboratories. Everyone who works in any laboratories under the supervision of CEE MUST follow the Lab Safety Requirements outlined below.

- a. If you plan to use any lab for course project or research, you must contact the lab coordinator: Dave Ventre if you plan to use any of the civil engineering lab; or contact Richard Warta if you plan to use any of the environmental engineering lab. The lab coordinator will also explain the lab rules of etiquette and cleanup. Then, the Lab Coordinator will add you to the lab roster.
- b. All lab workers must be on the official Office for Research Safety (ORS) lab roster in order to conduct any experiments or project in the lab.
- c. Lab Safety Training and preparation are required by ORS and CEE ***before a student can begin any lab work***. The required training can be taken on-line.
- d. Once you are on the roster, you will receive email notification from Northwestern Safety Information System (NSIS), the automated training web site. The email will provide links to take the on-line ORS training. They can be taken from any NU computer, or off campus (requires VPN).
- e. The lab coordinator will be notified when you have successfully completed the ORS training.
- f. In addition, you **MUST** take the CEE on-line training, <http://www.mccormick.northwestern.edu/civil-environmental/research/lab-safety.html>. Read the Safety Guide, then take the Safety Quiz. Submit the quiz as an attached file (pdf, doc, txt, etc) to Dave Ventre at d-ventre@northwestern.edu.
- g. You may be required to have additional training, such as welding safety, depending on the specific machinery or equipment you will use.
- h. Once you have successfully complete the CEE safety quiz, ORS training, and any additional safety training, the lab coordinator will give you your lab access code and you can begin lab work.

- i. Please note that our labs and workshops contain certain specialty machines and tools that require individual, hands-on training to operate safely. This includes MTS machines, the Hobart mixers, saws, grinders, drills, hand tools, welding equipment and others. Most are kept locked. **Using any such machines without proper training and lab coordinator approval is strictly forbidden.**
- j. Anyone working in a lab without the required training, failing to follow lab safety and hygiene rules, or operating equipment without proper training and authorization, will have their lab access and privileges suspended.
- k. Under no circumstances should there be only one person in the lab during weekends, holidays, and non-normal operating hours: 8:30 am to 5:00 pm Monday through Friday.

Academic Advising

You are among the elite groups of students in the Northwestern community. It is our goal for you to have an enjoyable and productive learning experience during your time with us. To achieve this goal, the Department has developed an Advising Policy for the M.S. programs described below to assist you with curriculum planning and progress towards your M.S. degree.

The Department is using the GSTS (Graduate Students Tracking System) to monitor all the M.S. student academic plan, academic progress, and advising. You will have a 24/7 access to your unofficial academic record (the only official academic record is the transcript issued by the Registrar Office), study plan, curriculum plan. The url of GSTS is <https://gsts.northwestern.edu/site/login>. You can login with your netid and password.

While all the advising communication can be done online through GSTS, **it is not the intent of GSTS to replace your adviser**. You are **STRONGLY** recommended to meet with your adviser as often as you wish and certainly no less than once a quarter. Your adviser is your primary resource for academic and professional advices. As experts in their fields, you should take full advantage of the opportunity to interact with your advisers.

1. Academic Adviser

Each M.S. student is assigned a faculty adviser in the student's area of study during the new student orientation in the fall quarter. The four major areas of M.S. program are: Environmental Engineering and Science (EES), Geotechnical (GEO), Structural Engineering (STR), and Transportation Systems Analysis and Planning (TRN). Each B.S. student interested in the BS/MS program must include the signature of his/her M.S. faculty-adviser-to-be in the application to BS/MS program. This faculty will become the BS/MS student's faculty adviser upon acceptance to the program.

A student may change his/her faculty (academic) adviser at any time. However, the **new faculty adviser must be a faculty member with at least 50% appointment in the Department of Civil and Environmental Engineering in the area of the student's study**. A change of adviser form, signed by the current adviser and adviser-to-be, must be submitted to the M.S. coordinator through the Academic Coordinator in CEE office.

2. Curriculum Plan

Each M.S. student **must complete a curriculum plan by the end of October** in the academic year that the student first enrolled in his/her M.S. program. This would help facilitate your advising session and help your adviser understand your career goal. The curriculum plan must follow the guidelines of one of the four M.S. programs that are described on the CEE website (<http://www.mccormick.northwestern.edu/civil-environmental/graduate/index.html>). One copy of the curriculum plan along with the adviser's original signature must be uploaded to GSTS (<https://gsts.northwestern.edu/document/index>). From your homepage in GSTS, click the **Documents** tab, click the **upload document** tab, from the **type** pull down menu, click **plan of study: courses planned**, choose your signed curriculum plan and upload it) **by the end of October** to prevent a registration hold for the winter quarter. Students with a registration hold will not be allowed to register for any courses until the hold is removed.

Students may revise their curriculum plan at any time prior to the student's graduation with the M.S. degree. The revised curriculum plan form must be signed by the student's academic adviser and uploaded to the **GSTS document** page under **plan of study: courses planned**. The most current curriculum plan in the student's file will be used for M.S. degree audit when the student submits the AFD (Application for a Degree) form to The Graduate School.

3. Monitoring of Progress

All M.S. and BS/MS students **must meet** with their faculty advisers at least once per quarter for academic advising and career planning. During each advising session, the student is encouraged to discuss current course performance, course selection for the subsequent quarter, and career planning such as internship, co-op, or post graduate job searching with the faculty adviser. Course selection should follow the most current curriculum plan that is in the student's academic file at the time (via GSTS>documents>plan of study). Deviation from the curriculum plan is permissible if a completed revised curriculum plan form is uploaded GSTS while submitting the plan of study (via GSTS>Plan of Study) for your adviser's approval.

Every M.S. and BS/MS student is required to complete the plan of study (course selection for the upcoming quarter) via the GSTS and approved by his/her adviser in order to receive permission to register for the following quarter. The mandatory advising session should be held no later than a week before the registration begins for each quarter. Registration holds will be in place until your adviser approved your plan of study each quarter. Failure to meet with the academic adviser will delay the student's ability to register.

Registration hold is usually removed within 1 business day after your adviser approves your plan. E-mail will be sent when the registration hold is removed. A new registration hold is placed on each student in each quarter until the student completes all the degree requirements.

4. Satisfactory Progress

According to The Graduate School (TGS) requirements: *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 making satisfactory academic progress and will be placed on probation by TGS. Individual programs may have stricter criteria (<http://www.tgs.northwestern.edu/about/policies/satisfactory-academic-progress.html>).*

A GPA of 3.0 is required for graduation. A GPA below 3.0 in any quarter will place a student on probation. Probation is intended as a notice of unsatisfactory academic performance and constitutes a warning that improvement must be made in subsequent work to demonstrate progress toward M.S. degree. TGS allows a student **up to two (2) consecutive quarters** to return to satisfactory progress (quarter and cumulative GPA ≥ 3.0). Lack of improvement or evidence of inability to complete the work successfully in a given curriculum may provide reason for dismissal. Each student's academic performance is reviewed by the M.S. coordinator to ensure students are progressing satisfactorily.

If a quarter GPA (QGPA) or cumulative GPA (CGPA) falls below a 3.0, the M.S. coordinator will send an e-mail via GSTS before the beginning of a new quarter informing the student of his/her unsatisfactory progress. A letter from TGS will arrive in about the second week of the new quarter.

If a student's QGPA or CGPA is between 3.0 and 3.2, an e-mail from M.S. coordinator will be sent via GSTS to the student. Although this range of GPA is still considered satisfactory, however, a course below 3.0 could easily put the student's GPA in jeopardy. Unlike undergraduate, the M.S. program is only one year long, it is critical to recognize the importance of time and performance.

Degree Requirements

The Department of Civil and Environmental Engineering (CEE) offers The Graduate School (TGS) Master of Science degree in four (4) specialty areas. The requirement for M.S. in CEE is 12 units of courses. A minimum of 9 units must be taken for grades. Each specialty area requires minimum of 2 to 3 quarters of seminar course. This is a zero unit, no tuition course.

In addition to the above requirements, each program has its own core and elective courses requirements; thesis, course-only, design project, or research paper requirement; and possibility for minor; etc. Please refer to the area degree requirements in subsequent pages for detail and discuss the requirements with your adviser.

Full Time Enrollment

While the M.S. degree is designed for full time enrollment, this is not an absolute requirement. For international students (F1 or similar visa holders), full time enrollment is required during the academic year (fall, winter, and spring quarters; excluding summer session).

Full time enrollment is defined as 3 to 4 units of courses in a quarter. If a student wishes to enroll more than 4 units of courses in any one quarter, additional tuition would be assessed (equivalent to 1/3 of quarter tuition per unit of course beyond 4 units in a quarter).

For students who have registered for 12 units of courses but have not completed the degree requirements, for example, completing research paper (must register for CivEnv 508, zero unit) in TRN; completing a CivEnv 499 project; or completing CivEnv 590 thesis, registration of TGS 512 is required for international students if the work is to be completed in U.S. during the following academic year. Registration of TGS 512 is recognized by Northwestern as full time enrollment. The cost of this course is about \$100 and is only allowed after a student has registered for 12 units of courses. For U.S. residents or U.S. citizen, registration of TGS 512 is not required if the student is not completing the work on campus. More information can be found on TGS General Registration Policy

<http://www.tgs.northwestern.edu/about/policies/general-registration-policies.html>

Part Time Enrollment

Part time enrollment is permitted and is usually occurred when a student needs one or two courses to complete the degree. For international students (F1 or similar visa holders), part time enrollment is permitted during the quarter when the student only needs those courses to complete the degree. In this case, the student must submit a **Reduced Course Load Form**

http://www.northwestern.edu/international/docs/current-students/Reduced_Course_Load_Form.pdf.

Independent Study (CivEnv 499)

Independent Study is a self-structured study that is agreed upon between the student and the faculty supervisor. For area that has a thesis option, CivEnv 499 is a good way for both the student and the faculty to see if research or thesis is right for each other. **Independent work done during CivEnv 499 can be expanded to become a M.S. thesis.** At that time the student should register for CivEnv 590. **Every area of specialization has its limit on the maximum number of CivEnv 499 is permitted among the 12 units of courses registered. A petition form (available in this handbook and online) signed by the student and the faculty supervisor must be submitted to the M.S. Coordinator in order to receive a permission number for registration.** The petition form will be uploaded to the GSTS and becomes part of the student's academic record.

Application for a Degree (AFD)

In any quarter if you **anticipate** to complete ALL your degree requirements (12 units of courses and necessary paper, project, or thesis depending on the program), you **must** submit an Application for a Degree (AFD) via CAESAR. Submission of this form does not bind you to complete all your work by the deadline of that quarter. It is a notice to TGS that you plan to graduate at the end of that quarter. There is a deadline for submitting AFD each quarter and in the summer session. You may consult the Academic Calendar on the Registrar Office web site or refer to the Important Dates (page 4) for the current academic year. You may submit AFD more than once until you graduate.

Degree Completion Form

Once TGS approves your AFD, you will return to CAESAR to fill out the Degree Completion Form. This form must be signed by your M.S. committee which usually include your (academic, project, research, etc.) adviser and a graduate faculty member in CEE. Committee member names must be included in the Degree Completion Form. You will then e-mail the pdf of this form to the CEE Academic Coordinator. The Academic Coordinator will seek signatures from your Committee members and conduct subsequent administrative work. M.S. committee is required to approve a students' Degree Completion Form. This Form is required for students persuading course only or thesis option study.

NORTHWESTERN UNIVERSITY MASTERS OF SCIENCE PROGRAM IN ENVIRONMENTAL ENGINEERING & SCIENCE

2018-2019

The MS in EES requires 12 course units in addition to the Environmental Seminar Series – CIV ENV 516. For the BS/MS option, students use 3 of their undergraduate courses, denoted by *, that count towards the MS and need to follow an additional 9 courses.

		1 st Quarter/Fall	2 nd Quarter/Winter	3 rd Quarter/Spring	Optional 4 th Quarter/Summer
Recommended: CIV ENV # 4 Courses/Quarter and the EES seminar series		Environmental Microbiology (361-1)^{†*}	Environmental Laboratory (365)[*]	Bio-physico-chemical Processes in Environmental Systems (448)	
		Chemical Processes in Aquatic Systems (367)[*]	Physical-Chemical Processes in Environmental Systems (444)	Processes in Environmental Biotechnology (442)	
		Environmental Transport Processes (440)	1st Technical Elective[§]	2nd Technical Elective[§]	
		4 th Course from Tracks below or as unrestricted elective	4 th Course from Tracks below or as unrestricted elective	4 th Course from Tracks below or as unrestricted elective	4 th Course from Tracks below or as unrestricted elective
		Environmental Engineering Science Seminar Series (516) – no tuition zero credit seminar			
Tracks & Tech Electives Choose additional Courses/Quarter	Environmental Chemistry		Organic Geochemistry (314)	Emerging Organic Contaminants (370)	
	Environmental Microbiology		Public & Environ. Health (361-2)	Molecular Microbiology (495-0-36)	
	Global Ecological Health Engineering [#]	Sustainability: The City (368)		Medical Devices, Disease and Global Health (BMD ENG 380)	Global Health: Achieving Global Impact Through Local Engagement
	Electives within CEE	Environmental Law and Policy (303) Hydrogeology & Subsurface Contamination (355)	Community Based Design (398-1) Sustainable Water Systems (364)	Ecohydrology (346) Community Based Design (398-2)	
Additional Options	MS Thesis		Research Project (499)	Research Project (590)	Research Project (590) or TGS 512
	Design		Community Based Design (398-1)	Community Based Design (398-2)	

Note: required core courses are in **bold** face and in green.

[†] numbers in parentheses are CIV ENV course numbers unless otherwise stated

^{*} For the BS/MS option, students use 3 of their undergraduate courses, denoted by *, that count towards the MS and need to follow an additional 9 courses.

[§] Technical electives must be CIV ENV courses within the EES program

[#]For the Global and Ecological Health Engineering program, please contact Prof. Kimberly Gray.

NORTHWESTERN UNIVERSITY MASTERS OF SCIENCE PROGRAM IN GEOTECHNICAL ENGINEERING
2018-2019

The M.S. in GEO program requires 12 courses (9 required + 3 electives) and the Geotechnical Engineering Seminars in winter and spring quarters.

Track		1 st Quarter/Fall	2 nd Quarter/Winter	3 rd Quarter/Spring
Recommended: 4 Courses/Quarter plus Geotechnical Engineering Seminar		Ground Improvement (495-37)	Foundation Engineering (352)	Case Studies in Geotechnical Engineering (495-29)
		Hydrogeology and Subsurface Contamination (355)	Engineering Properties of Soil (451)	Unsaturated Soil Mechanics (452)
		Computational Plasticity and Limit Analysis (495-35)	Soil-Machine Interaction (495-39)	LRFD in geotechnical engineering (495-34)
		4 th Course from Tracks below	4 th Course from Tracks below	MS Design project (495) see below
			Seminar in Geotechnical Engineering in winter (515-1) and spring (515-2) quarters	
Tracks Choose 1 Course/Quarter	Design	Uncertainty analysis (306)	STR/GEO Capstone Pre-design Seminar (504); zero units	MS STR/GEO Capstone Design Project (495-25), pre-req.: 504
	Earth Science	Introductory (Aqueous) Geochemistry (Earth 310)	Seismology and Earth Structure (Earth 323-0)	
	Structures	Finite Elements (327)	Reinforced Concrete (325) Advanced Reinforced Concrete Design (495-27) Steel Design (323), <i>by permission only</i>	Advanced Steel Design (495-20)
Note: required courses/projects are in bold face ¹ number in parenthesis are Civ-Env courses unless noted otherwise				

NORTHWESTERN UNIVERSITY MASTERS OF SCIENCE PROGRAM IN STRUCTURAL ENGINEERING

2018-2019

The MS in STR requires 12 course units (6 core courses + 6 electives) in addition to the STR Seminar.

Track	1 st Quarter/Fall	2 nd Quarter/Winter	3 rd Quarter/Spring
Recommended: 4 Courses/Quarter plus STR Seminar	Dynamics of Structures (320)¹	Theory of Structures II (319)	1 st Course from approved list [†]
	Finite Element Methods (327)	Theory of Plates and shells (410)	2 nd Course from approved list [†]
	<i>Mechanics of Continua I (417)² or elasticity (415)</i>	Pre-stressed Concrete Structures (421)	3 rd Course from approved list [†]
	4 th Course from approved list [†]	4 th Course from approved list [†]	4 th Course from approved list [†]
	STR Seminar (512)³ – no tuition zero credit seminar (include the MS Professional Development Seminars)		
[†]Approved list of electives	Uncertainty Analysis (306) Architectural Engineering & Design I (385-1) High Performance Building Design (386) Mechanics of Composite Materials I (414-1) Stability of Structures (424) Advanced Soil Mechanics 1 (450-1) Method of Applied Math (ES APPM 311-1) ⁷ Independent Project/Study (499) ⁵	Properties of Concrete (321) Structural Steel Design (323) ⁴ , (by permission) Reinforced Concrete (325) ⁴ Foundation Design (352) Architectural Engineering & Design II (385-2) Design of Sustainable Urban Development (387) Advanced Finite Element Methods 1 (426-1) Advanced Design of RC Structures (495-27) Independent Project/Study (499) ⁵	Architectural Engineering & Design III (385-3), S Computational Forensics & Failure Anal. (395-24) Inelastic Analysis of Structures (422) Advance Finite Element Methods 2 (426-2) Cohesive Fracture and Scaling (430) Advanced Design of Steel Structures (495-20) Structural System and Optimization (495-26) Independent Project/Study (499) ⁵
Design Practice option		STR/GEO Capstone Pre-Design Seminar – zero unit (504)	MS STR/GEO Capstone Design Project (495-25) – pre-req. (504)
Thesis option <i>must identify a thesis advisor prior to registering CEE 590</i>	Research (590) ⁶ or Independent Study (research) (499) ⁵	Research (590) ⁶	Research (590) ⁶
<p><i>Note:</i> required courses shown in bold face and/or shaded cells and are required for students who choose post MS plan of Engineering Practice. Failure to satisfactorily meet the required course may delay your graduation. If you want to waive the required course requirement, the instructor of the course must approve the waiver and report the decision in GSTS. For students who choose the thesis option, your curriculum plan may deviate from above and must be approved by your academic and thesis advisor.</p> <p>¹ numbers in parentheses are Civ_Env course numbers unless otherwise stated</p> <p>² either 417 or 415 is required; when both are taken, one will be counted towards electives</p> <p>³ additional professional development seminars at 5 or 6 pm on Wednesday are required for students who choose post MS plan of Engineering Practice (non-thesis option).</p> <p>⁴ must take these courses in the appropriate quarters if not taken as an undergraduate</p> <p>⁵ maximum of 1 unit of CivEnv 499 may be used in M.S. program; must submit petition form to CEE</p> <p>⁶ A thesis and presentation are required for Civ_Env 590, min. 2 units, or min 1 unit when combined with CivEnv 499, and max 3 units without CivEnv 499. Grading is P/N.</p> <p>⁷ To prepare for 424 and 422</p>			

**NORTHWESTERN UNIVERSITY MASTERS OF SCIENCE PROGRAM IN
TRANSPORTATION SYSTEMS ANALYSIS AND PLANNING
2018-2019**

The MS in TRN requires 12 course units in addition to a writing requirement and the Seminar in Transportation Engineering

Track		1 st Quarter/Fall	2 nd Quarter/Winter	3 rd Quarter/Spring
4 Courses/Quarter plus Transportation Engineering Seminar The five courses listed on the right columns are required courses		Transportation Systems Planning and Management (479)	Infrastructure Systems Analysis (483)	Evaluation and Decision Making for Infrastructure Systems (482)
			Travel Demand Analysis & Forecasting 1¹ (480-1)	
		Seminar in Transportation Engineering (517) – no tuition zero credit seminar		
Tracks Recommendation	Transportation Science and Systems	Introduction to Transportation Engineering (376, *)	Transportation Systems Analysis I (471-1, *) Transportation Systems Operations and Control 2: Scheduled Modes and Real Time Systems (472-2, +, #)	Transportation Systems Analysis II (471-2, *) , Transportation Systems Operations and Control 1: Urbans (472-1, +, #)
	Operations Research and Logistics	Mathematical Programming (IEMS 450-1, \$, &) Deterministic Models and Optimization (IEMS 313, \$, &)	Mathematical Programming (450-2), Production and logistics-I (480-1), Supply chain modeling and analysis (IEMS 381)	Civil and Environmental Engineering Systems Analysis (304) Data Analytics for Transportation and Urban Infrastructure Applications (495-32)
	Travel Demand Analysis	Intermediate statistics (IEMS 401,\$, !) Introduction to Applied Econometrics (ECON 281-0, !) Uncertainty analysis (306) Introduction to Econometrics (ECON 480, !) Statistical Methods for Data Mining (IEMS 304), Stochastic models and simulation (IEMS 315) Microeconomics (Econ 310)		Survey methods, data and analysis (473, \$)
	Urban Planning and Policy	Transportation Economics and Public Policy (ECON 355, \$) Elements of Public Finance (Econ 309)		
Writing requirement		A zero-unit independent study course (508) Please see Appendix B for detailed requirement.		
Please see Appendix A for explanations.				
¹ Pre-requisites: ECON 281, IEMS 401 or ECON 480-1				

Appendix A

Important notes on MS Transportation System Analysis and Planning (TRN) Program Table

1. Recommended courses/projects are in **bold** face in the table.
2. Recommended courses without any marks are *required*; Recommended courses marked with \$ are electives.
3. For the three recommended courses marked with *, at least two *must* be taken to fulfill the MS degree requirement.
4. For the four recommended courses marked with +, at least one *must* be taken to fulfill the MS degree requirement.
5. Recommended courses marked with # are offered in alternating years.
6. The students are recommended to take one of the two courses marked with &. While both courses cover optimization, IEMS 313 is more suitable for those who do not have a strong background in this area.
7. ECON 281-0 is recommended only for PhD students who need a solid introductory course to applied econometrics. MS students cannot use this course to fulfil the 12-unit degree requirement.
8. CivEnv 517: Seminar in Transportation engineering. All students are expected to register and attend the seminar series through the year.
9. Seminar in Responsible Conduct for Research. Researchers and MS/PhD students are required to attend. MS students with PhD aspirations are encouraged to attend. Please contact CEE DGS, Dave Corr (d-corr@northwestern.edu), for additional details.
10. Electives are not limited to the courses listed in the table. Other 300 level courses or above may be taken as electives, subject to the faculty supervisor's approval. Students may also take up to 3 research/independent-study units, which also requires the faculty supervisor's approval.

Appendix B

M.S. Transportation System Analysis and Planning (TRN) Program Writing Requirement

In addition to satisfactory completion of required coursework, M.S. students must conduct an independent research effort and prepare a research report. This could focus on a subject covered in the coursework of our program, or it may go beyond into an area of special interest to the student. The work and the product must have these characteristics:

- The work may be basic or applied research, an innovative analysis and solution to a practical problem, evaluation or development of a transportation policy, etc.
- It must be an original effort which, though limited in scope, demonstrates an interesting contribution to transportation and significant growth in the student's knowledge.
- By "original" we mean that the work must feature a contribution from the student him/herself, rather than being merely a survey of what others have done.
- The topic must be mutually agreed upon by student and his/her faculty advisor, which is to say that the advisor has a role in selection of topic from the outset.
- Students should consult with their advisors in the design of the effort, selection of tools and data, and interpretation of results.
- Any transportation faculty member may serve as principal advisor. Another Northwestern faculty member, or (if the substance of the topic so warrants) even an outside senior professional in the field, may serve as principal advisor with the consent of student, the candidate advisor, and the Transportation Program area coordinator, Prof. Nie.
- The effort should reflect approximately one month or 180 hours of full-time work. Of course the effort itself may be spread over a much longer time period.
- The final product must be a well-written report which is:
 - Suitable for use as a professional report or a paper for submission to a journal.
 - In clear and correct English
 - Structured with a title page, executive summary, table of contents, lists of figures and tables, main text including a review of the literature and/or work of others, structured with thoughtful headings, graphics integrated in the text, and references presented in proper and consistent format.
- Draft reports should be presented for review by the principal advisor and second faculty member prior to completion. Advisors must be given **a minimum of two weeks** for report review. Students must address all significant comments from the advisor.
- When the report is found to be satisfactory, advisor and secondary reader will clear the student for graduation.
- Students must register for CivEnv 508, a zero-unit, zero-tuition course, every quarter (excluding the summer) when working on the research paper until the paper is approved by the faculty adviser and a grade of S will be assigned.

Northwestern University
 Department of Civil & Environmental Engineering
 Master of Science Curriculum Plan for Advising

Name: _____ Specialty Area: _____
 Starting Quarter: _____ Projected Graduation Date: _____
 Faculty Adviser _____
 (F.A.): _____ F.A. signature & date: _____

Date	Course Number	Course Title	credit
Quarter 1 (mm/yyyy)			
Quarter 2 (mm/yyyy)			
Quarter 3 (mm/yyyy)			
Quarter 4 (mm/yyyy)			
Quarter 5 (mm/yyyy)			

Notes: (list alternate courses and comments; *use additional sheets if needed*)

1.03 28 July 2017

Also available online <http://www.mccormick.northwestern.edu/civil-environmental/documents/current-students/forms-documents/ms-curriculum-plan-advising-1-02.pdf>

Northwestern University
 Department of Civil & Environmental Engineering
 Master of Science **REVISED** Curriculum Plan for Advising

Name: _____ Specialty Area: _____
 Starting Quarter: _____ Projected Graduation Date: _____
 Faculty Adviser _____
 (F.A.): _____ F.A. signature & date: _____
 Date of most current curriculum plan _____

Date	Most current curriculum plan		Revised curriculum plan		credit
	Course No.	Course Title	Course No.	Course Title	
Quarter 1					
Quarter 2					
Quarter 3					
Quarter 4					
Quarter 5					

Notes: (list alternate courses and comments; use additional sheets if needed)

1.01 17 August 2012

Also available online <http://www.mccormick.northwestern.edu/civil-environmental/documents/current-students/forms-documents/ms-revised-curriculum-plan-advising-1-01.pdf>

Department of Civil and Environmental Engineering

Northwestern University • McCormick School of Engineering and Applied Science

CHANGE OF ADVISER FORM

Name of student: _____

NU ID: _____

E-mail address: _____

Mobile phone number: _____

Name of current
faculty adviser: _____

Signature/Date: _____

Procedures for Changing Academic Adviser:

1. This Change of Adviser form must be signed by both your current adviser and your adviser-to-be.
2. Bring a copy of your M.S. Advising Form and your most current M.S. Curriculum Plan along with this form to your adviser-to-be. You may request a copy from the Academic Coordinator. If you wish to modify your curriculum plan, you must also bring the M.S. Revised Curriculum Plan form to your adviser-to-be.
3. Return the completed Change of Adviser Form to the M.S. Coordinator.

To the Adviser-to-be:

Have you reviewed the student's advising record and the most recent curriculum plan (M.S. Curriculum Plan and/or M.S. Revised Curriculum Plan form)? Will you approve the most recent curriculum plan, and agree to serve as the student's faculty adviser?

_____ YES

_____ NO

Comments:

Name of faculty
adviser-to-be: _____

Signature/Date: _____

1.0 16 August 2012

Also available online <http://www.mccormick.northwestern.edu/civil-environmental/current-students/forms-documents.html>

CIV_ENV 499 Project Application for an Independent Study

1) Your Topic

- a. Scope/project objectives

- b. List of project tasks/goals and a tentative weekly schedule

- c. References

- d. Deliverables (all projects must include a written report and an oral presentation; if this is for lab work, it must involve a significant lab report at the end of the quarter.)

2) How this independent study supports your curriculum

- a. Courses that led to this one

- b. How this enhances your learning in your master degree?

3) Interaction with professor

- a. How often will you meet
- b. Basis of evaluation (preference: itemized evaluation, example – weekly reports 15%, scholarly/technical component 50%, written report 20%, oral presentation 15%)

4) Signatures by sponsoring independent study Professor,

Sponsoring Project Adviser _____
(print name)

(signature) Date _____

Student _____
(print name)

(signature) Date _____

Please return completed form to CEE Academic Coordinator (Tech A236) to be placed in the student's academic folder and to receive a permission number to register CivEnv 499.

Also available online <http://www.mccormick.northwestern.edu/civil-environmental/current-students/forms-documents.html>

Instructions for Using GSTS (Graduate Students Tracking System)

<https://gsts.northwestern.edu/site/login>

Plan of Study Page – Part 1

Northwestern GRADUATE STUDENT TRACKING SYSTEM

Dashboard Committee Plan of Study Academic Progress Research Project Documents Communications Reporting Administration Logout (kcc769)

Plan of Study f Student Name \li C20MS Active Student \ K.L. - [C20MS] SHOW PROFILE

Guidelines for Study Plan

Input your proposed plan of study for each quarter. Please update this section as your plan of study changes. As you complete courses in your plan of study, this will be noted and a grade displayed.

In order to assign a course to a category, hit Enter after choosing the category from the drop-down menu in the Study Plan Section column.

Study Plan & Progress

Suggested Plan of Study & Progress

Completed and ready for review
Not yet Completed

The Graduate School establishes the minimum requirements for courses and residency. Students must complete at least nine graded courses approved for TGS credit. Doctoral and masters students must meet the published residency requirements.

You can go to the Civil and Environmental Engineering MS Student Handbook for more information.

Information about advising starts on page 18.

Expand All

▼ Area of Specialization
Select your area of specialization. In case you do not see your specialization in the list, please contact your advisor.

Below are links to the curriculum plans for each of the MS specialization areas:

Environmental Engineering & Sciences
Geotech
Structural
Transportation

Structural Engineering (STR)

switch this to completed when quarter plan is complete

area of specialization

for use by adviser or coordinator only

Program Office Change History

Review by Program Office

Completed review of the study plan?
Not yet Completed

Feedback from Reviewer

Approve the study plan?
Hold Approve

Once a student submits information, the program's Director of Graduate Studies (DGS) or DGS designate must review, insert comments (if necessary), and submit an approval decision. Please note that comments are part of the student's educational record and should not be considered private.

Reviewer Comments

No comments found.

adviser comments shown here

Changes Since Last Approval

Reviewed the changes?
Not yet Yes

Shown above is the top section of the Plan of Study page, you will see your area of specialization on the left hand panel. On the same panel, there is a toggle for “completed” when your quarter course selection plan is complete and ready for your adviser’s review and approval. Once you switch this toggle from “not yet” to “completed”, a notification is sent to your adviser and the MS coordinator requesting your adviser’s review of your quarter course plan.

The right hand panel is for your adviser or coordinator’s use. When your adviser wishes to comment on your quarter course plan, the comments will be shown here. A notification is sent to you when your adviser approves or has comments on your plan. Unfortunately, GSTS does not have a comment only notification. We advise you to check in to GSTS when you receive the automated notification from GSTS (on behalf of MS Coordinator) to see if your adviser leaves you a message.

When your quarter course plan is approved by your adviser, the MS Coordinator will notify the Academic Coordinator to remove your registration hold. The registration hold is usually removed within 1 business day. The Academic Coordinator will e-mail you when your registration hold is removed.

Plan of Study Page – Part 2

▼ Courses Waived

Search courses... [Add]

Course	Term	Course Category	Updated	Notes (255 max)	Documents
--------	------	-----------------	---------	-----------------	-----------

If you have any courses waived by the program, it will appear here

No records to view

▼ Quarter 1

▼ Courses Planned

Search courses... [Add]

Course	Term	Updated	Notes (255 max)	Documents
--------	------	---------	-----------------	-----------

Select the courses you plan to take during orientation for the first quarter of your program by using the "search course" and "Add" above this box

▼ Courses Taken

No course found.

This box will be populated automatically if you denote the courses you selected as either required or elective

The change log is visible below.

No change logs found.

▼ Quarter 1

▼ Courses Planned

CIV_ENV 320-0 2016 Fall [Add]

Course	Term	Updated	Notes (255 max)	Documents
CIV_ENV 320-0 Struct Analysis--Dynamics Course ID: 004858-1	2016 Fall	2016-09-06		

Once the course is selected, the information is shown

Plan of Study Page – Part 3

▼ Quarter 2

▼ Courses Planned

Search courses...

Course ↕	Term	Updated	Notes (255 max)	Documents
<i>Follow the procedures for Quarter 1 to populate Quarter 2 and subsequent quarters. This is usually completed after academic advising for subsequent quarter.</i>				

No records to view

▼ Courses Taken

No course found.

▼ Quarter 3

▼ Courses Planned

Search courses...

Course ↕	Term	Updated	Notes (255 max)	Documents
----------	------	---------	-----------------	-----------

No records to view

▼ Courses Taken

No course found.

You will repeat the same process for each quarter. For Quarter 2 which is the winter quarter, the advising process starts at around the fifth week of the fall quarter (Quarter 1). Please make an appointment to meet with your adviser to discuss your course selection for Quarter 2. Registration for the winter quarter starts at about the 8th or 9th week of the fall quarter. The same process repeats for registration of the spring (Quarter 3). Please note that registration hold is imposed every quarter. Registration hold is remove once your course selection for subsequent quarter is approved by your adviser.

Plan of Study Page – Part 4

▼ **Quarter 4**

▼ Courses Planned

Search courses...

Course ↑	Term	Updated	Notes (255 max)	Documents
No records to view				

▼ Courses Taken

No course found.

▼ **Quarter 5**

▼ Courses Planned

Search courses...

Course ↑	Term	Updated	Notes (255 max)	Documents
No records to view				

▼ Courses Taken

No course found.

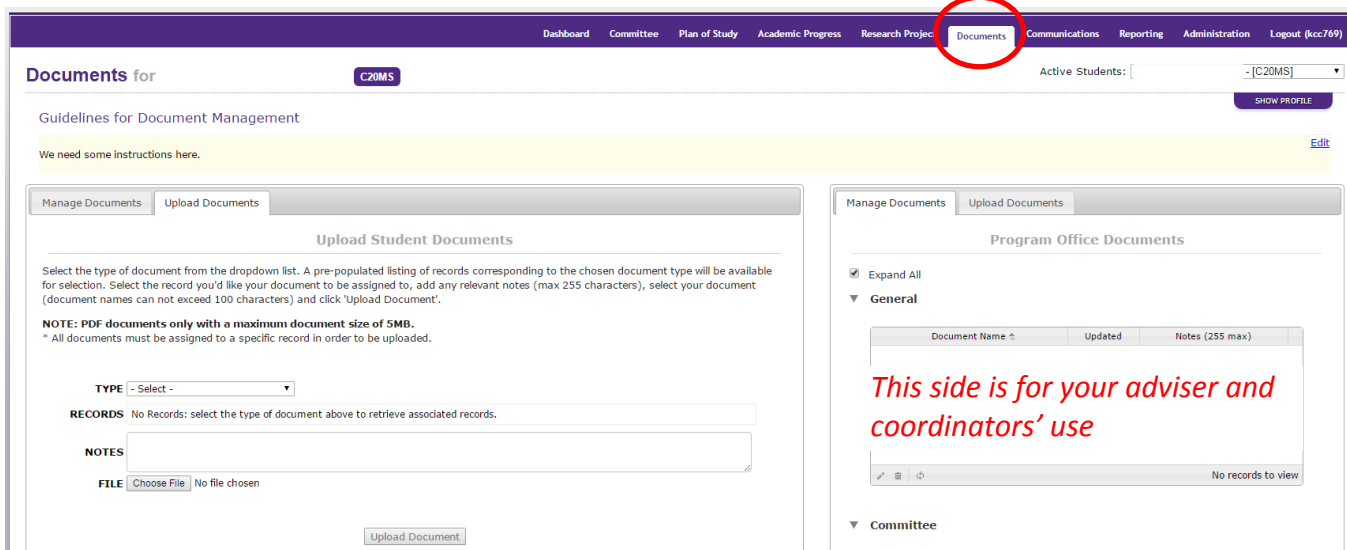
▼ **Comments (if any)**

Enter any additional information or comments about your plan of study:

For most of you, three quarters of registration is needed to complete your MS program. If you plan to extend your study to beyond three quarters, you are required to have course selection beyond Quarter 3 approved by your adviser. This requirement is necessary even if you are registering for TGS 512 for cases where your Independent Study (CivEnv 499), Paper (CivEnv 508, required by Transportation Analysis and Planning, TRN), or thesis (CivEnv 590) requires more time to complete. Please note that there is no need to register for TGS 512 during the summer.

The “Comments” box is for you to communicate with your adviser for information such as a desire to have a minor, certificate, thesis adviser’s name, alternative courses, etc.

Uploading Your Curriculum Plan and Other Document



The screenshot shows the 'Documents' page in the GSTS system. The navigation bar at the top includes 'Dashboard', 'Committee', 'Plan of Study', 'Academic Progress', 'Research Project', 'Documents' (highlighted with a red circle), 'Communications', 'Reporting', 'Administration', and 'Logout (kcc769)'. The page title is 'Documents for C20MS'. Below the title, there is a section for 'Guidelines for Document Management' with a note: 'We need some instructions here.' and an 'Edit' link. The main content area is divided into two panels. The left panel, titled 'Upload Student Documents', contains instructions: 'Select the type of document from the dropdown list. A pre-populated listing of records corresponding to the chosen document type will be available for selection. Select the record you'd like your document to be assigned to, add any relevant notes (max 255 characters), select your document (document names can not exceed 100 characters) and click 'Upload Document''. It also includes a note: 'NOTE: PDF documents only with a maximum document size of 5MB. * All documents must be assigned to a specific record in order to be uploaded.' Below this are fields for 'TYPE' (a dropdown menu), 'RECORDS' (a text area), 'NOTES' (a text area), and 'FILE' (a 'Choose File' button). An 'Upload Document' button is at the bottom. The right panel, titled 'Program Office Documents', has an 'Expand All' checkbox and a 'General' section. It contains a table with columns 'Document Name', 'Updated', and 'Notes (255 max)'. The table is empty, and a red text overlay reads: 'This side is for your adviser and coordinators' use'. Below the table are icons for refresh, delete, and search, and a 'No records to view' message. A 'Committee' section is partially visible at the bottom.

Follow the instruction on the left hand side of the “Document” page to upload any document you want to share with your adviser or coordinators.

Sample procedures for uploading Curriculum Plan:

From your homepage in GSTS, click the **Documents** tab, click the **upload document** tab, from the **type** pull down menu, click **plan of study: courses planned**, choose your signed curriculum plan and upload it) **by the end of October** to prevent a registration hold for the winter quarter.

Important deadlines for uploading documents

- **Transcript** from your most recent degree **by the end of September**
- **Curriculum Plan** (**due the end of October**)

Department of Civil and Environmental Faculty

Jan Achenbach (Emeritus Professor) Mechanics, Materials, and Structures	Ange-Therese Akono Mechanics, Materials, and Structures
Arantzazu (Aranchra) Alarcon-Fleming Mechanics, Materials, and Structures	Oluwaseyi Balogun Mechanics, Materials, and Structures
Zdeněk Bažant Mechanics, Materials, and Structures	Neil Blair Environmental Engineering & Science
Lawrence Booth Architectural Engineering & Design	Giuseppe Buscarnera Geotechnical Engineering
Karen Chou (Assistant Chair, DGS M.S., M.S. in STR Coordinator) Mechanics, Materials, and Structures	Mark Clark Environmental Engineering & Science
David Corr (Director of Graduate Study) Mechanics, Materials, and Structures	Gianluca Cusatis (Ph.D. in MMS Coordinator) Mechanics, Materials, and Structures
Isaac Daniel Mechanics, Materials, and Structures	Charles Dowding (Emeritus Professor) Geotechnical Engineering
Pablo Durango-Cohen Transportation Systems Analysis & Planning	Richard Finno (GEO Coordinator) Geotechnical Engineering
Jean-François Gaillard (EES Coordinator) Environmental Engineering & Science	Kimberly Gray (Department Chair) Environmental Engineering & Science
Ahmad Hadavi (MPM Associate Director) Project Management	James Hambleton Geotechnical Engineering
Erica Hartmann Environmental Engineering & Science	Yonggang Huang Mechanics, Materials, and Structures
Leon Keer (Emeritus Professor) Mechanics, Materials, and Structures	Sinan Keten Mechanics, Materials, and Structures
Raymond Krizek (MPM Director) Geotechnical Engineering; Project Management	Luisa Marcelino (Lecturer) Environmental Engineering & Science
Hani Mahmassani (Transportation Center Director) Transportation Systems Analysis & Planning	Yu (Marco) Nie (TRN Coordinator) Transportation Systems Analysis & Planning
Aaron Packman Environmental Engineering & Science	John Rudnicki Mechanics, Materials, and Structures
Joseph Schofer Transportation Systems Analysis & Planning	Surendra Shah (Emeritus Professor) Mechanics, Materials, and Structures
Amanda Stathopoulos Transportation System Analysis & Planning	George Wells Environmental Engineering & Science

Contacts for Frequently Asked Questions

Questions

Students should consult with their academic advisers regarding academic and professional issues such as course selections and career guidance. The MS coordinator will assist the academic coordinator when procedural issues arise. The list below is intended to help you identify resources that could address your questions.

Staff Contact Information

Academic Coordinator	Melissa Koelling (Tech A236)
CEE IT	Craig Neumann (Tech A144)
Laboratory (dry) coordinator & Lab safety coordinator	Dave Ventre (Tech A142)
Environmental laboratory & safety coordinator	Richard Warta (Tech A254)
Payroll	George Homsy (Tech A138)
Access to MS study room	CEE staff (Tech A236)

University Contact Information

If you have question related to:	Who should you see or where should you go:
Academic – satisfaction progress	Professor Karen Chou (Tech A218) Bianca West or Kate Veraldi, TGS
Academic Calendar	http://www.registrar.northwestern.edu/calendars/index.html
CAESAR – reference materials, how to register	http://www.northwestern.edu/caesar/
Counseling and Psychological Services (CAPS)	Student Affairs http://www.northwestern.edu/counseling/
Course schedule/listings – current academic year	http://www.mccormick.northwestern.edu/civil-environmental/courses/index.html
General M.S. degree requirements	Dr. Bruce Lindvall, Assistant Dean for Graduate Study, McCormick
GSTS	Professor Karen Chou or Academic Coordinator
Health Service	http://www.northwestern.edu/health/
Internship, Co-op	http://www.mccormick.northwestern.edu/career-development/index.html
M.S. in CEE degree requirements	academic advisers, area coordinators
Parking – walking zone, rates, FAQ, campus shuttle, U-Pass CTA	http://www.northwestern.edu/up/parking/
Reduced Course form	International Office
Optional Practical Training form	https://www.northwestern.edu/international/living-working/form-library/student-forms.html
Curricular Practical Training form	
Registration hold	Academic Coordinator or Professor Karen Chou
Transportation Center & Library	http://www.transportation.northwestern.edu/ http://www.library.northwestern.edu/libraries-collections/evanston-campus/transportation-library
Visa	International Office https://northwestern.edu/international/index.html
WildCard	http://www.northwestern.edu/userservices/wildcard/