

TAM Program

Graduate Studies HANDBOOK

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Information about the Theoretical and Applied Mechanics Program

McCormick School of Engineering and Applied Science

Northwestern University

2022-2023

Theoretical and Applied Mechanics (TAM) is an interdisciplinary, interdepartmental graduate degree program. Adaptable to the specific needs and abilities of its students, TAM allows qualified students of engineering, mathematics, physics, or an allied science to pursue their MSc and PhD in mechanics.

Some specific research areas for TAM PhD students include:

- computational mechanics
- mechanics in biology and fluids
- micro/nanomechanics
- multifunctional materials
- geomechanics
- structural reliability and nondestructive characterization

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.

THE GRADUATE PROGRAM IN THEORETICAL AND APPLIED MECHANICS

Programs

Qualified students of engineering, materials sciences, physics, applied mathematics, or an allied science may pursue graduate studies in solid mechanics or fluid mechanics through the program, which is administered by an executive committee of professors.

Programs of study in solid mechanics are available in computational, analytical, or experimental mechanics; biomechanics, fracture and damage mechanics; micromechanics and nanomechanics; composite, nanocomposite and hybrid materials including processing, characterization, and modeling; geomechanics, time and environment dependent, fatigue, and dynamic response of materials; and nondestructive evaluation.

Programs of study in fluid mechanics are available for both theoretical and experimental research in energy; computational fluid dynamics; aerodynamics and hydrodynamics; non-Newtonian fluids and gas-liquid and liquid-solid interface problems; and bioengineering applications.

MS Program Learning Objectives, Milestones, and Assessment

Learning objective(s) <i>Students should be able to...</i>	Milestone/ Requirement/Capacity	Assessment Strategies and Criteria* <i>How do we know this objective has been achieved?</i> <i>What criteria do we have to measure success?</i>
Make original research contributions to science, engineering and technology management fields.	Research Project Planning and Execution	Assessment Strategy: Advisor evaluates planned research project, provides feedback for improvement. Criteria: Formulate a research plan with proper methodology, write an original thesis or project report, and as feasible publish research progress in journals or file patents/IP.
Demonstrate command over basic knowledge in the field and effective scholarly communication skills.	MS Thesis Defense or MS Research Project Report	Assessment Strategy: Thesis committee (or the advisor for research project) review of student's basic knowledge in the field, research skills, and presentation skills. Criteria: A research presentation summarizing key accomplishments.
Establish a career plan	Semi-Annual Meeting for MS Thesis Candidates	Student shares plan semi-annually with advisor at semiannual progress review and individual meetings; student and advisor craft a plan for appropriate training and identify necessary resources for post - graduate success.
Enact ethical research methodologies and practices.	RCR Training/ Research	Criteria: Fosters ethical problem-solving skills; increase the ability to recognize ethical issues in design and conduct of research; identify and understand clinical ethics regulations, policies, and resources.

PhD Program Learning Objectives, Milestones, and Assessment

Learning objective(s) <i>Students should be able to...</i>	Milestone/ Requirement/Cap acity	Assessment Strategies and Criteria* <i>How do we know this objective has been achieved?</i> <i>What criteria do we have to measure success?</i>
Make original research contributions to science, engineering and technology management fields.	Thesis Proposal Defense/ Dissertation/ Publications/ Patents	Assessment Strategy: Committee evaluates thesis defense, provides feedback for improvement. Criteria: Formulate a research plan with proper methodology, write an original thesis, publish research progress in journals or file patents/IP.
Design a classroom activity and gain teaching experience	TA fulfilled / other teaching experience	Assessment Strategy: Course instructor evaluates outcomes, students provide formative assessment (e.g. CTECs, surveys). Designed classwork or homework serves as a summative assessment that measures students' success in acquiring the new skills and knowledge.
Establish a career plan	Annual Meeting	Student shares plan annually with advisor at annual progress review and individual meetings; student and advisor craft a plan for appropriate training and identify necessary resources for post-graduate success.
Enact ethical research methodologies and practices.	RCR Training/ Research	Criteria: Fosters ethical problem-solving skills; increase the ability to recognize ethical issues in design and conduct of research; identify and understand clinical ethics regulations, policies, and resources.

MS PROGRAM INFORMATION

(The following pages, 10-11, are applicable for the MS degree)

MS DEGREE REQUIREMENTS:

TGS minimum course requirements: TGS policy requires, as a minimum for master's degrees: Nine quality letter-graded (ABC, not P/NP) courses approved for TGS credit (i.e., courses with a "career" designation of "The Graduate School" in CAESAR). Full-time registration requires enrollment in a combination of course units and ME 590 (research) units for a total of 3 or more units each quarter. **The TAM graduate program has further course requirements for MS degrees as detailed below.**

1 Thesis option

Course Requirements:

- **Number of courses:** Twelve course units are required. For thesis option, a maximum of three research project units out of the 12 total units are admissible.

TAM is a very flexible program and as such it does not have specific course requirements. Students can take courses from any school or department at Northwestern University related to his/her course of study. This distinguishes the program from other departmental programs in McCormick and provides ample flexibility for the student and advisor to select a plan of study. Check program web site for courses offered by TAM faculty.

- **Level:** Students are *encouraged* to take 4 credited course units (excluding research units) at 400-level or above.
- **Seminar:** Regular attendance at the non-credit TAM Seminar Series is required for all quarters.
- **Course registration approval:** Students must obtain approval for all courses in advance from their advisor, or the TAM Director, Professor Espinosa, before an advisor is identified.

Research: Three credit units of research project (e.g., ME 590 or equivalent) are required in which a suitable thesis under the direction of a faculty advisor must be completed and defended.

Residency: Three quarters of full-time registration (3-4 courses or project units per quarter) are required.

GPA requirement: GPA is determined by all BS/MS qualifying courses or post BS courses taken at Northwestern towards satisfying the course requirements above. A minimum GPA of 3.0 is required by The Graduate School to earn a MS degree. Students whose GPA falls below 3.0 will be placed on probation by TGS, and will be given two quarters to recover a 3.0 GPA. Failure to meet the minimum GPA after two quarters on probation will result in removal from the program. If after fulfilling the course requirements, a student's GPA is below the minimum it may be necessary to take additional classes to raise the GPA to the required minimum.

Master's Thesis and Examination: The TAM program requires a written thesis to be approved at a final examination. The final examination shall include a presentation by the student of the thesis material and examination by the Examining Committee. The Examining Committee is comprised of at least two full-time members of the Northwestern University faculty, who must also be members of the Graduate Faculty. Coursework and core courses must be filled out on the "TAM MS Degree Requirement" form, signed by the advisor and by the TAM director. This form must be presented prior to the final examination. Upon successful completion of the final examination, the Examining Committee signs the *Master's Degree Completion form*, which is then submitted to the Graduate School via GSTS: TGS Forms.

MS thesis: The thesis should be based on original research that is of publishable quality and should have a quantity of material equivalent to at least one journal paper. It should be prepared according to the Graduate School format for PhD dissertations (<https://www.tgs.northwestern.edu/academic-policies-procedures/dissertation-publication/dissertation-formattingrequirements/index.html>). An *Application for Degree* must be submitted to The Graduate School by the relevant published deadline for June, August, December or March graduation.

Transferring from MS to PhD:

Occasionally, an outstanding MS student may want to continue their studies for a PhD. Completion of MS is not a requirement for being in the PhD program. Since our PhD program is fully supported, the student will need to work effectively with his (her) MS research advisor who may sponsor the student for a PhD provided funding is available. After the student has identified a sponsoring professor, please contact the TAM Director who will make the final

admission decisions, which will be subject to approval by The Graduate School. Note that there is no separate application to fill out; only a one-page Program Transfer form, which should be submitted (to the Graduate Program Assistant for processing) at least six weeks before the PhD enrollment.

If you are awarded an external Doctoral Fellowship (for example, NSF) please contact the Graduate TAM Director right away. If you are pursuing a McCormick Professional MS (for example MSR), the above procedure does not apply. You will need to complete the TGS application for a PhD admission by the December 15th deadline and await the evaluations.

2 Non-thesis option for terminal MS degree

Course Requirements:

- **Number of courses:** Eleven course units plus one project unit (e.g., ME 499 or equivalent) are required. (12 total units)
- **Level:** Students are *encouraged* to take 4 credited course units (excluding research units) at 400-level or above.
- **Seminar:** Regular attendance at the non-credit TAM Seminar is required for all quarters.
- **Approval:** Students must obtain approval from the TAM Director for all courses before registration.

Project: One credit unit of ME 499 or an approved project course is required in which a suitable research project under the direction of a TAM faculty advisor must be completed. Students may also petition, to the TAM Director, to complete an additional course unit in lieu of one project course credit, resulting in a total of 12 courses (12 units total).

Residency: Three quarters of full-time registration (3-4 courses or project units per quarter) are required.

GPA requirement: GPA is determined by all BS/MS qualifying courses or post BS courses taken at Northwestern towards satisfying the course requirements above. A minimum GPA of 3.0 is required by The Graduate School to earn a MS degree. Students whose GPA falls below 3.0 will be placed on probation by TGS, and will be given two quarters to recover a 3.0 GPA. Failure to meet the minimum GPA after two quarters on probation will result in removal from the program. If after fulfilling the course requirements, a student's GPA is below the minimum it may be necessary to take additional classes to raise the GPA to the required minimum.

Master's Completion: Coursework and core courses must be filled out on the "TAM MS Degree Requirement" form and signed by the TAM Director. This form must be submitted to the TAM graduate program assistant.

An *Application for Degree* must be submitted to The Graduate School by the relevant published deadline for June, August, December, or March graduation.

PHD PROGRAM INFORMATION

(The following pages, 13-16, are applicable only for the PhD degree)

PHD DEGREE REQUIREMENTS:

A summary of PhD requirements is given in Table 1 and described in the following pages.

Table 1: PhD student milestone summary

Milestone/ Requirement	TAM Deadline	TGS Deadline	Notes
Choose advisor	Y1Q1		<ul style="list-style-type: none"> • Advisor must have appointment or courtesy appointment in ME department
Complete Responsible Conduct of Research (RCR) training (CITI & GEN_ENG 519)	Y1Q4 (McCormick deadline)		<ul style="list-style-type: none"> • Sections fill quickly; recommend taking early
External fellowship application	Y2Q4		<ul style="list-style-type: none"> • See graduate handbook for details
Complete course requirements	Y2Q4 (entering w/ MS)		<ul style="list-style-type: none"> • Must maintain 3.0 cumulative GPA (TGS requirement) • Must finish with a 3.5 cumulative GPA (TAM requirement)
Dissertation proposal exam	Y2Q4 (entering w/ MS) Y3Q4 (entering w/o MS)	Y4Q4	<ul style="list-style-type: none"> • Written proposal and oral exam • Submit PhD Requirements Form • Proposal submitted to committee 1 week in advance • 3+ person committee • 2+ members of NU graduate faculty • 1+ member with primary appointment outside TAM
Teaching requirement	Y5Q4	Y5Q4 (for TA)	<ul style="list-style-type: none"> • One quarter TA or 3 quarters part-time TA • Register for GEN_ENG 546 (full TA) or GEN_ENG 545 (part-time TA)
Dissertation and defense	Typical Y5Q4 w/MS; Y6Q4 w/o MS	Y9Q4	<ul style="list-style-type: none"> • Same committee requirements as proposal exam • Dissertation submitted to committee 1 week in advance

Course Requirements:

- **Number of courses taken at NU:** At least 9 graded courses must be taken at NU.
- **Number of post-BS courses:** A total of fifteen (15) course units are required towards the PhD. Nine (9) course units within this 15 course units must satisfy the MS course requirements.
- **MS from another school:** Students admitted with a MS degree from elsewhere may submit a petition for a waiver of up to a maximum of six (6) course units towards the 15-course requirement, based on post-bachelor's degree study. An MS course waiver form Course waiver form (using the Petition section of the [PhD Requirements Form](#)) must be completed by the student and the advisor and be approved by the TAM Program Director. Students should submit this form as early as possible; see the Graduate Program Assistant, Pat Dyess, for details.
- **Level:** Students are *encouraged* to take at least one half (1/2) of the credited course units satisfying the post-MS requirement at the 400-level or above courses.
- **Seminar:** Regular attendance at the non-credit TAM Seminar Series is required for all quarters.
- **Professional Essentials:** Students may register for the non-credit ME 513 Seminar for one quarter within the first two years. It is strongly recommended that if the student decides to take this seminar course, it be taken before PhD candidacy.
- **Approval:** Students are free to choose courses that accommodate individual needs, talents, and interests while satisfying the basic degree requirements. Students are strongly encouraged to talk with their advisor for any questions or consultation.
- **Timeline.** The course requirements for the PhD program shall be fulfilled within the first 12 and 8 quarters of full-time registration for students matriculating with BS and MS, respectively.
- **Full-time registration:** Funded PhD students may register for TGS 500 or MECH_ENG 590 Research during summers in their first and second year, or whenever they are not taking a full-time load of courses to maintain full-time registration. See p. 28 for more information.

GPA requirement:

GPA is determined by all post-BS courses taken at Northwestern towards satisfying the course requirements above, excluding research and seminar units. At most one MECH_ENG 499 credit (either research or independent study) can be used in the overall GPA calculation, even if more than one MECH_ENG 499 (independent study) credit is counted toward the degree requirements. Students whose GPA falls short of a 3.5 average, shall be required to take a preparatory examination prior to the Dissertation Proposal Exam (see below). These examinations will be administered by a committee consisting of at least three faculty members. The committee can consist of the same members in the examination committee for research defense. The exam can be either written or oral or a combination of these two. Based on the research contents, the committee decides what subject(s) will be tested and informs the student the form and the content of the exam at least two months in advance. The result of the examination will be decided by the committee. Students who fail the preparatory examination will be given another chance to be re-examined in two months following the same rule described above. Students who fail both attempts shall not continue in the PhD program.

A minimum GPA of 3.0 is required by The Graduate School. Students whose GPA falls below 3.0 at any point will be placed on probation by TGS, and will be given two quarters to recover a 3.0 GPA. Failure to meet the minimum GPA after two quarters on probation will result in removal from the program.

Teaching Experience:

All PhD students must meet one of the following requirements: (1) serve as an instructor of an undergraduate course, (2) serve as a full-time teaching assistant (20 hours a week) in an undergraduate course for at least one quarter, and (3) serve as a part-time teaching assistant (6-8 hours a week) in an undergraduate course for at least three quarters. The student must register for GEN_ENG 546-0 "Teaching Experience" (0 units) for activities that fall under (1) and (2); register GEN_ENG 545-0 "Teaching Experience" (0 units) for activities that fall under (3). Consult your advisor for help in obtaining a teaching assistant position.

Proposal Writing Experience:

All PhD students who do not already have a major external fellowship* are required to apply for at least one such fellowship sometime during the first two years of their PhD study. If a major fellowship opportunity cannot be identified for which the student is eligible, the student may instead apply for another research award or fellowship or contribute to a research proposal, as approved by his or her advisor.

* A major external fellowship is defined as one that provides tuition and a stipend for two or more years, such as the NSF Graduate Research Fellowship, NDSEG fellowship, DOE fellowships, Ford Foundation, NASA Research Fellowship, Hertz Foundation Fellowship, Microsoft PhD Fellowship, Microsoft Ada Lovelace Fellowship, etc.

English Requirement:

All international PhD students whose primary language is not English should fulfill the Engineering proficiency requirement after arriving at Northwestern. International students must pass the English proficiency requirement before being eligible for a teaching assistantship. International students whose primary language is English may seek an exemption by making a request through TGS English Language Programs. Students can satisfy the English proficiency requirement by passing the Versant test (scoring 65 or higher out of a possible 80) or SPEAK test (scoring 50 or higher out of a possible 60). There are four additional ways students may fulfill this requirement: (1) A score of 26 or higher (out of a possible 30) on the Speaking Section of the TOEFL internet-based test; (2) A score of 8 or higher on the speaking section of the IELTS test; (3) Two Versant test scores of 63 or 64; and (4) Teaching demonstration in LING 480 (The Language of Teaching and Teachers). More details of the English proficiency requirement can be found at <https://www.tgs.northwestern.edu/funding/assistantships/graduate-and-teaching/requirements.html> . Low scoring students will be assigned to participate in a mandatory supplemental English language curriculum offered by English Language Programs <https://www.elp.northwestern.edu/index.html> .

Admission to Candidacy:

Admission to The Graduate School does not constitute or guarantee a student's admission to candidacy for the PhD degree. Admission to candidacy is contingent upon the recommendation of the TAM program and upon approval of The Graduate School. Students are admitted to candidacy for the PhD degree by passing a Dissertation Proposal Exam.

Dissertation Proposal Exam:

Students are required to pass the Dissertation Proposal Exam (or Prospectus) no later than the end of the 2nd year of full-time study if entering with an MS degree, or the end of the 3rd year of full-time study if entering with a BS degree. Students are eligible to take the dissertation proposal exam when no more than 3 of the courses required for the PhD remain to be taken. The oral dissertation proposal examination will be based on, but not restricted to, a written research proposal (recommended to be less than 30 pages in total length, double spaced) prepared by the student, a proposal presentation made by the student, and an oral examination administered by the examination committee. The dissertation proposal should be provided to the committee at least a week before the final exam.

Students should complete and submit the [PhD Requirements Form](#) to the TAM Program Assistant (Pat Dyess) before the Proposal Exam. Contact Pat Dyess for more details.

The proposal examination committee is normally the advisory committee of a student until completion of the PhD degree, and also conducts the final examination for the PhD at a later date. The committee should satisfy the TGS requirements (<https://www.tgs.northwestern.edu/about/policies/phd-degree-requirements.html>). The chairperson of the committee must be a graduate faculty member and is generally the student's advisor. If the chairperson is not a TAM faculty member, a TAM faculty member must be identified to serve as the co-chair of the committee. Any faculty member may request the privilege of serving on the committee for a particular student, by contacting the student and advisor. The student is responsible for personally contacting members of the committee to invite them to serve. Formation of an examination committee is subject to the approval of both the TAM program and The Graduate School.

Students who fail the examination may, upon the recommendation of their committee, retake it within one quarter. Students who do not pass the re-examination shall not continue in the PhD program.

PhD Dissertation:

A written dissertation on the research project that is satisfactory to the student's faculty advisor, the advisory (examination) committee, and meets the University's requirements, is required. The dissertation should be prepared according to The Graduate School format for PhD dissertations (<https://www.tgs.northwestern.edu/academic-policies-procedures/dissertation-publication/dissertation-formatting-requirements/index.html>).

Final Examination / Dissertation Defense: An oral examination by the examination committee of faculty including the student's advisor addressing the research is required. The written dissertation must be given to the members of the student's examination committee at least one week before the date of the scheduled examination.

PHD STUDENT ASSESSMENT AND FEEDBACK

The objective of the annual PhD student evaluation is to provide early and ongoing feedback to students regarding their performance during their PhD studies, and to provide guidance and advice for their work and progress. **Annual evaluation is required by the Graduate School.**

- 1) Each PhD student should be evaluated annually before the end of the summer quarter of each year. This evaluation should consist of the following:
 - a. Each student will submit an annual progress report following the required format in the online Graduate Student Tracking System (<https://gsts.northwestern.edu/site/login>).
 - b. A face-to-face meeting between the advisor and student is highly recommended before the faculty advisor finalizes the advisor evaluation.
 - c. If a student disagrees with the advisor's evaluation, the student should contact the TAM Director to request a reevaluation. If the student advisor is the TAM Director, students should contact Assistant Dean Bruce Lindvall.
- 2) Students with low GPA and/or unsatisfactory research progress will be put on probation. Such cases will be carefully discussed and handled individually with the evaluation committee. Depending on subsequent improvements, students may be advised to leave, pursue a terminal MS, or continue with the PhD program.

OTHER IMPORTANT GRADUATE STUDY INFORMATION

Course Levels

Courses are labeled with letter prefixes having the following meaning:

- 1 - Introductory (Freshman level)
- 2 - Intermediate (Sophomore level)
- 3 - Advanced (Junior, Senior, and Graduate level)
- 4, 5- Graduate level

Grades

Credit for the MS or PhD degree will be given only for courses in which a letter grade above C has been received. No P/N registration will be accepted. A student whose overall grade average is below B (3.0) is not meeting academic standards and will be placed on probation. Failure to remedy that situation may lead to dismissal by The Graduate School.

An incomplete grade (Y) for any course except Projects (499) must be removed within one year of the official ending of the course. Research (590) may be graded as incomplete (K) until the research is finished. All K grades must be changed by the time the Application for Degree (AFD) is submitted to The Graduate School.

More information on grading policies can be found on the TGS web site: <https://www.tgs.northwestern.edu/academic-policies-procedures/policies/general-registration-policies.html#grades>

Financial Aid, Fellowships, and Registration

Recipients of financial aid must be fully registered. Full registration, according to The Graduate School regulations, means 3-4 courses per quarter.

Students enrolled in the MS program are not eligible for financial aid and assistantships except for the GEM Fellowship for under-represented minority students.

Several types of financial aid are available for PhD students. The Walter P. Murphy and Royal E. Cabell Fellowships are endowed fellowships that enable outstanding students to pursue their first year of graduate study with no teaching or research obligations. Information on merit-based fellowships offered by the Graduate School at Northwestern University can be found at <http://www.tgs.northwestern.edu/funding/fellowships-and-grants/index.html>. Terminal Year Fellowships are available on a competitive basis for students completing their PhD studies to enable them to focus entirely on their dissertation during their final year. Examples of external fellowships that are suitable to TAM PhD students include the NSF Graduate Research Fellowship, the National Defense Science & Engineering Graduate Fellowship, and the HHMI International Student Research Fellowship.

Fellowships generally provide a monthly stipend and tuition for full-time study and research. Fellowships for underrepresented minority group members are available for new and continuing students. General information on fellowship opportunities for encouraging diversity can be found at <http://www.tgs.northwestern.edu/diversity/funding-resources/index.html>.

Research assistantships involve participation in ongoing funded research projects and are awarded at the discretion of the faculty advisor. Some new students and most continuing students are supported through research assistantships. Research assistantships provide a monthly stipend and tuition for full-time study and research. A limited number of teaching assistantships are available. A teaching assistant has responsibility for running the laboratory portion of a course or for grading papers and holding office hours. Teaching assistantships cover tuition, provide a monthly stipend, and are arranged by the department with the endorsement from faculty advisor. Students whose native language is not English must pass the English proficiency requirement to be considered for a teaching assistantship. Fellowship, research assistantships, and teaching assistantships are subject to income tax.

Full-time graduate students in good academic standing are eligible to apply for low-cost student loans. More information is available at the Student Loan Office, 555 Clark Street, 3rd Floor.

PhD students who receive financial support in the form of NU fellowships, research, and teaching fellowships are strongly discouraged from terminating PhD study with a MS degree. When such situation happens and with the approval of the faculty advisor, the student must take the thesis option for MS degree (see section on “MS Degree Requirements”).

Registration as a Full-Time Student

All students using departmental facilities in any quarter must be registered or must be employees of the University. During the fall, winter or spring quarters, a full-time registration of 3-4 units of courses and research normally should be elected. For MS students this is achieved by registering for a combination of course units and ME-499 Research Project or ME-590 Thesis Research. Preferable registration is for a total of 4 units per quarter for three quarters to meet the residency requirement and to fulfill the 12 required units for the MS degree within three quarters. Students who need to continue their research after having completed the required 12 units should register for TGS-512 Continuous Registration, described below.

PhD candidates who have not achieved candidacy (passed the qualifying exam) should maintain a full-time registration of 3-4 units of courses and ME-590 Research. Full-time registration for 5 quarters beyond the MS degree or 8 quarters beyond the BS is necessary to meet the residency requirement and to fulfill the course requirements (9 courses beyond MS degree and 15 courses beyond BS degree). Students who need to continue their research but take no classes prior to candidacy may register for TGS-500 Resident Doctoral Study at a reduced tuition level. Courses related to the student's area of study may be taken in addition to TGS 500, up to a maximum of 4 course units.

Registration for the *summer quarter* is required for students who work on research. Registration for a summer internship is optional (see section on "Summer Internship" in "Other Important Graduate Student Information"). Students are strongly encouraged to discuss summer registration with the faculty advisor.

MS research/project registration is summarized below:

ME-499 Research Project or ME-590 Thesis Research--Available to master's with thesis option students to pursue research for their MS project. One unit of ME-499 is required for the "non-thesis option" and three units of ME-590 are required for the "thesis option". Typical registration is for 1 to 3 research units in addition to courses to achieve a total of 3-4 units for full-time registration. A second unit of ME-499 may be used to fulfill the MS or PhD degree requirements.

TGS-512 Continuous Registration--Available to master's degree students who have completed all course and residency requirements, and have previously registered for the required number of ME-499 or ME-590 units, and are continuing research, need to use university facilities, are receiving financial aid, or hold F-1 or J-1 visa status. Requests for more than one 512 registration will be reviewed by The Graduate School. Provides full-time status, but allows no accumulation of credit or residency toward the master's degree. No courses, excluding the ME-512 Seminar, may be taken with TGS-512 registration. Only a registration fee is required rather than tuition for regular registration.

PhD research/project registration is summarized below:

ME-590 Research--Available to PhD students to pursue research for their PhD prior to candidacy and completing residency requirements. Typical registration is for 1 to 4 590 units in addition to courses to achieve a total of 3-4 units for full-time registration until residency is completed.

TGS-500 Advanced Doctoral Study--Available to doctoral students who have completed all residency requirements, been admitted to candidacy, and need to use University facilities to complete a dissertation. Also appropriate for students receiving financial aid or on F-1 and J-1 visas. Provides full-time status, but is not a required registration. Tuition is substantially lower for 500 registration than for full-time registration.

PhD research registration summary:

	Resid. Credit	Candidacy	Tuition rate	Use
ME 590	yes	pre	full	In 1st few (1-3) years while satisfying residency requirements. Minimum three units required before taking the research qualification exam
TGS 500	no	post	reduced	As needed after 8 quarters to maintain student status until dissertation is handed in

Continuous Registration Requirement

All doctoral students in years one through nine and master's students in years one through five must be registered at Northwestern University in each of the fall, winter and spring terms. Explanation of the policy is available at: <http://www.tgs.northwestern.edu/about/policies/general-registration-policies.html>

Where and When to Register

Register on CAESAR www.caesar.northwestern.edu

Finding an Advisor

Students are recommended to seek out a research advisor to work with on his/her graduate research within the first quarter of beginning graduate study. The research advisor directs the student's research by providing research guidance, background information, computer resources, laboratory facilities, and often, research assistantship support. The advisor is on the student's examination committee and is usually the chair of the committee. The advisor also closely reviews the research report, thesis, or dissertation and is co-author on publications arising from the research project.

Changing an Advisor

In very rare instances, a change of advisor may be necessary due to loss of funding, mismatch of research interests, or other reasons. All students are encouraged to contact the TAM Director regarding concerns related to changing advisors. If the TAM Director is an advisor himself, the student is encouraged to contact Assistant Dean Bruce Lindvall.

PhD Advisory Committee Guidelines

The role of the PhD advisory committee is one of guidance as well as examination. Members of the advisory committee will help direct the PhD student's research efforts and will also serve as the examining committee for the qualifying exam and the thesis exam. Any faculty member who requests membership on this committee will be granted that privilege. In order to enhance the student's progress the following guidelines should be followed:

- The advisory committee for the student should be formed as soon as the general direction of research is identified, ideally no later than the end of the second quarter after the MS degree; or the end of the second year after the BS degree.
- The student should meet individually and collectively with the members of the advisory committee on a regular basis: quarterly or bi-annually is suggested.
- In addition to the regular meetings, the student should meet with all the advisory committee members before the proposal exam and thesis exam are scheduled; consultation 2-3 months prior to the exam date will allow time for advice to be incorporated into research before the exam.
- It is strongly recommended that the student give presentations on their work at every opportunity. Conference presentations and the practice of a final thesis presentation to a larger audience are particularly advised.
- The thesis proposal and the thesis should be completed and distributed to the advisory committee at least one week prior to each scheduled exam date.

Summer Internship

Students may seek internships during the summer term to gain practical experience in industry or at national laboratories in areas closely related to their research. Student must consult with the faculty advisor to discuss the student intent to pursue an internship. The summer term is typically intense in research for students supported by grants, but it is also a suitable time for an internship since no courses are offered in the summer. Students seeking a summer internship should contact the McCormick Engineering Career Development Office and begin the process in the winter quarter, although they may also find an internship on their own. Students may choose to register their summer internship through the McCormick Engineering Career Development Office as CRDV 411 for MS students or CRDV 510 for PhD students. CRDV courses are non-credit, non-tuition-bearing courses. The CRDV registration enables international students with F-1 visas to qualify for CPT work authorization, allows health benefits to be maintained (if the student desires them and pays the appropriate fees), permits loans to be deferred, and provides evidence of the internship on transcripts.

The **Crown Family Internship** program is open to all doctoral students in the McCormick School. International students may participate by using a part or all of their practical traineeship visa during the internship. However, the total term of work experience (pre-graduation internship plus post-graduation work) may not exceed one year. Participants in this program register for CRDV 510. Up to three registrations of CRDV 510 are allowed, but no more than two registrations may be consecutive. Details and the application process of the Crown Family Internship are provided at the website <http://www.mccormick.northwestern.edu/students/graduate/fellowships-internships/crown-family.html> .

Conference Travel Grant

The Conference Travel Grant (CTG) offered by The Graduate School provides funds to assist PhD and MFA students traveling to conferences and/or seminars to make presentations on behalf of the University. Students are eligible for a maximum of **two grants** up to \$600 over the entire course of their graduate career. Details can be found at <https://www.tgs.northwestern.edu/funding/fellowships-and-grants/internal-fellowships-grants/conference-travel-grant.html> .

Academic Probation

A student who is not making satisfactory academic progress will be placed on academic probation by The Graduate School and/or the TAM Program. When a decision to place a student on probation is made, the student will be given at most two quarters (not including summer quarter) to resume satisfactory academic standing. Detailed guidelines can be found at <https://www.tgs.northwestern.edu/academic-policies-procedures/policies/satisfactory-academic-progress.html> .

Exclusion (Dismissal) and Appeals Process

If a student cannot re-establish satisfactory academic standing during the two probationary quarters, the student will become ineligible to receive financial aid and will be excluded (dismissed) from TGS.

Students wishing to appeal an exclusion decision should follow the procedure specified by The Graduate School under “Appeal Process”. Student should send a copy of appeal to his (or her) academic advisor and the Director of Graduate Studies when submitting the appeal to The Graduate School.

Visit the Graduate School Policy page (<http://www.tgs.northwestern.edu/about/policies/index.html>) (NU Student Handbook is included here) for a complete description of graduate school policies at Northwestern University.

TAM program information: TAM is administratively supported by the ME department:

1. Support Staff:

Boardman, Owen	Financial Assistant	Room B224	owen.boardman@northwestern.edu
Dyess, Pat	Graduate Program Asst	Room B224	j-dyess@northwestern.edu
Kulanda, Sinta	Business Coordinator	Room B225	s-kulanda@northwestern.edu
Latham, John	Research Administrator	Room B225	john.latham@northwestern.edu
Martin, Madison (Mady)	Assistant to ME Chair	Room B224	madison.martin1@northwestern.edu
Marzec, Rick	Technical Support	Room AG24	r-marzec@northwestern.edu
Sparks, Hillary	Business Administrator	Room B223	h-sparks@northwestern.edu
Thompson, Kyle	Financial Assistant	Room B224	kyle.thompson@northwestern.edu
Wells, Jeremy	Administrative Assistant	Room B224	jeremywells@northwestern.edu

The above rooms are located in the Technological Institute unless otherwise indicated.

2. Photocopier/Scanner: In Room B224 there is a photocopier that you may use for official business.

3. Fax Machine: There is a fax machine in Room B224. If you need to send a fax long distance, your advisor will provide you with a phone code. The cost of sending a fax is \$0.60/page. Incoming faxes have no cost. Faxes may also be received through this machine - the number is 847-491-3915.

4. Paychecks: For those students on payroll (fellowships, teaching assistantships or research assistantships), paychecks will be directly deposited to your bank account on the last working day of the month.

5. Eligibility to Work in the U.S: If you are on the payroll (including fellowships, teaching assistantships or research assistantships), and you have not been on any Northwestern payroll during the last six months, you are required by law to complete an I-9 form - Employment Eligibility Verification Form. You will not receive your September paycheck unless this form is completed. Complete here <https://northwestern.i9servicecenter.com/Login.aspx> .

E-Verify FAQs Electronic I9 Access and Section 1 Questions and Electronic I9 Section 2 Processors
<http://www.northwestern.edu/hr/payroll/e-verify/index.html>

How does E-Verify work regarding the 3 days of hiring an employee?
<http://www.northwestern.edu/hr/payroll/payment/index.html>

6. Mailboxes: Graduate student and faculty mailboxes are located to the left as you enter the department office, Tech. B224. *The departmental mailboxes should not be used for receiving personal mail.* The proper mailing address to receive mail is:

Your Name
Department of Mechanical Engineering
2145 Sheridan Road
Northwestern University
Evanston, IL 60208-3111

7. Phones: Telephones are available in most graduate laboratories or offices. The phones are equipped to handle only campus and local calls. Campus calls, including the medical school, require only the last 5 digits of the phone number. Calls in the 847 (Chicago north shore) require dialing 9-XXX-XXXX. Local calls in the Chicago area require 9-LAC-XXX-XXXX, where LAC is the local area code (312 or 773-Chicago, 708 or 630-suburbs).

8. Emergency: For emergencies such as fire or injury dial **456** from any campus phone to directly connect to campus police. For life-threatening events, call **911**.

9. E-Mail: Graduate students may obtain an email account that is accessible from any networked computer. E-mail accounts may be obtained at the Computing Center, 1800 Sherman Avenue. A valid NU identification card is needed to obtain an e-mail account.

10. Purchasing: To purchase non IBuyNU items, consult the ME Department Financial Assistant., Owen Boardman owen.boardman@northwestern.edu ,
When the requested items arrive, you will receive an email to pick up the package from the ME Department Mail Room, Tech B214. When items arrive, the packing slip should be provided to Owen to notify him that the items were received and payment should be made.

11. Travel Reimbursement: Before planning your business travel, review the university's travel reimbursement policy at <http://www.northwestern.edu/userservices/> and see Owen Boardman, the department Financial Assistant, to review the key points of the policy. Be sure to keep all your itemized and credit card receipts to prevent your reimbursement from being delayed. Travel reimbursement forms should be filled out and signed by the traveler and then signed by your advisor. Give the signed form to Owen within 30 days of return.

TAM FACILITIES

The facilities of the TAM faculty (laboratories) provide many opportunities for graduate students to conduct their research. McCormick facilities are also available to TAM students. For instance, the prototyping shop provides space and equipment, including machine tools, for prototyping designs and building experimental apparatus. For engineering computer use, the ME department maintains a PC/workstation lab in Room AG21.

THEORETICAL AND APPLIED MECHANICS PROGRAM FACULTY

A list of the Theoretical and Applied Mechanics (TAM) Faculty, along with contact information and links to individual web pages, is available online:

<https://www.mccormick.northwestern.edu/theoretical-applied-mechanics/faculty/>

AROUND NORTHWESTERN UNIVERSITY

Norris Center Bookstore: 847-491-3990. This is the main on-campus bookstore, located in Norris University Center. Other bookstores are in downtown Evanston.

Bursar's Office: 619 Clark. 847-491-5343.

Campus Parking Office: 1819 Hinman. 847-491-3319. On campus parking is only available to those who live beyond a certain distance from campus. Details, and permits, are available at this office.

Campus Police Department: **Emergency: 456.** Regular business: 847-491-3254.

University Career Services

620 Lincoln
847-491-3700

The goal of University Career Services is to help students make informed decisions about career-related issues - from exploring their own interests and talents to choosing a major to investigating graduate study and career possibilities. UCS is available to assist students in finding employment for graduating students at the bachelor's, master's and PhD/Post Doc level, and all alumni for the balance of their working lives. UCS is open the year around, with a special emphasis on on-campus recruiting from early fall through late spring of each school year. Each year 300-400 employers recruit on campus. Another several thousand positions are faxed, mailed, or called in each year.

Counseling and Psychological Services (CAPS)

633 Emerson Street, 2nd floor
847-491-2151, After-hours emergency service - 847-491-8100 (Ask to speak with CAPS staff on call)

The Counseling and Psychological Services staff are the University's primary counseling staff. The team of counselors, social workers, psychologists, and psychiatrists provide counseling and psychotherapy services to students with emotional and personal concerns. Services include individual counseling, groups, workshops, and firesides for a wide range of concerns including homesickness, academic motivation, test anxiety, personal relationships, family problems, eating behavior, sexuality, loss of a loved one, and depression.

Ryan Field and McGaw Hall: Ticket Office: 888-467-8775. The stadium is the site of football games, while McGaw Hall contains Welsh-Ryan arena, home of the basketball team. Football tickets may be purchased online at NUsports.com, by telephone or in person at the Ryan Field Ticket Office.

ID Cards: 847-467-6843. The NU identification card is known as the WildCard. This may be obtained in the WildCard office in the basement of the Norris University Center. Bring a photo ID to get your WildCard. The WildCard can be used as a library card, copy account card, bank machine card, and debit card.

Math Library: 847-491-7627. Located in Lunt Hall, this library houses the math collection.

Norris University Center: Information: 847-491-2300. This is Northwestern's student center, and it contains the school bookstore, a cafeteria, a convenience store, postal services, a reading library, as well as many other services. The information desk on the first floor is a great source for answers to many and varied questions about Northwestern, and available services.

Off-Campus Housing Office: 1915 Maple Ave. 847-491-3015. Provides listings of available off-campus housing.

Patten Gym: 2407 Sheridan Rd. 847-491-4099. This gym contains a free-weight room, as well as basketball and volleyball courts.

Seeley G. Mudd Library: 847-491-3362. This is the Tech. Library, where most of the science and engineering books and journals are located. The Wildcard is used as a library card and personal copy card. Group study rooms on the second floor of Mudd Library may be reserved here <https://northwestern.libcal.com/>.

Sports and Aquatic Center (SPAC): 847-491-4300. This facility houses an Olympic size swimming pool, an indoor track, various Nautilus and Cybex weight machines, treadmills and Stairmasters, and basketball, squash, racquetball and tennis courts.

Student Health Center: 633 Emerson Street. 847-491-8100 This is the student clinic.

Student Loans Office: 555 Clark Street, 3rd Floor. 847-491-3125.

University Library: 1970 Campus Drive, 847-491-7568. The three towers and associated buildings contain the majority of Northwestern's collection of works in the humanities, social sciences, and history. The business collection is located here.

EVANSTON INFORMATION

Evanston Police/Fire:

Emergency Only: 911 (use **456** for on-campus emergencies)

Regular business: Fire 847-866-5900

Police 847-866-5000

Housing

ON-CAMPUS

Engelhart Hall (1915 Maple Avenue) and Seabury Apartments (605-615 and 621-623 Garrett Place) are the only on-campus housing available for graduate students. The Graduate Housing office is located at 1915 Maple Avenue (847-467-4663). In Engelhart, single students share a "twin studio" which is a two bedroom apartment, with a kitchen and bath, but no common areas. In Seabury, single students can rent an "efficiency/studio apartment" which has a single room for a combined bedroom with kitchenette area, and a private bath. Married students can rent one, two, or three bedroom apartments, with kitchen, bath, and living room. All apartments are furnished with bed, desk, bookshelves and lamps. Utilities are included in the rent and each bedroom has an air conditioner. The kitchens are tiny with little counter space. The Engelhart building is located next to the Foster El stop (about a 15 minute walk to Tech.), so noise can be a problem. The Seabury building is quite close to Tech. Nicer, more spacious apartments can be found off-campus at lower rents.

OFF-CAMPUS

There are many apartment options available. Rent is primarily influenced by location - the closer you are to campus, the higher the rent. Lower rents can be found in areas a mile or two from campus and in the Rogers Park section of Chicago. Some students choose to live in the Wrigleyville/Lincoln Park areas of Chicago. These areas of Chicago are an easy commute to Northwestern on the El (30-45 min.). Rents vary widely, but reasonable apartments can be found.

Most apartments in Evanston are in converted private houses or in apartment buildings. Most apartments become available at the end of the summer (Aug. 1 or Sept. 1). Apartment hunting in the winter can be difficult since listings are scarce. It is difficult to find anything other than a one-year lease, resulting in many people trying to sublet their apartment for the summer. If you want to live alone, studios and one-bedrooms are available, but are typically more expensive than multi-bedroom apartments. Finding a roommate(s) can reduce your rent dramatically: either find a friend or check the listings for apartments to share. A third option is renting a room in a private home. Rooms are usually furnished with a bed, chair, desk, bookshelves, etc. Some rooms will have private entrance, private bath, kitchen and laundry facilities.

The **Off-Campus Housing Office** (in Scott Hall, 601 University Place, 847-491-8430, <http://www.northwestern.edu/offcampus/index.html>) provides computerized apartment listings - including apartments to rent, apartments to share, and rooms to rent. This is the best place to start your apartment search. The office provides maps of Evanston and Chicago, local newspapers, copies of the Evanston Landlord and Tenant Ordinance. Other apartment listings can be found in the *Evanston Review* and the *Chicago Reader* (both of which are published on Thursdays), the *Chicago Tribune*, the *Daily Northwestern* and posted in the Norris University Center.

Transportation

Public

The **CTA (Chicago Transit Authority)** offers 24 hour service between Chicago and Evanston via the El (which is short for elevated trains). The Purple Line runs between the Howard Street station (on the border of Chicago and Evanston) and the Linden Street Station, in Wilmette, with no service between 2:00-4:30a.m. At Howard you must switch to a Howard/Dan Ryan (Red Line) train to head south to Wrigleyville/Lincoln Park, the Loop, or anywhere south (e.g. Cellular Field or Chinatown). Purple line trains run every 5 to 20 minutes (depending on the time of day). Red line trains run every 5-15 minutes. CTA maps are available at the Davis Street stop in downtown Evanston, online at <http://www.transitchicago.com> or by calling the CTA (312-836-7000). The El stops closest to Northwestern are:

Noyes Street, between Sherman Avenue and Ridge Avenue (best stop for Tech)

Foster Street, between Sherman Avenue and Ridge Avenue
Davis Street, at Davis Street and Benson Avenue

The cost is \$2.25 per ride. If you'll also be riding a bus, you are allowed to transfer an additional 2 times within a 2-hour period. Graduate students in possession of an activated U-Pass will incur no cost on the El system. Students may load money onto their U-Pass and use it to ride Pace buses.

During morning and evening rush hours, the **Evanston Express** runs between Linden and the Loop. These trains make all stops between Linden and Howard, but then run express to Belmont, Fullerton, and around the Loop. The Express trains can reduce travel times between Evanston and the Loop considerably (approximately 30 minutes between Foster and the Merchandise Mart). Alternatively, if you are not heading to the Loop, you can ride the Express to Howard and switch to a Howard/Dan Ryan train.

Evanston Express hours (Monday through Friday only):

Southbound: 6:25 a.m.-9:20 a.m.

3:00 p.m.-5:30 p.m.

Northbound: 7:05 a.m.-10:00 a.m.

3:40 p.m.-6:05 p.m.

During rush hour the CTA also runs the Skokie Swift between Howard Street and downtown Skokie. Look for the trains with the bright yellow signs.

In addition to the El, the double-decker **Metra** trains also run between Evanston and Chicago. This is primarily a commuter line - carrying suburbanites to and from the Loop. The Evanston stops are along the Chicago-Kenosha line, which runs between the Chicago NorthWestern Station downtown and Kenosha, Wisconsin. Trains stop at Main Street, Davis Street, and Central Street in Evanston. At NorthWestern Station, downtown, you can switch to any of the eleven other lines to various suburbs. Trains run on a fixed schedule, and fares vary according to destination and day of travel (in general, the Metra is more expensive than the El for trips into Chicago). A detailed schedule with fare information can be obtained here <https://metra.com/> or at the Davis Street stop, 901 Davis St., Evanston, or call 312-322-6777.

Amtrak (1-800-872-7245) trains leave from Union Station, downtown Chicago, at Adams and Canal St. <https://www.amtrak.com/home.html>

NU Shuttles

Evanston and Campus Loop - For schedules see <http://www.shuttle.northwestern.edu>

Intercampus - <http://www.shuttle.northwestern.edu>

The [Chicago Transit Authority's #201 bus](#) (CTA 201) operates between the CTA Howard station and Westfield Old Orchard mall with stops in downtown Evanston, on campus, at Ryan Field, and along Central Street.

Northwestern Ventra Card

A University-issued Ventra card is required to receive free rides on the CTA #201 route during program dates, September 1, 2022 through June 30, 2023. The cards are available to those who have a [Student, Faculty, or Staff Wildcard](#). If you were issued a card in the past your continued affiliation will be verified and the pass added to the issued card.

Graduate students enrolled in schools that offer the Ventra U-Pass do not need to apply for this #201 program. With the Ventra U-Pass, those graduate students have access to free rides on the #201. Applications submitted for the #201 program will not be processed for graduate students with a school issued U-Pass.

For questions or comments about the shuttles, please contact the Transportation Office of University Services at 312-503-8129 or via email at shuttle@northwestern.edu. For automated message regarding service updates, call 847-467-5284. For Lost & Found and after hours dispatch, call 708-474-7474. <http://www.northwestern.edu/transportation-parking/index.html>

NU-Argonne National Lab Carpool - <https://naise.northwestern.edu/contact/northwestern-argonne-carpool.html>

The Northwestern-Argonne Carpool is a user-run service that travels daily between the Northwestern Evanston Campus and the Argonne National Lab Campus. Students, professors and researchers affiliated with Northwestern are encouraged to take advantage of this carpool, which is fully funded by the Northwestern University Office for Research. Contact the NAISE staff <https://naise.northwestern.edu/contact/northwestern-argonne-carpool.html> for access to the online reservation system.

Getting to O'Hare and Midway Airports

The Pace #250 Bus runs to O'Hare parking lot; board at the Davis Street El stop or along Dempster Street in Evanston.

To get to O'Hare on the El, take the Howard/Dan Ryan to Washington St. station, and transfer to the O'Hare/Congress/Douglas line (the blue line). Follow the signs - you'll go down a flight of stairs and walk through an underground tunnel to the blue line station. The connection is free. You want to head northwest to O'Hare (don't worry - there are lots of signs!), and O'Hare is the last stop. Time: 1-1.5 hours. Cost: \$2.25.

To get to Midway airport, take the Howard/Dan Ryan to the Roosevelt station and transfer to the Midway line (the orange line). Time: 1-2 hours. Cost \$2.25. See also www.transitchicago.com.

Airport vans run from the Hotel Orrington or the Foster Walker Complex at NU to O'Hare. Time: 1-2 hours. www.airportexpress.com, 1-800-654-7871.

Taxi service to and from O'Hare is also available. Time: Usually less than an hour. Cost: ~\$40 (Norshore (847-864-7500) or 303 Cab (847-468-0303)). Taxi service to Midway is quite expensive--about \$60.

Parking on Campus

In order to park in a university parking lot or restricted street, a permit must be displayed in the rear bumper or rear window. Permits may be purchased from the Parking Office at 1819 Hinman Ave. (847-491-3319). Students must live outside the "walking zone" to be eligible to buy a parking permit.

Parking in the City of Evanston

Evanston has many rules and special regulations. Make it a habit to read the signs posted for the entire block each and every time you park. Some restrictions include:

- **Street Cleaning** - Street cleaning on alternate sides of the street, from 1 a.m.-8 a.m. or 9 a.m.-4 p.m. on various weekdays. During this period, parking is forbidden and violators will be ticketed or towed. See posted signs for specific dates when this occurs. <https://www.cityofevanston.org/residents/parking/street-cleaning>
 - Beware of special street cleanings (these will be posted three to four days prior to towing).
- **Two Hour Parking** - Some streets allow parking for up to two hours without a permit. For extended parking, a permit is required (available at the Evanston Civic Center, 2100 Ridge Ave., from the City Collectors Office on the 1st floor). <https://www.cityofevanston.org/residents/parking/residential-parking-permits>
- **Snow Emergency** - During snow emergencies, street parking is restricted to specific areas. Signs for snow emergency areas are posted year round. Familiarize yourself with the affected streets in your neighborhood before the snow falls. Many routes are "No Parking 11 p.m.-Complete Removal". Most residential streets are "No Parking 9 a.m.-6 p.m., alternating odd/even days". "Snow emergencies" are announced on the Evanston city website (<https://www.cityofevanston.org/residents/parking/snow-parking-regulations>) text **COE SNOW** to **468311** and on the Snow Hotline, 847-864-SNOW.
 - **Meters** - Do not assume that you can keep feeding quarters and park in a two hour metered spot for six hours. They will mark your tire with chalk, and even if your meter has money, you will receive a ticket for parking greater than two hours.
 - **Public Lots** - Many residential neighborhoods have lots available to the public with purchase of a sticker from the City of Evanston's Parking Services Department, 3-1-1 or 847-448-4311.