THE DURHAM SCHOOL
OF ARCHITECTURAL ENGINEERING AND CONSTRUCTION

Graduate Student Handbook

For Incoming and Current

UNL Graduate Students

in

Construction Engineering and Management

or

Architectural Engineering

I. INTRODUCTION 5
A. Program Mission and Goals 5
B. Durham School of Architectural Engineering and Construction Support Staff 6
C. Structure and Location of Durham School Graduate Programs 6
II. NEW GRADUATE STUDENT CHECKLISTS 7
A. Domestic Student Checklist 7
B. International Student Checklist 8
III. GRADUATE PROGRAMS OVERVIEW 11
A. Master of Science 11
B. Doctor of Philosophy 11
C. Provisional Admission and Deficiency Course Requirements 12
IV. ADVISOR SELECTION AND ADVISEMENT PROCESS 12
A. Master's Student Advising 12
B. Thesis Advisor Roles and Responsibilities 12
C. Master's Thesis Committee 13
D. Doctoral Student Advising 14
E. Changing Advisors 14
F. Doctoral Supervisory Committee 14
G. Roles and Responsibilities of the Graduate Committee Chair 15
V. GRADUATE STUDIES IN CONSTRUCTION ENGINEERING AND MANAGEMENT (CEMT) 16
A. Construction Programs Graduate Faculty 16
VI. ROADMAP TO YOUR M.S. DEGREE IN CONSTRUCTION ENGINEERING AND MANAGEMENT (M.S. CEMT) 17
A. Typical Path to an M.S. CEMT 17
B. M.S. Degree Requirements 17
Master's Degree – Option A 18
Master's Degree – Option B 18
C. Minors within the Construction Engineering and Management M.S. Program 18
D. M.S. Examination Requirements and Format 19
E. Nature and Scope of Thesis 19
VII. ROADMAP TO YOUR PH.D. IN ENGINEERING WITH A SPECIALIZATION IN CONSTRUCTION ENGINEERING AND MANAGEMENT (PH.D. CEMT) 20

A. Typical Path to a Ph.D. CEMT 20
B. Ph.D. Curriculum 20
Learning Outcomes for CEMT Ph.D. Curriculum 20
Coursework and Research Timeline for CEMT Ph.D. Curriculum 21
Examination and Dissertation Requirements for CEMT Ph.D. Curriculum 21
Competency Requirements for CEMT Ph.D. 22
Qualifying Examination for CEMT Ph.D. 22
Comprehensive Examination for CEMT Ph.D. 23
Dissertation Requirements for CEMT Ph.D. 24
Final Examination for CEMT Ph.D. 24
VIII. GRADUATE STUDIES IN ARCHITECTURAL ENGINEERING 26
A. Architectural Engineering Graduate Faculty 26
IX. ROADMAP TO YOUR MASTER OF ARCHITECTURAL ENGINEERING (M.A.E.) 27
X. ROADMAP TO YOUR M.S. DEGREE IN ARCHITECTURAL ENGINEERING 30
A. Typical Path to an M.S. Degree in Architectural Engineering 30
B. M.S. Degree Requirements 30
Master's Degree – Option A 30
Master's Degree – Option B 31
C. Minors within the Architectural Engineering M.S. Program 31
D. M.S. Examination Requirements and Format 31
E. Nature and Scope of Thesis 32
XI. ROADMAP TO YOUR PH.D. IN ARCHITECTURAL ENGINEERING 33
A. Typical Path to the Doctoral Degree 33
B. Ph.D. Curriculum 33
Learning Outcomes of the Ph.D. Program in Architectural Engineering 33
Coursework and Research Timeline 34
Examination and Dissertation Requirements 34
Qualifying Exam 34
Comprehensive Examination 37
Dissertation Requirements 38
Final Examination 38
XII. ASSISTANTSHIPS AND OTHER FINANCIAL SUPPORT 40
A. Graduate Assistant (GA) Expectations for both GRA and GTA Appointments 40

GA Work Style and Habits: 40
GA Outcome Expectations: 41
GA Performance Evaluations and Review Interval: 41
B. Graduate Research Assistantships 42
GRA Job Description: 42
GRA Terms of Assignment: 42
GRA Required Qualifications: 42
C. Graduate Teaching Assistantships 43
GTA Job Description: 43
GTA Expanded Utilization Examples: 43
GTA Term of Assignment: 44
GTA Required Qualifications: 44
GTA Training: 44
D. Fellowships and Scholarships 45
XIII. HOUSING 46
XIV. TRANSPORTATION AND PARKING 46
XV. COURSE LISTINGS 46
XVI. GRADUATE FREQUENTLY ASKED QUESTIONS (FAQ) 46

THE DURHAM SCHOOL WOULD LIKE TO THANK THE UNL COLLEGE OF ENGINEERING DEPARTMENT OF CIVIL ENGINEERING, AND SPECIFICALLY DR. SHANNON BARTELT-HUNT, FOR PROVIDING US WITH A TEMPLATE FOR THE ORIGINAL 2016 VERSION OF THIS HANDBOOK.

I. INTRODUCTION

The Durham School of Architectural Engineering and Construction offers advanced degrees in Architectural Engineering (AE) and in Construction Engineering and Management (CEMT). Each of these programs has specific requirements for both the University of Nebraska-Lincoln Office of Graduate Studies (Graduate Studies) and The Durham School.

Director of The Durham School
Lily M. Wang, PhD, PE, FASA
Charles W. and Margre H. Durham Distinguished Professor
100B Peter Kiewit Institute (Scott Campus); (402) 554-2065
A 405Z Kiewit Hall (City Campus); (402) 472-8897
lilywang@unl.edu

The University of Nebraska-Lincoln Graduate & Professional Catalog
The Graduate & Professional Catalog (Graduate Catalog) describes all graduate policies and programs. The current catalog and archived versions of previous catalogs are available online.

This handbook describes Durham School graduate programs and requirements for each degree and is to be considered a supplement to the Graduate Catalog. Consult the Graduate Catalog for requirements according to the UNL graduate college, the Office of Graduate Studies.

Direct specific inquiries with respect to The Durham School graduate programs to the following:

Graduate Chair of Construction Engineering and Management
Dr. Terry L. Stentz, Ph.D., MPH, CPE, CPC A 405CC Kiewit Hall
Lincoln, NE 68588-0500
Phone: 402-472-3742
E-mail: tstentz1@unl.edu

Graduate Chair of Architectural Engineering
Dr. Josephine Lau, Ph.D. PKI 105D
Omaha, NE 68182-0816
Phone: 402-554-2079
E-mail: jlau3@unl.edu

Durham School Graduate Program Assistant
Kasey Jensen PKI 100
Omaha, NE 68182-0816
Phone: 402-554-5935
E-mail: ejensen32@unl.edu

A. Program Mission and Goals

The mission of The Durham School of Architectural Engineering and Construction is to educate the engineer and constructor of the future—a professional that is not only technically competent, but who also focuses on innovation, possesses an entrepreneurial spirit, enjoys global and social awareness and is a leader in the community.

B. Durham School of Architectural Engineering and Construction Support Staff

The Durham School has two (2) support staff members. Kasey Jensen, located on the Scott Campus in Omaha, is the Durham School Graduate Program Assistant.

Staff	Position	Office	Email	Phone
Ranelle Korth	Assistant Director of Operations	PKI 100C Omaha KH A405AA Lincoln	ranelle.korth@unl.edu	(402) 554-6009
Kasey Jensen	Graduate Program Assistant	PKI 100 Omaha	ejensen32@unl.edu	(402) 554-5935

C. Structure and Location of Durham School Graduate Programs

The Durham School offers its Construction Engineering and Management (CEMT) graduate programs on two campuses—UNL's City Campus in Lincoln, Nebraska and the Scott Campus, at the University of Nebraska at Omaha (UNO), in Omaha, Nebraska. CEMT students may choose their home campus and may take courses at either or both campuses. Regardless of campus choice, Durham School graduate students are students admitted by the UNL graduate college, and all engineering coursework is taught by UNL faculty. The degree-awarding institution is UNL.

The Architectural Engineering (AE) graduate programs are housed entirely on the Scott Campus in Omaha, Nebraska, allowing opportunities for Durham School students to develop robust working relationships with AE industry partners in and around Omaha.

Intercampus students enrolling in courses at UNO can direct intercampus questions to Kasey Jensen.

II. NEW GRADUATE STUDENT CHECKLISTS

A. Domestic Student Checklist

- ✓ Check in with the department
  - Contact Kasey Jensen
    - Scott Campus, Peter Kiewit Institute 100
  - If you are to be employed, prepare to provide:
    - your driver's license or passport;
    - your signed social security card (the physical card, not a copy); and
    - a voided check or direct deposit form from your bank.
- ✓ Contact your advisor
  - Your advisor can provide information about the duties of your assistantship (if you have one) and your study program, including suggested courses for your first semester.
- ✓ Complete immunization requirements
  - See New Student Health Requirement.
  - Call your campus Health Center for more information or to make an appointment.
    - Lincoln: 402-472-5000
    - Omaha: 402-554-2374
- ✓ Enroll in classes
  - Lincoln: Access MyRED to register for courses.
  - Omaha: Complete the Intercampus Application.
    - Complete **every semester** to enroll in courses at UNO.
    - Once processed, access MavLINK to register for courses.
- ✓ Obtain your student ID card
  - Lincoln: Follow instructions to obtain an NCard.
  - Omaha: Once eligible to enroll in courses at UNO as an intercampus student, follow instructions to obtain a MavCARD.
- ✓ Purchase a parking permit (if you have a vehicle and wish to park on campus)
  - Lincoln: Visit Parking and Transit Services (UNL).
  - Omaha: Visit Parking and Transit Services (UNO).
- ✓ Enroll in or waive student health insurance
  - Lincoln:
    - Enroll in Student Health Insurance (**except** students on a paid Graduate Assistantship).
  - Lincoln-based **Graduate Assistants**
    - You will be automatically enrolled in student health insurance.
    - To waive this benefit, you must complete the health insurance waiver request form **every semester** within 14 days of beginning your employment.
  - Omaha: UNO has different student insurance portal dates than UNL. Please contact unobst@unomaha.edu for the dates if you have questions.
    - Communication regarding insurance enrollment is sent to the UNO email account.
    - Automatic enrollment at UNO will occur once the insurance portal date closes.

        - Insurance is waived at UNO (visiting campus) if it is already being charged at UNL (**except** students on a paid Graduate Assistantship).
        - *It is a best practice to log into MavLINK and MyRed to prevent being charged for insurance on both campuses.*
    - Omaha-based **Graduate Assistants:**
        - Fill out the health insurance waiver at UNL to avoid being charged for two plans.
        - Fill out the waiver **every semester** within 14 days of beginning your employment.
- ✓ Plan to attend welcome and orientation events
    - Visit the Office of Graduate Studies Welcome page for information.
- ✓ Sign into your email
    - Lincoln and Omaha: http://huskers.unl.edu/liveedu/
        - Official university communication from UNL will be sent to your @huskers.unl.edu email address.
    - Omaha: https://www.unomaha.edu/information-technology-services/index.php
        - After the Intercampus Application has been processed, your @unomaha.edu account will be set up automatically.
        - This will be used for login to various systems at UNO.
        - Official university communication from UNO will be sent to your @unomaha.edu email address.
        - *It is suggested to set up your email so that both UNO and UNL communications come to a single inbox.*
- ✓ Review Student Code of Conduct
    - See Section II: Standards of Academic Integrity and Responsible Conduct.

B. International Student Checklist

- ✓ Check in with the department
    - Contact Kasey Jensen
        - Scott Campus, Peter Kiewit Institute 100
    - If you are to be employed
        - Provide your immigration documentation
            - Current passport
            - Visa
            - I-20
            - I-94
        - Obtain a local address.
        - Obtain a domestic phone number.
        - Arrange for a domestic bank account.
            - A bank account in the US is required for direct deposit of employment pay.
            - When opening an account, bring a passport and an initial sum of money to deposit.
        - Bring a voided check or direct deposit form to the department for employment paperwork.
        - Apply for a social security number (SSN).

- Obtain employment verification letter signed by the department and by the International Student and Scholar Office (ISSO).
- Visit the local Social Security Administration (SSA) office to apply.
- Bring the receipt of application from the SSA to the department for employment paperwork.
- Once you receive your social security card, provide the department with a copy of the signed card for employment paperwork (**never send sensitive information in an email**).

✓ Visit the Office of Graduate Studies website and become familiar with their policies regarding your stay and course of study.

✓ Visit Graduate Student Check-In at the International Student and Scholar Office (ISSO) and follow the procedures given to maintain legal immigration status.
  - Lincoln: ISSO is located in Louise Pound Hall Suite 130.
  - Omaha: An ISSO representative is available at PKI 206F one day per month.
    - Contact Kasey Jensen for ISSO UNO visitation schedule.

✓ English proficiency requirements
  - Check your Letter of Admission from Graduate Studies to confirm whether you are required to sit for the English Language Test (ELT) or take an English language course.
  - The English language course hours may count toward the Ph.D. credits if approved by the supervisory committee.
  - Contact Graduate Studies at 402-472-2875 or graduate@unl.edu if you have additional questions.

✓ Contact your advisor
  - Your advisor can provide information about the duties of your assistantship (if you have one) and your study program, including suggested courses for your first semester.

✓ Complete immunization requirements
  - See New Student Health Requirement.
  - Call your campus Health Center for more information or to make an appointment.
    - Lincoln: 402-472-5000
    - Omaha: 402-554-2374

✓ Enroll in classes
  - Lincoln: Access MyRED to register for courses.
  - Omaha: Complete the Intercampus Application.
    - Complete **every semester** to enroll in courses at UNO.
    - Once processed, access MavLINK to register for courses.

✓ Obtain your student ID card
  - Lincoln: Follow instructions to obtain an NCard.
  - Omaha: Once eligible to enroll in courses at UNO as an intercampus student, follow instructions to obtain a MavCARD.

✓ Purchase a parking permit (if you have a vehicle and wish to park on campus)
  - Lincoln: Visit Parking and Transit Services (UNL).
  - Omaha: Visit Parking and Transit Services (UNO).

✓ Enroll in or waive student health insurance

- Lincoln:
    - Enroll in Student Health Insurance (**except** students on a paid Graduate Assistantship).
- Lincoln-based **Graduate Assistants**
    - You will be automatically enrolled in student health insurance.
    - To waive this benefit, you must complete the health insurance waiver request form **every semester** within 14 days of beginning your employment.
- Omaha: UNO has different student insurance portal dates than UNL. Please contact unobst@unomaha.edu for the dates if you have questions.
    - Communication regarding insurance enrollment is sent to the UNO email account.
    - Automatic enrollment at UNO will occur once the insurance portal date closes.
    - Insurance is waived at UNO (visiting campus) if it is already being charged at UNL (**except** students on a paid Graduate Assistantship).
    - *It is a best practice to log into MavLINK and MyRed to prevent being charged for insurance on both campuses.*
- Omaha-based **Graduate Assistants:**
    - Fill out the health insurance waiver at UNL to avoid being charged for two plans.
    - Fill out the waiver **every semester** within 14 days of beginning your employment.

✓ Plan to attend welcome and orientation events
- Visit the Office of Graduate Studies Welcome page for information.

✓ Sign into your email
- Lincoln and Omaha: http://huskers.unl.edu/liveedu/
    - Official university communication from UNL will be sent to your @huskers.unl.edu email address.
- Omaha: https://www.unomaha.edu/information-technology-services/index.php
    - After the Intercampus Application has been processed, your @unomaha.edu account will be set up automatically.
    - This will be used for login to various systems at UNO.
    - Official university communication from UNO will be sent to your @unomaha.edu email address.
    - *It is suggested to set up your email so that both UNO and UNL communications come to a single inbox.*

✓ Review Student Code of Conduct
- See Section II: Standards of Academic Integrity and Responsible Conduct.

III. GRADUATE PROGRAMS OVERVIEW

A. Master of Science

The Master of Science (M.S.) requires completion of a minimum of 30* credits of coursework depending on the option chosen. No credits may be more than 10 years old, though the time to complete a master's degree is within 5 years of the first term of admission into the program. If credit hours applied to the Memorandum of Courses become over 10 years old, the Memorandum must be updated to include more current coursework to replace the expired hours.
**prior to fall 2021, M.S. required 36 hours per the Office of Graduate Studies*

- Option A is intended for students with a research emphasis
  - Thesis-based
  - Minimum 30 semester hours of credit
    - 20-24 semester hours of regular coursework
    - Thesis equivalent to 6-10 semester hours
- Option B
  - Coursework-only, no thesis
  - Minimum of 30 semester hours of course credit
    - At least half of credit hours for courses within the major
    - At least 15 credit hours in graduate-only (no undergraduate offering) courses
    - Remaining course credits may be applied to an approved minor consisting of at least 9 credit hours

The Architectural Engineering program also offers the Master of Architectural Engineering (M.A.E.), which is a specialized, fifth-year Option B master's degree, specifically for students who earned a B.S. in AE from UNL.

For specific terms about the master's degree programs see the Graduate and Professional Catalog.

B. Doctor of Philosophy

Doctoral study is intended for students seeking in-depth knowledge in their field beyond that resulting from an M.S. degree who wish to pursue faculty positions or other research positions in industry or governmental institutions. The time limit for granting the doctoral degree is eight (8) years from the time of filing the Program of Studies at Graduate Studies.

- The Doctor of Philosophy (Ph.D.) requires
  - 90 semester hours of graduate coursework
    - Can include up to 30 credits of master's degree credits with approval of the supervisory committee and the dean of Graduate Studies
    - 12 (minimum) to 55 (maximum) of dissertation credits

For specific terms about the Doctoral Degree Programs see the Graduate and Professional Catalog.

C. Provisional Admission and Deficiency Course Requirements

Students admitted under provisional status may have deficiency requirements (courses that must be completed, but do not count toward the credit requirement) or English language requirements. Regardless of the type of admission, discuss your background and interests in your first meeting with your advisor who may suggest additional preparation as a part of your program.

If admitted with provisional requirements, discuss with your advisor how to address them early in your program. The provisional status will be changed to active status when the conditions specified have been met, as determined by the program graduate chair and approved by the associate dean for Graduate Studies.

IV. ADVISOR SELECTION AND ADVISEMENT PROCESS

The graduate committee provides oversight of academic advising for current graduate students. All graduate students, including those funded by faculty from another department, must have a graduate faculty member from their program department as their academic advisor. If a faculty member from another department is providing funding, that faculty member may serve as a co-chair of the master's thesis committee or doctoral supervisory committee.

A. Master's Student Advising

Upon admission, most students are assigned to the graduate committee chair as a temporary advisor. A permanent academic advisor from the graduate faculty will be assigned by the end of the first year, based on the student's interests. For a master's program under Option A, the academic advisor is also the thesis advisor.

B. Thesis Advisor Roles and Responsibilities

The role of the thesis advisor includes the following:

- Ensuring communication about requirements and policies of the graduate program.
- Advising for development of a program plan, including appropriate coursework, research or creative activity and on available resources.
- Advising on the selection of a thesis topic with realistic prospects for successful completion and on the formation of a guidance committee.
- Providing training and oversight in creative activities, research rigor, theoretical and technical aspects of the thesis or project work and in professional integrity.
- Encouraging the student to stay abreast of the literature and cutting-edge ideas in the field.
- Helping to develop professional skills in writing reports and papers, making professional presentations, establishing professional networks, interviewing and evaluating manuscripts and papers.
- Providing regular feedback on progress toward degree completion, including feedback on research or creative activities, coursework, teaching and constructive criticism if progress does not meet expectations.
- Guiding the student to develop into a successful professional and colleague by encouraging participation in research or creative activities and dissemination of results in appropriate scholarly or public forums.

- Facilitating career development, including advising on appropriate job and career options and on the preparation of application materials for appropriate fellowship, scholarship and other relevant opportunities.
- Writing letters of reference for appropriate fellowship, scholarship, award and job opportunities.
- Providing for supervision and advising when the faculty advisor is on leave or extended absence.

Once a permanent thesis advisor is selected, it is unusual to change advisors. However, if a change seems imperative, consult with the graduate chair who will facilitate the change.

C. Master's Thesis Committee

Option A M.S. students have the responsibility to form a thesis committee with the approval and assistance of the advisor and approval of the graduate chair. This committee will have the following requirements:

- The thesis advisor acts as the committee chairperson
    - A committee chairperson going on leave shall provide for the necessary guidance of their advisees during their absence.
- The committee must consist of the chairperson and at least two (2) other members.
    - If no minor is chosen, at least three (3) members, including the chair, must be from the degree program.
    - If a minor is chosen, at least two (2) members, including the chair, shall be from the degree program and one (1) from the minor department.
- All professors on the committee must either be a member of the graduate faculty, or a graduate faculty associate, approved to perform specified graduate faculty duties*.

**If a member of the committee other than the chair leaves the employ of the university, or retires, a replacement should be appointed by approval of the program graduate committee. In circumstances where a continuing expertise is needed and the faculty member is willing to continue serving, the departing faculty member may continue as a member or co-chair of the committee, with approval of the program graduate committee and the UNL dean of Graduate Studies. Should the student's advisor unexpectedly leave UNL, it is The Durham School director's responsibility to facilitate arrangements that allow the student to successfully complete his/her degree program.*

Responsibilities of the thesis committee include the following:

- Advising the student on coursework, research or creative activities.
- Providing feedback and guidance at least annually concerning progress toward the degree.
- Reviewing the thesis in a timely, constructive and critical manner.

Responsibilities of the student include the following:

- Consulting with the advisor to identify faculty members with expertise and interest in supervising the proposed research and meeting with them to discuss their willingness to serve in this capacity.
- Meeting with the committee before the research plan is finalized to review the proposed work and modify as appropriate.

- Keeping the committee informed on the progress of the research and soliciting their input to address unforeseen issues or to improve quality.
- Scheduling the final examination and providing the committee with a copy of the final written product at least two weeks before the examination.

D. Doctoral Student Advising

Students admitted to the Ph.D. program with a research assistantship provided by a particular faculty member will be assigned to that faculty member as their academic advisor and dissertation advisor, known as the supervising professor. For Ph.D. students admitted with a graduate assistantship or fellowship not explicitly tied to a particular faculty member, the selection of an advisor is based on mutual research interests.

The policy of The Durham School is to establish prior to admission that there is interest from at least one faculty member to serve as advisor to the Ph.D. applicant. If more than one faculty member has expressed interest in serving as academic advisor to the applicant, the newly admitted graduate student will visit with all faculty expressing interest and select their advisor based on these meetings. This should typically occur within the first month, and certainly by no later than the end of the first semester. The Ph.D. academic advisor will be the student's supervising professor and will serve as the chairperson of the doctoral supervisory committee.

E. Changing Advisors

A student may change advisors if there is mutual agreement the change would be beneficial. A common reason to switch advisors is that the student is more interested in the research done by another faculty member than that of the assigned advisor. It is recommended a student seek the guidance of the Doctoral Programs Coordinator in the Office of Graduate Studies before taking steps to change advisors.

If a student is supported as a graduate research assistant (GRA), but there are extenuating circumstances that require changing advisors, they should meet with their current advisor as soon as the change is deemed necessary. Part of this meeting should be a discussion on how to fulfill the obligations of the research assistantship. After meeting with the advisor, a Change of Committee form must be completed listing the full committee as it is after the change. The form must be signed by the past advisor (if still at UNL), the new advisor and the program graduate committee chair, then submitted to the Doctoral Programs Coordinator in Graduate Studies at UNL.

F. Doctoral Supervisory Committee

Each Ph.D. student must form a supervisory committee in consultation with their supervising professor. The supervisory committee should be formed after the completion of 36 hours of coursework and not later than the completion of 45 hours of coursework.

All faculty on the supervisory committee must either be a member of the graduate faculty or be non-graduate faculty who has been approved by the department graduate committee and the dean of Graduate Studies to perform specified graduate faculty duties. The committee will consist of at least four (4) graduate faculty members. At least one graduate faculty member external to the academic department or area in which the doctorate is to be granted must be on the committee.

The representative of the minor department on the committee may serve as the outside representative.

Information on the specific roles of supervisory committee members can be found in the Graduate Catalog but briefly:

- The chair serves as the advisor and mentor, assists with selection of other supervisory committee members and courses for the Program of Studies and monitors progress.
- Two (2) members of the supervisory committee are designated as reading members. These members, along with the chair, read the draft of the dissertation to determine if the student is ready to defend.
- One (1) member of the committee must be external to the student's major program but serve as a graduate faculty member within the University of Nebraska system.
    - If a faculty member from an external UNL department is serving as the co-chair, they cannot also serve as the outside representative.

G. Roles and Responsibilities of the Graduate Committee Chair

The University of Nebraska-Lincoln Office of Graduate Studies approves and appoints the graduate chair of an academic degree program. The graduate chair is a position of academic leadership established to foster the rigor and sophistication of graduate education in a degree program. Graduate Studies staff is prepared to provide necessary assistance to the graduate chair in every aspect of the assigned roles and responsibilities.

Responsibilities of the graduate committee chair are:

- Assuring fair and consistent compliance with Office of Graduate Studies policies and overseeing student appeals.
- Overseeing graduate degrees, majors, specializations, minors and certificate programs in the program unit.
- Facilitating the agenda and deliberations of the graduate committee.
- Helping design curriculum, examinations and research requirements
- Assisting with mentoring for graduate students.
- Assuring that every graduate student meets the highest standards of academic integrity.

V. GRADUATE STUDIES IN CONSTRUCTION ENGINEERING AND MANAGEMENT (CEMT)

The Durham School currently offers three (3) graduate programs in Construction Engineering and Management.

The Construction Engineering and Management graduate certificate gives students the opportunity to take 12 credit hours in graduate coursework to earn a certificate, and potentially continue for another 18 credit hours to complete an M.S. in Construction Engineering and Management, Option B.

The Master of Science (M.S.) in Construction Engineering and Management requires completion of 30 credits for both Options A and B.

The Ph.D. in Engineering with a concentration in Construction Engineering and Management requires 90 semester hours of graduate coursework beyond the bachelor's degree, including a minimum of 12 hours of dissertation credits*. The time limit for granting the doctoral degree is eight (8) years from the time of filing the Program of Studies. The Graduate College allows for up to 30 hours of an acceptable master's degree to be transferred into the Ph.D. program, as evaluated and recommended by the CEMT Graduate Committee.
**55 hours maximum dissertation credits*

Oversight for construction graduate programs resides with the Construction Programs Graduate Committee, which consists of appointed faculty representatives with expertise and focus in construction engineering and construction management.

A. Construction Programs Graduate Faculty

Faculty	Office	Email
Dr. Stuart Bernstein	104A PKI, Omaha	sbernstein2@unl.edu
Dr. Kevin Grosskopf	A 405A KH, Lincoln	kevin.grosskopf@unl.edu
Dr. Jun Ho	A 405G KH, Lincoln	chunhsing.ho@unl.edu
Dr. Kyungki Kim	101A PKI, Omaha	kkim13@unl.edu
Dr. Kelli Kopocis	104G PKI, Omaha	kellikopocis@unl.edu
Dr. Marc Maguire	104E PKI, Omaha	marc.maguire@unl.edu
Dr. George Morcous	105B PKI, Omaha	gmorcous2@unl.edu
Dr. Avery Schwer	101D PKI, Omaha	aschwer1@unl.edu
Dr. Zhigang Shen	A 405EE KH, Lincoln	shen@unl.edu
Dr. Terry Stentz	A 405CC KH, Lincoln	tstentz1@unl.edu

VI. ROADMAP TO YOUR M.S. DEGREE IN CONSTRUCTION ENGINEERING AND MANAGEMENT (M.S. CEMT)

A. Typical Path to an M.S. CEMT

The typical path for an M.S. Degree in Construction Engineering and Management is as follows:

□	Meet with the graduate chair and your prospective advisor as soon as possible.
	□ Meet with your advisor to plan your first semester schedule.
□	File the Memorandum of Courses (MOC)
	□ Must be filed before completing 15 hours of coursework for the MS degree.
	□ You cannot apply for graduation in the same semester as you file the MOC.
□	Form the thesis committee consisting of your advisor and at least two additional CEMT graduate faculty.
□	Complete the required coursework and, for Option A, your thesis.
□	File an Application for Graduation in MyRED.
	□ File early in the semester in which you expect to graduate.
□	Pass the written comprehensive examination.
	□ For Option A students only, the thesis is the written comprehensive exam.
□	File the Final Examination Report.
	□ At least four weeks (three weeks in summer) prior to the date of the oral exam.
	□ Check the dates shown on the Graduate Studies website.
□	Schedule and complete the oral comprehensive exam.
	□ For Option A, this is an oral defense of the thesis. □ For Option B, work with your advisor to choose either written or oral final exam.
□	Submit the final thesis for Option A.
□	All forms, milestones and deadlines for the master's degree can be found HERE.

B. M.S. Degree Requirements

The M.S. degree requires completion of 30 credits of coursework. During the first semester of graduate study, the student and advisor work to develop a draft Memorandum of Courses that meets the academic needs and interests of the student and complies with the M.S. CEMT program requirements. The Memorandum of Courses specifies the courses and optional project or thesis that the student will complete. The initial consideration for most students is whether to satisfy the degree requirements through Option A or B.

Coursework applied to the M.S. expires after 10 years. Expired courses must be replaced or retaken as they are not eligible to fulfill the requirements of the degree. Additionally, beginning in catalog year 2021-2022, students have five years after admission to complete their master's program.

Master's Degree – Option A
Under this option a student must earn a minimum of 30 semester hours of credit, consisting of 20-24 semester hours of regular coursework, and present a thesis equivalent to 6-10 semester hours. At least one-half of the required work, including thesis, must be taken in construction engineering (CONE) and construction management (CNST) courses. The remaining credit hours may be earned in supporting courses or in a minor consisting of at least 9 credit hours. In addition to the thesis, 8 credit hours must be earned in courses that are exclusively graduate-level (900- or 800-level without a 400-level or lower cross-listing).

The subject of the thesis should be chosen from the field of major interest and must be approved by the thesis advisor. The thesis should reveal a capacity to carry on independent study or research and demonstrate an ability to use techniques employed in the major field. It must conform in style and form to the guidelines set forth on the UNL Graduate Studies website. An electronic copy of the thesis and abstract must be presented for preliminary review to the Master's Programs Coordinator in Graduate Studies at least two weeks (one week in the summer sessions) before the date of the oral examination. A candidate is not eligible for the oral examination until the thesis is completed and approved by their major advisor. After the thesis has been successfully defended, it needs to be electronically submitted to the Master's Programs Coordinator for a final review prior to being uploaded to Digital Commons.

Master's Degree – Option B
Under this option, a student must earn a minimum of 30 semester hours of credit in courses representing the major. A thesis is not required*. This option encourages a wider range of courses than is permissible under Option A.

At least one-half of the credit hours required for the degree must be in construction engineering (CONE) or construction management (CNST). The remaining work may be in supporting courses and may comprise a minor consisting of at least 9 credit hours selected from and approved by the minor department. A minor is optional, not required. Finally, at least 15 credit hours must be earned in courses that are exclusively graduate-level (900- or 800-level without a 400-level or lower cross-listing).
**Students who are working on the master's degree under Option B and later elect to continue with graduate work for Ph.D. in CEMT must give evidence of ability to carry out independent research.*

C. Minors within the Construction Engineering and Management M.S. Program
Under M.S. Options A or B, a student may pursue up to two minors. A minor typically consists of nine (9) or more credit hours in a specific area outside of the major department. Each minor may have requirements for the number of credit hours as well as which specific courses count toward the minor.

Students are encouraged to identify a minor early in their academic program and work with their faculty advisor and the graduate chair, in conjunction with faculty in the minor department, to determine the specific coursework requirements.

Common minors for M.S. CEMT students have included business, civil engineering, architectural engineering, architecture, and community and regional planning.

D. M.S. Examination Requirements and Format

The final examination is the culmination of a student's graduate education and training at the master's level. It reflects not only the accomplishments of the graduate student, but also the quality of the graduate program. Meeting the requirement for the final exam depends on the chosen option (A or B).

- For Option A, the requirement is met through the presentation of a thesis and an oral thesis defense.
- For Option B, the comprehensive exam consists of a written or oral examination at the discretion of the student's faculty advisor and the CEMT Graduate Committee chair.

E. Nature and Scope of Thesis

An approved thesis that is accepted by the graduate school becomes a single-author publication and contributes to the body of knowledge in the construction engineering and management discipline. Approved theses are uploaded to Digital Commons. Instructions for uploading the thesis document can be found in the *Guide to Submitting* linked at Digital Commons.

VII. ROADMAP TO YOUR PH.D. IN ENGINEERING WITH A SPECIALIZATION IN CONSTRUCTION ENGINEERING AND MANAGEMENT (PH.D. CEMT)

Most Ph.D. CEMT students should be able to finish their doctoral program in an average of approximately three (3) years beyond the M.S. degree if they are able to apply the maximum allowable credits (30 hours) from their M.S. coursework. All requirements for the degree must be completed in no more than eight (8) years from the time of filing the Program of Studies with Graduate Studies.

A. Typical Path to a Ph.D. CEMT

The typical path toward a Ph.D. CEMT is as follows:

☐	Meet with your faculty advisor to plan academic goals and your first semester of studies.
☐	Take and pass the qualifying exam (within the first academic year of study).
☐	Submit the Appointment of the Supervisory Committee* form.
	☐ Form the supervisory committee prior to the completion of 45 credit hours.
☐	Submit the Program of Studies form.
	☐ Design your coursework program with the supervisory committee.
☐	Take and pass the comprehensive exam.
	☐ Exam is given when coursework has been substantially completed.
☐	Supervisory committee submits the Application for Admission to Candidacy form**.
	☐ Upon passing the comprehensive exam.
☐	Complete your research and write your dissertation.
☐	Apply for Graduation in MyRED and submit the Hooding Participation form.
☐	Apply for your Final Oral Examination.
☐	Defend your dissertation.
☐	Upload your dissertation to ProQuest and Digital Commons.
☐	All forms, milestones and deadlines for the Ph.D. degree can be found HERE.

**If a change of any members of the supervisory committee is needed, you must submit a Change of Committee form.*

***Once candidacy is achieved, registration is required each fall and spring semester until graduation. Failure to register will result in termination of candidacy and thus, the program.*

B. Ph.D. Curriculum

The Ph.D. curriculum consists of three elements:

1. Learning outcomes
2. Coursework requirements
3. Examination and dissertation requirements

Each element is covered below.

Learning Outcomes for CEMT Ph.D. Curriculum

- *Fundamental Knowledge*: Graduates will command profound basic and applied knowledge in their specialty area within their specialization. This will be achieved

through their coursework. Evaluation of this outcome will be through the qualifying exam.

- *Independent Abilities*: Graduates will have the ability to conduct a major independent and original research study that includes gathering of information, gaining an understanding of the process of academic or commercial exploitation of research results, demonstrating an understanding of contemporary research issues, effective project management, synthesis and evaluation, and appropriate dissemination of research findings. This outcome will be achieved through and evaluated using their dissertation research and publications resulting from the dissertation research.
- *Critical Thinking*: Graduates will have a profound ability to critique and synthesize literature, review results and to apply knowledge gained from literature to develop new ideas, to design and evaluate scientific investigations, and to assess, interpret and understand data related to their specialty area within their specialization. Evidence of this outcome is demonstrated in and evaluated using the comprehensive exam and the dissertation research.
- *Advanced Knowledge*: Graduates will demonstrate profound mastery of the subject matter at a deeper theoretical and applied level well beyond fundamental knowledge gained in the undergraduate course sequence and the higher-level knowledge gained in the master's level course sequence. Evidence of this will be demonstrated through the qualifying exam, the comprehensive exam and the final exam.
- *Effective Communication*: Graduates will have the ability to construct coherent arguments and articulate ideas clearly to an audience, through a variety of techniques, constructively defend research outcomes, justify their research to the profession and promote the public understanding of their research fields. This will be achieved through presentation and publication of the student's dissertation research.
- *Professional Development*: A student graduating with a doctoral degree in engineering, with an emphasis in construction engineering and management is expected to demonstrate interest in pursuing life-long learning by attaining professional licenses, and obtaining professional development hours by attendance at conferences, higher educational classes, short courses and seminars, conducting classes, and publishing. Periodic surveys of our graduates will be the method used to evaluate this outcome.

Coursework and Research Timeline for CEMT Ph.D. Curriculum

The Ph.D. CEMT should ordinarily take no more than five years to complete. While individual circumstances will vary, a typical timeline will be as follows:

- Year 1-2 (0-42 credits): Coursework, preliminary research, supervisory committee selection, submission of Program of Studies
- Year 3 (43-63 credits): Coursework, preliminary research, comprehensive exam
- Year 4 (64-84 credits): Research
- Year 5 (85 or more credits): Research, completion of dissertation, final examination (dissertation defense)

Examination and Dissertation Requirements for CEMT Ph.D. Curriculum

The Ph.D. CEMT has competency (qualifying), comprehensive and final examination requirements as described below.

Competency Requirements for CEMT Ph.D.

All CEMT students entering the Ph.D. program must demonstrate a basic level of competence in the following six (6) core areas at the discretion of the CEMT Graduate Committee:

1. Project Management/Project Administration
2. Estimating and Scheduling
3. Materials and Methods
4. Safety and Human Factors
5. Productivity
6. Environmental Systems, Energy and Sustainability

There are six (6) options for demonstrating core area competencies, listed in the table below. The CEMT Graduate Committee retains the right to review and accept terms proposed by the student's faculty advisor.

Option 1	Present a B.S. in construction management, construction engineering or construction science from an ABET- or ACCE-accredited institution.
Option 2	Pass the American Institute of Constructors (AIC) Certified Professional Constructor (CPC) Exam Level 1 or 2, the Civil Engineering option Fundamentalsof Engineering (FE) Exam or other approved engineering exam.
Option 3	Pass a qualifying exam administered by the CEMT Graduate Committee no later than the end of second semester of graduate study (see ***Qualifying Examination*** section below).
Option 4	Complete core area coursework with an acceptable final grade, evaluated on a case-by-case basis by the CEMT Graduate Committee.
Option 5	Demonstrate substantive professional construction work experience in the six core areas, evaluated on a case-by-case basis by the CEMT Graduate Committee.
Option 6	Complete a graduate-level CEMT core-areas intense review course (taught only in the 8-week summer session) with a "B" or better. This is not applicable toward your graduate degree program credits.

Qualifying Examination for CEMT Ph.D.

The CEMT graduate qualifying examination is meant to reflect the student's knowledge and experience base in the six (6) core areas described above and will consist of written and oral components requiring a combined score of 75%.

The qualifying exam must be taken and passed before the end of the first full year of study. Students who do not pass will be offered an opportunity to retake the exam within six months of the first attempt. Students who do not pass the second time will not be able to continue their Ph.D. program in CEMT.

Written Examination

- 4-hour open book and notes. Allowable calculators must comply with NCEES requirements.
- Students will not be allowed to ask technical questions during the test.
- Questions will be developed in the topics listed in Section 3 below.

- Student responses will be graded by faculty members in each core area.
- The final grade will be reported within three (3) weeks of the written exam date.

Oral Examination

- 1-hour with closed book, notes, and no calculator.
- Questions are from the topics listed in Section 3 below.
- A minimum of three faculty members will administer the questions and will deliberate immediately after, deciding the result with a majority vote.
- The final grade will be reported within one (1) week of the oral exam date.

Specific Topics Tested

Group A: Project Management/Project Administration
Group B: Estimating and Scheduling
Group C: Materials and Methods
Group D: Safety, Human Factors, Productivity
Group E: Environmental Systems, Energy, Sustainability

Comprehensive Examination for CEMT Ph.D.

Upon substantially completing studies in the doctoral program, a comprehensive exam is required in the major and minor or related fields. The comprehensive exam is an investigation of breadth of understanding in the student's subject field of knowledge, not of the coursework requirements, and has written and oral portions. Each member of the supervisory committee receives a copy of the written exam at least two (2) weeks before the oral exam date.

Written Portion of Comprehensive Exam

There are three (3) options for the written portion of the comprehensive exam. The appropriate option is determined by the supervisory committee. These options are:

1. Dissertation proposal.
2. A funded research proposal appropriate to the field of research with all portions of the proposal written independently by the student, except the section regarding budget beyond instrumentation purchasing cost, and formatted appropriately for the funding agency.
3. Three (3) members of the supervisory committee will each pose two (2) questions in the major and minor fields. The student must answer one (1) question from each of the committee members in no more than 2,500 words per response.

Oral Portion of Comprehensive Exam

The oral portion of the exam consists of a 30-minute presentation on the proposed topic. Questioning by the graduate committee will follow the presentation. It is anticipated that the total time for the oral exam will be approximately two (2) hours.
The three (3) possible outcomes for the comprehensive exam for the first time are:

1. Unqualified pass.
2. Pass with the qualification that the student work with their advisor to adjust the proposal.

3. Failure, with the option of retaking the exam at a later date, mutually agreed upon by the student and the faculty. However, it may not be retaken in the same semester as the first attempt. Typically, the latest retake date will be six (6) months from the date of the original exam. A failure on the second attempt is considered final. The student will either be asked to find another dissertation topic or to leave the graduate program.

The supervisory committee chair will report to the graduate chair and Graduate Studies the outcome of the comprehensive exam. When the student has passed the comprehensive examination and removed any provisional admission requirements, their supervisory committee will file the Application for Admission to Candidacy for the doctoral degree, noting the completion dates for the comprehensive examination.

Dissertation Requirements for CEMT Ph.D.

The dissertation is of no fixed length. It should treat a subject from the candidate's field, approved by the supervisory committee and show technical mastery of the field and advance or modify former knowledge. That is, it should cover new material, find new results, draw new conclusions, or interpret old material in a new light. Dissertation research generally contains a theoretical aspect as well as applied aspects related to the research problem. The dissertation is to be submitted with an abstract.

For specific guidelines, see Preparing a Dissertation on the Graduate Studies website.

Final Examination for CEMT Ph.D.

The final exam, often called the dissertation defense, is given by the supervisory committee after studies are complete and the submitted dissertation is accepted. The character and length of this oral exam is determined by the supervisory committee and may be devoted to the topic and field of the dissertation, the candidate's general knowledge, or it may be designed to test judgment and critical skill.

During the dissertation presentation and general questioning, members of the university community and the public are welcome. However, at the end of the public hearing, there will be a closed questioning portion of the exam where only the candidate, doctoral supervisory committee and invited faculty are present.

The dissertation defense may be scheduled only when a majority of the supervisory committee, including the chair, is available. An Application for Final Oral Exam, signed by the supervising professor and both of the dissertation readers must be filed with Graduate Studies at least two weeks prior to the scheduled defense.

Two weeks prior to the date scheduled for the final exam, the candidate prepares Doctoral Dissertation Announcement on the department template (download link found HERE) for dissemination to all Durham School faculty and students. This announcement should be a single page and include:

- Dissertation title

- Name of the candidate and the chair/co-chair of the committee
- A short (approximately 250 word) abstract
- Time, date and location of the exam

The candidate needs to fill out the Report of Completion form and bring it to the dissertation defense/final oral exam. After the candidate is notified of their passing of the dissertation defense, they should obtain the signatures of all committee members present on the Report of Completion form.

Following the successful completion of the oral examination, complete the remaining doctoral milestones. Only abstracts and dissertations that meet all published requirements can be approved and stamped for depositing. Depositing also involves payment of a processing fee and, if applicable, a fee to register a copyright.

If members of the committee are not unanimous in passing a candidate, the student is to be approved for the degree if only one examiner dissents. However, each dissenting member of the committee will be expected to file a letter of explanation in Graduate Studies.

If a student fails to pass the final examination, the supervisory committee must file a report in Graduate Studies indicating what is required of the student before taking another final exam. Another exam may not be held during the same semester as the first attempt.

VIII. GRADUATE STUDIES IN ARCHITECTURAL ENGINEERING

The Durham School currently offers three (3) graduate programs in Architectural Engineering.

The Master of Architectural Engineering (M.A.E.) is a specialized, ABET-accredited, fifth-year master's degree available only to students with a bachelor of science in Architectural Engineering (B.S. AE) from the University of Nebraska – Lincoln.

The Master of Science (M.S.) in Architectural Engineering requires completion of a minimum of 30 credits; option (A) includes a minimum of 6 hours of thesis credits, while option B is purely based on coursework.

The Ph.D. in Architectural Engineering requires 90 semester hours of graduate coursework, including a minimum of 12 hours of dissertation credits*. The time limit for granting the doctoral degree is eight (8) years from the time of filing the Program of Studies in Graduate Studies.
**55 hours maximum dissertation credits*

Oversight for AE graduate programs resides with the graduate committee, which consists of appointed faculty representatives from Architectural Engineering.

A. Architectural Engineering Graduate Faculty

Faculty	Office	Email
Dr. Moe Alahmad	PKI 105A, Omaha	malahmad2@unl.edu
Dr. Fadi Alsaleem	PKI 105C, Omaha	falsaleem2@unl.edu
Dr. Michelle Eble-Hankins	PKI 104C, Omaha	meblehankins@unl.edu
Dr. Iason Konstantzos	PKI 104B, Omaha	iason.konstantzos@unl.edu
Dr. Josephine Lau	PKI 105D, Omaha	jlau3@unl.edu
Dr. Haorong Li	PKI 101F, Omaha	hli3@unl.edu
Dr. Clare Liu	PKI 101F, Omaha	xiaoqi.liu@unl.edu
Dr. Milad Roohi	PKI 103D, Omaha	milad.roohi@unl.edu
Dr. Lily Wang	PKI 100B, Omaha	lwang4@unl.edu
Dr. Clarence Waters	PKI 101E, Omaha	cwaters2@unl.edu
Dr. David Yuill	PKI 104E, Omaha	dyuill@unl.edu

IX. ROADMAP TO YOUR MASTER OF ARCHITECTURAL ENGINEERING (M.A.E.)

These are the procedures for the Master of Architectural Engineering (M.A.E.) in roughly chronological order. Please refer also to the M.A.E. Curriculum.

7th Semester – Senior fall semester

Plan to take graduate courses toward the M.A.E. degree in your senior undergraduate year. Up to 13 credits of graduate course work is permitted for M.A.E. students.

TO DO	NOTES	
Complete the Undergraduate Seniors Request to Register for Graduate Credit form for the specific courses	You must -have a 3.0 GPA in your major. -be within 12 months of receiving your B.S. AE degree.	https://www.unomaha.edu/office-of-graduate-studies/_files/documents/undergraduate-junior-senior-form.pdf
☐	Ask your faculty advisor to sign the Request to Register form as the departmental representative.	
☐	Take completed Request to Register form to the AE academic advisor.	
Request faculty approval for registration permits to enroll in the graduate courses on your Advising Form	During registration for spring courses	https://engineering.unl.edu/sites/unl.edu.engineering/files/media/file/Fillable%20AdvisingForm_ScottCampus.pdf
Take the Fundamentals of Engineering (FE) exam	**NCEES special instructions for UNL MAEs** Indicate: -you are a master's student. -you will graduate within 9 months.	https://ea.nebraska.gov/fe

8th Semester – Senior spring semester

TO DO	NOTES	
Complete the Application for Degree form to graduate with your B.S. AE	Access through UNO MavLINK	https://www.unomaha.edu/registrar/students/graduation-and-diplomas/graduation-general-information.php
Apply to the MAE graduate program at the University of Nebraska – Lincoln (not the MS program) You will need: -application fee -copies of all university transcripts -proof of taking the FE exam	Admission requires a minimum cumulative 3.0 GPA in the B.S. AE APPLICATION DEADLINES: -Summer or fall admission •Domestic students: March 15 •International students: February 28 -Spring admission: September 15	https://www.unl.edu/gradstudies/academics/programs/AREN-MARE
Accept admission	Once notified, log in to the applicant portal, accept admission, and click on the "Complete your Decision Form" button.	http://go.unl.edu/gradappstatus
Complete the application for Intercampus Enrollment and wait for approval at UNL, then UNO	This must be done every semester to take graduate courses in Omaha. -Your degree campus is Lincoln -Your visiting campus in Omaha	https://www.unl.edu/gradstudies/academics/intercampus

Register for courses in MavLINK	TIMEFRAME: March-May Meet with a faculty advisor, to: -discuss classes and remove any holds on your registration. -request any permits needed for courses or increased course-load limit.	

Summer between 8th and 9th semesters		
TO DO	**NOTES**	
Request departmental letter for financial aid* from the chair of the graduate committee	*If you require a departmental letter that describes your enrollment for financial aid purposes	Dr. Josephine Lau email jlau3@unl.edu
Familiarize yourself with the UNL Graduate & Professional Catalog	Important catalog requirements: -Cumulative 3.0 GPA in graduate coursework to graduate with MAE -Undergraduate/graduate cross-listed courses minimum grade of B for degree credit -Graduate only courses minimum grade of C for degree credit	https://catalog.unl.edu/graduate-professional/ For master's degrees https://catalog.unl.edu/graduate-professional/policies/academic-program-requirements/#text For grad requirements https://catalog.unl.edu/graduate-professional/policies/grades/
Familiarize yourself with the UNL Office of Graduate Studies Master's Degree Milestones page		https://graduate.unl.edu/academics/program-steps/masters-degree-steps-to-completion/

9th Semester – Graduate fall semester		
TO DO	**NOTES**	
Complete the Memorandum of Courses form (**You cannot graduate in the same semester that you submit your Memorandum of Courses**)	The Memorandum must be completed and approved by Graduate Studies prior to the semester you plan to graduate.	https://graduate.unl.edu/sites/unl.edu.executive-vice-chancellor.graduate-studies/files/media/file/Masters-Memorandum.pdf
☐	Choose Option B	
☐	Write "Architectural Engineering" as your major. Leave "Specialization" blank.	
☐	Minimum of 15 credits must be from graduate-only courses.	
☐	Obtain approval and signature from your major advisor.	

Submit the completed form to the chair of the AE Graduate Committee	Deadline: November 1	Chair: Dr. Josephine Lau

10th/Final Semester – Graduate spring semester		
TO DO	**NOTES**	
Submit changes to Memorandum of Courses by sending an email to the chair of the AE Graduate Committee, listing the details of the changes	Changes must be submitted prior to the UNL Application for Degree deadline.	Dr. Josephine Lau email jlau3@unl.edu
Complete the UNL Application for Degree form	Deadline will be announced (typically in late January)	https://registrar.unl.edu/student/commencement/application/
Inform the AE Graduate Committee -if you plan to walk in Omaha -if so, how you would like your name to appear in the UNO Commencement Program	DEADLINE: February (spring graduation) or October (fall graduation)	RSVP to email inquiry, usually from Durham School staff or the AE Graduate Committee chair
Complete the Final Examination Report form (Parts 1-3 only)	The MAE requires a final MAE report with a final oral presentation. Your MAE Project instructor will set up these presentation dates.	https://graduate.unl.edu/sites/unl.edu.executive-vice-chancellor.graduate-studies/files/media/file/Masters-FinalExam.pdf
☐	Part 1, select MAE Degree, write Architectural Engineering for Major, leave Specialization blank, and choose Option B.	
☐	Part 2, leave blank (unless instructed by the MAE project instructor)	
☐	Part 3, obtain the signature of the MAE Project instructor as your Major Advisor and the signature of the AE Graduate Committee chair.	
☐	Part 4, leave blank.	
☐	Part 5, leave blank.	
☐	DEADLINE: February 28 Submit the completed form to the AE Graduate Committee chair, who will forward approved forms to the UNL Office of Graduate Studies.	Chair: Dr. Josephine Lau
Prepare for Commencement.	CONGRATULATIONS!	

X. ROADMAP TO YOUR M.S. DEGREE IN ARCHITECTURAL ENGINEERING

A. Typical Path to an M.S. Degree in Architectural Engineering

Students pursuing the M.S. Architectural Engineering (M.S. AE) can follow a thesis option (Option A), or a coursework-based option (Option B).

The typical path for an M.S. AE is as follows:

□	Meet with the graduate chair and your prospective advisor as soon as possible.
	□ Meet with your advisor to plan your first semester schedule.
□	File the Memorandum of Courses (MOC)
	□ File before grades have been received in more than half of the program courses.
	□ You cannot apply for graduation in the same semester as you file the MOC.
□	Complete the required coursework and, for Option A, your thesis.
□	File an Application for Graduation in MyRED.
	□ File early in the semester in which you expect to graduate.
□	Pass the written comprehensive examination.
	□ For Option A students, the thesis is the written comprehensive exam.
□	File the Final Examination Report.
	□ At least four weeks (three weeks in summer) prior to the date of the oral exam.
	□ Check the dates shown on the Graduate Studies website.
□	Schedule and complete the oral comprehensive exam.
	□ For Option A, this is an oral defense of the thesis.
□	Submit the final thesis for Option A.
□	All forms, milestones and deadlines for the master's degree can be found HERE.

B. M.S. Degree Requirements

The M.S. degree requires completion of a minimum of 30 credits (students matriculating prior to fall 2021 must earn a minimum of 36 credits). During the first semester, the student and advisor work to develop a draft Memorandum of Courses that meets the academic needs and interests of the student and complies with the M.S. Architectural Engineering program Graduate Studies requirements. This draft specifies the courses and project or thesis to be completed. The initial consideration for most students is whether to satisfy the degree requirements by completing a coursework with thesis program (Option A)* or through a coursework-only program (Option B).

Coursework applied to the M.S. expires after 10 years. Expired courses must be replaced or retaken as they are not eligible to fulfill the requirements of the degree. Additionally, beginning in catalog year 2021-2022, students have five years after admission to complete their master's program.

**If a Ph.D. or master's student is funded as a GRA/ GTA, only option A may be selected if they want to pursue an M.S. AE. Option B may be allowed on a case-by-case basis with the approval of the graduate committee.*

Master's Degree – Option A

Under this option a student must earn a minimum of 30 semester hours of credit, consisting of 20-24 hours of regular coursework and a thesis equivalent to 6 to 10 semester hours. At least

one-half of the required work, including thesis, must be taken in Architectural Engineering. The remaining credit hours may be earned in supporting courses or in a minor consisting of at least 9 semester hours. Eight hours, in addition to the thesis, must be earned in courses that are exclusively graduate-level (900- or 800-level without a 400-level or lower cross-listing).

Master's Degree – Option B
The master's degree in Architectural Engineering under Option B does not require a thesis. This option encourages a wider range of courses than is permissible under Option A. Students who are working on the master's degree under Option B and later elect to continue with graduate work for the Ph.D. AE must give evidence of ability to carry on independent research.

Option B is most appropriate for students pursuing practice-based or professional careers in which the master's degree provides suitable training. Under Option B, AE students must earn a minimum of 30 credit hours in coursework. At least one-half of the credit hours required for the degree must be in the major. The remaining work may be in supporting courses and may comprise a minor consisting of at least 9 credit hours selected from and approved by the minor department. At least 15 credit hours must be earned in courses open exclusively to graduate students (900- or 800-level without 400-level or lower counterparts).

C. Minors within the Architectural Engineering M.S. Program
Under the M.S. Option A, a student may pursue up to two minors. A minor typically consists of 9 (or more) credit hours in a specific area outside of the major department. The M.S. AE is designed for flexibility, with the required courses in each specialized subfield counting for no more than 9-12 hours of the required 20-36 hours of coursework.

Each minor may have requirements for the number of credit hours required as well as the specific courses which count toward the minor. Students are encouraged to identify a minor early in their academic program and work with their faculty advisor and the graduate chair, in conjunction with faculty in the department granting the minor, to determine the specific coursework requirements. Common minors for M.S. AE students have included: business, civil engineering, architecture, and community and regional planning.

D. M.S. Examination Requirements and Format
The comprehensive examination is the final master's degree exam and is the culmination of a student's graduate education and training. It reflects not only the accomplishments of the graduate student, but also the quality of the graduate program. Meeting the requirement for the comprehensive exam for the M.S. degree depends on the chosen Option.

- For Option A, the requirement is met through the presentation of a thesis and an oral thesis defense. MS oral defense should be within 30-45 minutes, followed by 20-35 minutes Q&A sessions with the committee members. The scope of the oral defense should be focus on the studies and results from the written thesis. For MS oral defense, the candidate should demonstrate a solid understanding and mastery of the topic.
- For Option B, the comprehensive exam consists of a report based on non-thesis research conducted by the student under the guidance of their faculty advisor and an oral defense

of or a written examination and/or oral exam at the discretion of the faculty advisor and the AE Graduate Committee chair.

E. Nature and Scope of Thesis

An approved thesis that is accepted by the graduate school becomes a single-author publication and contributes to the body of knowledge of the Architectural Engineering discipline. Approved theses are uploaded to Digital Commons. Instructions for uploading the thesis document can be found in the *Guide to Submitting* at Digital Commons (http://digitalcommons.unl.edu/).

XI. ROADMAP TO YOUR PH.D. IN ARCHITECTURAL ENGINEERING

Most Ph.D. students in Architectural Engineering at UNL should be able to finish their doctoral program in an average of approximately three to four years (beyond the M.S. degree). All requirements for the degree must be completed by eight (8) years from the time of filing the Program of Studies with Graduate Studies.

A. Typical Path to the Doctoral Degree

The typical path toward a doctoral degree in Architectural Engineering at the University of Nebraska-Lincoln is as follows:

☐	Meet with your faculty advisor to plan academic goals and your first semester of studies.
☐	Take and pass the qualifying exam (see timelines in section titled ***Qualifying Exam*** below).
☐	Submit the Appointment of the Supervisory Committee* form.
	☐ Form the supervisory committee prior to the completion of 45 credit hours.
☐	Submit the Program of Studies form.
	☐ Design your coursework program with the supervisory committee.
☐	Take and pass the comprehensive exam.
	☐ Exam is given when coursework has been substantially completed.
☐	Supervisory committee submits the Application for Admission to Candidacy form**.
	☐ Upon passing the comprehensive exam.
☐	Complete your research and write your dissertation.
☐	Apply for Graduation in MyRED and submit the Hooding Participation form.
☐	Apply for your Final Oral Examination.
☐	Defend your dissertation.
☐	Upload your dissertation to ProQuest and Digital Commons.
☐	All forms, milestones and deadlines for the Ph.D. degree can be found HERE.

**If a change of any members of the supervisory committee is needed, you must submit a Change of Committee form.*

***Once candidacy is achieved, registration is required each fall and spring semester until graduation. Failure to register will result in termination of candidacy and thus, the program.*

B. Ph.D. Curriculum

The Ph.D. curriculum consist of three elements:

1. Learning outcomes
2. Coursework and research timeline
3. Examination requirements

Each element is covered below.

Learning Outcomes of the Ph.D. Program in Architectural Engineering

- *Fundamental Knowledge*: Graduates will command profound basic and applied knowledge in their concentration. This will be achieved through their coursework. Evaluation of this outcome will be through the qualifying exam.

- *Independent Abilities*: Graduates will have the ability to perform major independent and original research that includes gathering of information, understanding the process of academic or commercial exploitation of research results, demonstrating an understanding of contemporary research issues, experimental design, gathering data, effective project management, synthesis and evaluation, and appropriate dissemination of research findings. This outcome will be achieved through and evaluated using their dissertation research and publications resulting from the dissertation research.
- *Critical Thinking:* Graduates will have a profound ability to critique and synthesize literature, review results and apply knowledge gained from literature to develop new ideas, design and evaluate scientific investigations and assess, interpret and understand data related to their concentration area. Evidence of this outcome is demonstrated in and evaluated using the comprehensive exam and the dissertation research.
- *Advanced Knowledge*: Graduates will demonstrate profound mastery of the subject matter at a deeper theoretical and applied level well beyond fundamental knowledge gained in the undergraduate course sequence and the higher-level knowledge gained in the master's level course sequence. Evidence of this will be demonstrated through the qualifying exam, the comprehensive exam and the final exam.
- *Effective Communication*: Graduates will have the ability to construct coherent arguments and articulate ideas clearly to an audience through a variety of techniques, constructively defend research outcomes, justify their research to the profession and promote the public understanding of their research concentration area. This will be achieved through presentation and publication of dissertation research.

Coursework and Research Timeline
While individual circumstances will vary, a typical timeline for Ph.D. degree in Architectural Engineering may be as follows:

- Year 1-2 (0-42 credits)*: Coursework, preliminary research, supervisory committee selection, qualifying exam, submission of Program of Studies
- Year 3 (43-63 credits): Coursework, preliminary research, comprehensive exam
- Year 4 (64-84 credits): Research
- Year 5 (85 or more credits): Research, completion of dissertation, Final Examination (Dissertation Defense)

**Students taking research credits prior to taking and passing their qualifying exam should enroll in AREN 9970 Research other than Thesis credits and not in AREN 9990 Dissertation credits.*

Examination and Dissertation Requirements
The Ph.D. in Architectural Engineering has qualifying, comprehensive and final exam requirements. These exams are described below.

Qualifying Exam
Ph.D. AE students are required to take and pass the AE Qualifying Examination (QE) before the appointment of the doctoral degree supervisory committee. Students matriculating with an

M.S./M.A.E. degree must take the QE by the beginning of their second year in the Ph.D. program, while students matriculating with a B.S. degree must take the QE by the beginning of their third year in the Ph.D. program.

The QE is typically offered twice a year during the fall and spring semesters. The exam date will be set by the graduate committee chair.

Concentration Areas

The AE Qualifying Exam consists of a single area examination in a specific concentration within architectural engineering. The concentration areas that are currently offered include the following:

- Acoustics
- Electrical
- Lighting
- Mechanical
- Structures
- Integration of building systems
- Smart buildings

Procedures

The overall procedures are the same for all concentration areas. The QE consists of a written exam component and, if required, a supplementary oral component. Several outcomes are possible.

- *Overall Pass*: Students scoring at least 70% on the written exam pass the Ph.D. Qualifying Exam and can continue their graduate studies. No oral exam is required.
- *Oral Exam Required*: Students who score less than 70% but more than 60% on the written exam are required to take and pass a supplementary oral examination.
    - *Oral Exam Pass*: Students who pass the supplementary oral exam pass the Ph.D. Qualifying Exam and can continue their graduate studies.
    - *Oral Exam Fail*: Students who do not pass the supplementary oral exam fail the Ph.D. Qualifying Exam. They will be offered a second opportunity to take the Ph.D. Qualifying Exam within one calendar year, beginning again with a written exam.
- *Overall Fail*: Students scoring 60% or lower on the written exam fail the Ph.D. Qualifying Exam. No oral exam will be offered. Students who fail the written exam will be offered a second opportunity to take the Ph.D. Qualifying Exam within one calendar year, beginning again with a written exam.
- *Failed Twice*: Students who do not pass the Ph.D. Qualifying Exam process the second time will not be able to continue their program of graduate studies.

Written Examination: The written exam is a 4-hour, open-book and open-note exam. A proctor will be present to facilitate the exam but is not allowed to answer technical questions to allow for consistency across the concentration areas. The student will be asked to sign the attached form

prior to commencing the exam. Calculators are permitted. No smartphones, tablets, laptops or any other device that can be connected to the Internet, are allowed in the examination room.

Written exam questions will be developed in the specific topics that are listed below, and grading will be completed by faculty members in the concentration area. The final written exam grade will be reported to the student and AE Graduate Committee as an overall percentage within six weeks of the written exam date.

Oral Examination: The oral exam is a 1-hour exam, closed-book and closed-note exam. Calculators are not permitted. No smartphones, tablets, laptops, or any other devices that can be connected to the Internet are allowed in the exam room. During the oral exam, a minimum of three faculty members will ask the student questions in the specific topics that are listed below. Examiners may ask follow-up questions from the written exam as well as broader questions about the specific topics listed.

Upon completion of the oral exam, the faculty examiners will deliberate immediately, and decisions will be made by a majority vote. The final oral exam grade will be reported to the student and AE Graduate Committee as an overall pass or fail within one week of the oral exam date.

Specific Topics Tested

Specific topics under each concentration area are listed below. Weighting percentages indicated are specific to the written exam.

Acoustics:

Fundamentals (AE 3300, MECH 816):	40% of total
Architectural Acoustics (AE 8330):	30% of total
Noise Control (AE 8300):	30% of total

Electrical:

Fundamentals (ELEC 2110):	60% of total
Building Electrical Systems I (AE 3220):	20% of total
Building Electrical Systems II (AE 8220):	20% of total

Lighting:

Fundamentals (AE 3200, AE 4200):	50% of total
Lighting Design Principles (AE 3200, AE 4020, AE 4200):	20% of total
Calculations and Analysis (AE 3200, AE 4200, AE 4020, AE 8250):	30% of total

Mechanical: Students must declare their FOUR selected topics prior to registering for the QE. Each topic is worth 25 points as listed below:

Thermodynamics (MENG 200):	25 points
Fluid Dynamics (CIVE 310):	25 points
Heat Transfer: (MENG 420):	25 points
HVAC (AE 3100, AE 4120, AE 8140):	25 points

Indoor Air Quality (AE 8116):	25 points
Controls (AE 8120):	25 points

Structures:

Fundamentals (Statics, Mech. of Materials, Structural Anal.)	50% of total
Structural Design (Concrete I, Steel I, Foundations)	25% of total
Advanced Structures topics (Masonry Design, Concrete II, Steel II)	25% of total

Smart Buildings: Students must select any TWO topics from the Mechanical concentration area OR select ONE fundamental category of any of the remaining concentration areas. Additionally, students must select TWO topics from those listed below. Selected topics must be declared prior to registering for the QE.

Data Science and Visualization, I & II (STAT 8416, STAT 8426)	25 points
Building Sensors (AREN 8600 /AREN 8620)	25 points
Artificial Intelligence (CSCE 876/CSCI 8456)	25 points
Database (CSCE 813/CSCI 8856)	25 points

Additional graduate-level courses may be included if supported by the student's faculty advisor and upon official approval by vote of the AE faculty committee.

Comprehensive Examination

When a student has substantially completed studies in the doctoral program, they must pass a comprehensive examination, in the major and minor or related fields. Rather than a repetition of course exams, it is an investigation of the domain of the problem area of investigation, and demonstration of the expertise and knowledge of the methods used to answer the questions proposed. The supervisory committee administers the comprehensive exam.

The student must provide each member of their supervisory committee with a copy of the written exam at least two weeks before the oral exam date. The written portion of the comprehensive exam consists of a dissertation proposal with introduction, scope, objective and literature review of the research.

During the oral portion of the exam, the student will provide a 30-minute presentation on their proposed topic, research timeline and preliminary data (if appropriate). Questioning of the student by the graduate committee will follow the presentation. It is anticipated that the total time for the exam will be approximately two (2) hours.

There are three (3) possible outcomes for any given student who is taking the comprehensive exam for the first time:

- Unqualified pass
- Pass with the qualification that the student work with their advisor to adjust the proposal
- Failure, with the option of retaking the exam at an alternate date mutually agreed upon by the student and the faculty. Typically, the maximum date will be six months from the date of the original exam.

- The comprehensive exam may not be retaken in the same semester as the first attempt.
- A failure on the second attempt is considered final. The student will be either asked to find another dissertation topic or to leave the graduate program.

A decision about the student's success or failure on the comprehensive exam is made based on their performance on the written and oral exams. It is the responsibility of the supervisory committee chair to report to the Graduate chair and Graduate Studies the outcome of the comprehensive exam.

When the student has passed the comprehensive examination and removed any provisional admission requirements, the supervisory committee will recommend to Graduate Studies the student's admission to candidacy by filing the Application for Admission to Candidacy for the doctoral degree, noting the dates of completion for the comprehensive examination.

Dissertation Requirements
The dissertation is of no fixed length. It should treat a subject from the candidate's field, as approved by the supervisory committee, show technical mastery of the field, and advance or modify former knowledge (i.e., it should treat new material, or find new results or draw new conclusions, or it should interpret old material in a new light). The dissertation is to be submitted with an abstract.

Guidelines for dissertation preparation are available on the Graduate Studies website. For specific guidelines, visit: https://graduate.unl.edu/academics/degrees/guidelines/.

Final Examination
The final examination for the doctoral degree, often called the "dissertation defense" or more briefly, "defense," is given by the supervisory committee after the candidate's studies have been completed and the dissertation accepted. PhD oral defense should be within 40-50 minutes, followed by 30-45 minutes Q&A sessions with the committee members. The scope of the oral defense should be focus on the studies and results from the written dissertation. For PhD oral defense, the student should demonstrate the novelty of the works and mastery of the topic.

The final exam may be scheduled only when a majority of the supervisory committee, including the chair, is available. The supervisory committee must approve the completed dissertation before the exam will be scheduled. An Application for Final Oral Exam, signed by the supervising professor and both of the dissertation readers must be filed with Graduate Studies at least two weeks prior to the scheduled defense.

Two weeks prior to the date scheduled for the final exam, the candidate prepares Doctoral Dissertation Announcement on the department template (download link found HERE) for dissemination to all Durham School faculty and students. This announcement should be a single page and include:

- Dissertation title
- Name of the candidate and the chair/co-chair of the committee

- A short (approximately 250 word) abstract
- Time, date and location of the exam

The candidate needs to fill out the Report of Completion form and bring it to the dissertation defense/final oral exam. After the candidate is notified of their passing of the dissertation defense, they should obtain the signatures of all committee members present on the Report of Completion form.

Following the successful completion of the oral examination, complete the remaining doctoral milestones. Only abstracts and dissertations that meet all published requirements can be approved and stamped for depositing. Depositing also involves payment of a processing fee and, if applicable, a fee to register a copyright.

If members of the committee are not unanimous in passing a candidate, the student is to be approved for the degree if only one examiner dissents. However, each dissenting member of the committee will be expected to file a letter of explanation in Graduate Studies.

If a student fails to pass the final examination, the supervisory committee must file a report in Graduate Studies indicating what is required of the student before taking another final exam. Another exam may not be held during the same semester as the first attempt.

XII. ASSISTANTSHIPS AND OTHER FINANCIAL SUPPORT

At the University of Nebraska-Lincoln, graduate research assistantships (GRAs) and graduate teaching assistantships (GTAs) may be available on a competitive basis to qualified students. Students funded with fellowships, GTAs and GRAs are typically Ph.D. students. Student researchers may also be funded as GTAs for a portion of their graduate career. Work required of a graduate assistant that is not directly related to their program shall not exceed 19.6 hours per week (0.49 FTE) during spring and fall semesters.

International students that have not completed a previous degree in the United States are ***required*** to satisfactorily complete the Institute for International Teaching Assistants (ITA). This two-week training is held only one time per year, during late July and early August.

It is recommended that international Ph.D. students complete the ITA training as soon as possible upon arrival to facilitate later appointments as GTAs and completion of their Ph.D. program of study. A description of each type of assistantship and the criteria for selection are provided in the following sections.

Financial support for M.S. students is extremely limited and varies from semester to semester. However, M.S. students are eligible for some scholarships, fellowships, and hourly work support on a competitive basis. M.S. student support does not include tuition remission and student health insurance benefits. Graduate committee recommendation and Durham School director approval are required.

Because of the potential for the exploitation of graduate students, any assignment of responsibilities, such as teaching a course, must be associated with a fair and reasonable compensation. This principle precludes a graduate student from "volunteering" for any significant service to the department without an appropriate stipend.

A. Graduate Assistant (GA) Expectations for both GRA and GTA Appointments

GA Work Style and Habits:
The following is a list of expectations for GA employment:

- Integrity – GAs must be honest and ethical.
- Dependability – GAs must be reliable, responsible and dependable in fulfilling their obligations and completing required tasks on time.
- Attention to detail – GAs must be careful to ensure the required detail in their tasks.
- Concern for others – GAs must be sensitive to others' needs and feelings and be understanding and helpful.
- Self-control – GAs are required to maintain composure and avoid aggressive or threatening behavior in difficult situations.
- Leadership – GAs must be willing to lead, take charge and offer opinions and direction when appropriate.
- Initiative – GAs must be willing to take on responsibilities and challenges.

- Independence – GAs must be able to work autonomously and develop effective ways of completing work with minimal supervision but should seek help or guidance when it is necessary to ensure successful completion.
- Adaptability and flexibility – GAs must be open to change and comfortable with workspace and workload variety.
- Achievement and effort – GAs must establish and pursue achievement goals and give maximum effort to master the skills and knowledge necessary to achieve these goals.
- Cooperation – GAs must have a positive attitude and be cooperative in working and communicating with others.
- Stress tolerance – GAs must be willing to accept positive criticism and deal calmly and effectively with high-stress situations. Adequate rest, proper nutrition, exercise, taking time to have some fun, and cultivating healthy social relationships can help reduce stress and increase personal performance and maintain good health at the same time.
- Persistence – GAs must face obstacles with persistence and an attitude that obstacles are opportunities in disguise.
- Social orientation – GAs must work well with others and have a positive connection to others on the job.
- Analytical thinking – GAs must be able to analyze information and situations using logic and maturity to address work-related issues and challenges.
- Innovation – GAs must be creative and use alternative thinking to develop new ideas and methods for various types of problems in their academic experiences as well as their day-to-day job.

GA Outcome Expectations:

1. Demonstrated communications skills and abilities.
2. Positive contribution to student learning and other assigned tasks and responsibilities.
3. Successful completion of all assigned duties and tasks in a timely and quality manner.
4. Demonstrated improvement of GA skills, knowledge and competencies during the GA assignment period.
5. Positive professional representation of UNL's values, mission and vision.
6. Strong desire to continue serving as a GA in The Durham School.
7. Submission of a plan for continued GA improvement of strengths, knowledge and skills (covered in the performance evaluation and review).
8. Positive professional interactions with Durham School and university faculty, staff and industry contacts.

GA Performance Evaluations and Review Interval:
GA performance evaluations occur at the end of each semester (around May and December). The supervising faculty member or members evaluate GA performance for the assigned activities.

Performance evaluations are completed in three steps. First, the supervising faculty member completes the evaluation portion and forwards it to the GA. Then the GA will complete their self-evaluation and set up a meeting with the supervisor. Then, in a face-to-face meeting, issues should be addressed and plans for continued progress and improvement should be listed. The documents will be signed by both the supervisor and the GA, then submitted to the department

admin for review by the director and graduate committee members (if necessary). The evaluation is filed as part of the GA's employment record.

B. Graduate Research Assistantships

Graduate research assistantships (GRAs) are available to Ph.D. students in The Durham School. These assistantships provide a stipend from an external grant, The Durham School or university funds to enable a student to work towards the advanced degree. Decisions about GRAs are made on a case-by-case basis by individual research graduate faculty members.

Students receiving research assistantships may be expected to provide their academic advisor with a written report of their academic progress at the conclusion of the period for which the assistantship is awarded. GRAs are expected to write with the academic standards such that their research may be presented for submission as peer-reviewed journal articles. Production and presentation of papers and/or posters for national and international conferences and symposia are also commonly expected during a research-based graduate program.

GRA Job Description:

GRAs assist professors in their research or project-related assignments and should be related to the student's major field of study and areas of interest. GRA work assignments are at the discretion and direction of the supervising faculty and their time may be split between more than one professor or project. They may be expected to perform any or all of the following tasks at the direction of their supervising professor(s): literature review, programming and simulation, data collection, data analysis, methodology development and set-up or remodel of a laboratory, experiment, testbed, etc.

GRA Terms of Assignment:

A GRA appointment requires a signed contract detailing an offer approved by (1) the faculty member who is the principal investigator (PI) of that funding project and (2) their supervising professor(s) (if not the PI), and The Durham School director.

Appointment renewals are contingent on satisfactory performance and progress, funding availability and approval of the faculty member(s) who signed the initial contract. Unsatisfactory GRA performance can result in termination of the GRA appointment with a 30-day written notice from the advising or funding faculty and approval of The Durham School director.

GRA assignments cannot exceed 19.6 hours of work per week (0.49 FTE) during the fall and spring academic terms. GRAs must agree not to hold any other jobs if employed at 0.49 FTE. If a GRA appointment is less than 0.49 FTE, the student will be allowed to work at other jobs up to 19.6 hours total, including the GRA assignment. During the summer semester, GRA assignments should not exceed 40 hours.

GRA Required Qualifications:

1. Currently enrolled as a full-time or full-time certified M.S. or Ph.D. student in a Durham School degree program with a minimum 3.0 GPA and making acceptable progress in coursework and research.
2. Demonstrate excellent oral and written communication skills.

3. Possess the math, statistics and equivalent academic or research experience as a demonstration of substantive qualification for specific GRA assignments and related tasks.
4. Be highly motivated with the ability to work independently while strongly engaged with GRA assignments.
5. Demonstrate a strong interest in formulating and conducting high-quality academic research.
6. Observe UNL Research Compliance such as being current in CITI qualification if participating in research involving human subjects.

C. Graduate Teaching Assistantships

In The Durham School, graduate teaching assistantships (GTAs) are typically assigned in the spring for the following academic year. Selection and recommendations are made by the graduate committee in consultation with department faculty. Final approval and appointments are made by The Durham School director. The total number of GTA appointments in The Durham School is limited. These one- or two-semester (academic year) appointments may be renewed for a maximum of two academic years of GTA employment based on acceptable previous performance, a favorable recommendation by the graduate committee and approval by The Durham School director. GTAs may be expected to provide their academic advisor with a written report of their academic progress at the conclusion of the period for which the teaching assistantship is awarded.

GTA Job Description:

Graduate teaching assistants (GTAs) assist professors in their teaching and research-related duties. They can make in-class and in-lab topic presentations, demonstrations and exercises as directed by their supervising professor. GTAs can perform any or all of the following tasks at the direction of the supervising faculty member: grade assignments, prepare teaching and examination materials, tutor students, contribute to curriculum development and improvement, proctor exams, record grades, assist with research activities, conduct research related to enhancing both undergraduate and graduate educational experiences, assist in the development and advancement of special educational laboratory facilities and research capabilities and instruct and supervise assigned laboratories and field work.

GTA work assignments are at the discretion and direction of the supervising faculty. GTAs are considered professional members of the faculty and represent the university in executing their official duties. GTAs establish office hours to provide academic help to students who have need tutoring or other guidance. A GTA's time may be split between more than one professor or assigned activity.

GTA Expanded Utilization Examples:

In addition to the typical GTA assignments related to in-class or in-lab educational activities for a specific course or courses, there are important opportunities for GTAs to help develop educational materials, laboratory learning facilities and capabilities and identify and develop unique field locations for experiential learning. City Campus (Lincoln) examples include the BIM (Building Information Modeling) Library, Building Energy and Air Flow Modeling Library and Tutorial Modules, Human Factors and Safety Research Laboratory and the High Bay

Development Project. Scott Campus (Omaha) examples include the HVAC Laboratory, Lighting Laboratory, Acoustics Laboratory and other laboratory development and expansion projects.

GTA Term of Assignment:
GTA appointments are for one academic semester or year (fall-spring) and approved by The Durham School director. A GTA appointment requires a signed contract, and appointment extensions are contingent on satisfactory performance during the previous contract, funding availability and the approval of The Durham School director. Unsatisfactory GTA performance can result in termination of the GTA appointment with a 30-day written notice from The Durham School director.

GTA assignments cannot exceed 19.6 hours of work per week during the academic term. GTAs must agree not to hold any other outside job or jobs during an appointment with the accompanying tuition remission.

GTA Required Qualifications:

1. Currently enrolled as a full-time Ph.D. student in a Durham School degree program with a minimum 3.25 GPA and making acceptable progress in their plan of study and research.
2. Demonstrate excellent oral and written communication skills.
3. Possess the math, statistics and technical skills required for specific GTA assignments and related tasks.
4. Be highly motivated with the ability to work independently while strongly engaged with their GTA assignments.
5. Enjoy interacting with students and demonstrate a strong desire to help students perform well academically.
6. Previously taken the course or courses for which they are responsible or possesses equivalent academic or industry experience as a demonstration of substantive qualification.
7. Demonstrate a strong interest in formulating and conducting high-quality academic research.
8. International students or non-native English speakers must satisfactorily complete the Institute for International Teaching Assistants (ITA).
9. Satisfactorily complete the required GTA training/workshops provided by The Durham School, Office of Graduate Studies and the University of Nebraska.

GTA Training:
Resources for teaching development are provided by the Office of Graduate Studies.

GTAs must participate in the Office of Graduate Studies' teaching assistant orientation at the earliest possible offering (usually early in the fall semester). Additionally, international GTAs must attend the Institute for International Teaching Assistants (ITA) held in late July and early August.

Graduate teaching assistants intending to pursue a career in academia are also strongly encouraged to avail themselves of the Teaching Development Program (TDP).

D. Fellowships and Scholarships

Students holding fellowships receive advising similar to those holding assistantships. Fellowship recipients are selected based on excellence of merit and are implicitly expected to be productive in their work through self-motivation. However, continued disbursements from the fellowship during the award period carry no contingency for time or productivity. No additional work is required of a fellow commensurate with an equivalent research assistantship stipend.

Calvin C. Solem Fellowship

The Durham School is the only program to offer the Calvin C. Solem Fellowship, available specifically to M.S. CEMT students and applicants only, and does not require any application process. Each semester, the graduate committee reviews all M.S. CEMT students and applicants and solicits recommendations from the graduate faculty in construction engineering and management then makes a final determination about recipients. The fellowship is awarded on a semester-by-semester basis in fall and spring and varies in the award amount based on available resources and the number of recipients each semester. While the fellowship may be awarded to a recipient in subsequent semesters, there is no guarantee of repeated awards for any recipient. The goal is to help offset some of the cost of graduate study to highly successful students and applicants with great potential for success in the M.S. CEMT program.

Other fellowship and scholarship opportunities

The College of Engineering and the University of Nebraska-Lincoln Office of Graduate Studies provide listing of their fellowships and other funding opportunities.

College of Engineering Graduate Funding page
Office of Graduate Studies Fellowship page

XIII. HOUSING

Connections with other graduate students may perhaps be some of the best resources for local housing information. However, the university does offer some assistance for graduate students to find appropriate housing.

- Lincoln-based Graduate Students Housing Information
- Omaha-based Graduate Students Housing information
    - For help with off-campus options in Omaha, start HERE.

XIV. TRANSPORTATION AND PARKING

To park a personal vehicle on campus, you must pay for a parking permit. Buses and shuttles are available on campus.

- City Campus (UNL) Parking & Transit Services for Lincoln-based students
- Scott Campus (UNO) Parking and Transit Services for Omaha-based students

XV. COURSE LISTINGS

The University has a listing of all the courses currently offered for undergraduate and graduate students in each of the Durham School Programs.

A. Architectural Engineering (AREN)
    1. Undergraduate Courses
    2. Graduate Courses

B. Construction Management (CNST)
    1. Undergraduate Courses
    2. Graduate Courses

C. Construction Engineering (CONE)
    1. Undergraduate Courses
    2. Graduate Courses

XVI. GRADUATE FREQUENTLY ASKED QUESTIONS (FAQ)

When should I file my initial paperwork with the Office of Graduate Studies?

File your initial degree-level paperwork by the end of the semester in which you are halfway through your degree requirements.

- Master's students typically file by the end of the second semester.
- Doctoral students typically file by the end of the second year, especially if there are transfer credits.

Do I have to take an English Language Proficiency course or exam?

- International students who do not have a degree from a native English-language-based college or university are admitted provisionally with a requirement for additional English language testing and coursework (ENGL 887).
- This must be addressed during the first semester.

- Credit for ENGL 887 will be noted on the student's academic record, but it cannot be counted towards degree program.
- The Programs in English as a Second Language (PIESL) office will administer the tests and provide requirements to your advisor for any language courses you will need in addition to ENGL 887 as well as guidance on an appropriate first-semester academic load.

What fees must I pay if I take courses on both campuses?

- You will pay fees on both campuses when they are related to your specific course, i.e., Library, Technology, and Registration fees.
- International Student fees, Student Access and Success Fees and others may also be assessed.
- UPFF and health insurance are only paid on one campus.

What do I do if my fees are charged to the wrong campus?

- Contact your department's graduate program staff, Kasey Jensen (ejensen32@unl.edu).

How do I claim my "Home Campus"?

- Your home campus is the campus that you applied to and were accepted to. For example, College of Engineering graduate students are admitted to UNL's graduate school, so that is your home campus.
- If you study only in Omaha, your intercampus enrollment application will allow you to register for courses in Omaha, and as long as you only enroll in Omaha, your fees will be charged for Omaha amenities and access.
- If you study on both campuses, the facilities fees and insurance will default to Lincoln. For students living in and accessing services in Omaha, reach out to your departmental graduate program staff (Kasey Jensen ejensen32@unl.edu) to get assistance moving your access fees to your Omaha account.

Am I required to use my university email?

- All official university communications are sent via your student email, so you should claim your university email and check it frequently.

How do I acquire an N-Card or a MavCARD? What are these cards used for?
These cards are used for identification, approved electronic access to buildings and labs, educational discounts and purchasing items on campus.

- Lincoln: NCard Office
- Omaha: MavCARD Services

Do I need to acquire a social security number? How?

- If you are an international student and are employed by the university, you will need to acquire a social security number.
- Your departmental HR coordinator will assist you with the process upon hiring.

Where do I find the forms that I need to submit throughout my program?

- You can link to all forms required by the Office of Graduate Studies from their Steps to Program Completion page.
- Links to all department-specific and the graduate college forms are provided at Durham School Graduate Student Resources.

Can I work at an internship if I am funded on an assistantship?

- Most assistantships are not appointed during the summer semester, so if you are allowed by law to work off-campus, then you may work at an internship.
- During spring and fall semesters, you may work no more than 19.6 hours per week, so if you have a 19.6-hour assistantship, then you may not work for any other employer.
- If you are considering an internship while working as a graduate assistant, you should discuss this with your faculty advisor, the College of Engineering Career Services, and the International Student and Scholar Office (ISSO), if appropriate.

Can I work at an internship if I am an international student?

- International paperwork and employment eligibility are regulated by the International Student and Scholar Office (ISSO) in Lincoln.
- You need approval for employment first from ISSO before they file Co-op or Curricular Practical Training (CPT) paperwork.
- Your I-20 will be reissued with eligibility to work if approved for Co-op or CPT employment.

If I study entirely on the Scott Campus in Omaha, will I ever need to go to City Campus in Lincoln?

- It is unlikely that you will need to go to Lincoln for anything to do with your studies unless you take courses outside of the departments housed at the Peter Kiewit Institute, however, training for assistantships and other professional development activities are usually held at City Campus in Lincoln.

If I have a research assistantship, do I need to attend any training sessions?

- There are currently no departmental requirements, however, your faculty supervisor may have professional development and training requirements. Access to some of the lab spaces may require training and certification.

Do I need to provide my own laptop?

- At this time, we do not require you to have a laptop. It is highly recommended that you have your own computer resources.

What computer resources are available?

- The College of Engineering has several computer labs throughout the facilities in Omaha and Lincoln. These have installed all programs required by courses in the College of Engineering.
- Graduate assistants, as a courtesy benefit of their employment, are currently issued a desk with a computer to use. Students who do not have a current assistantship assignment may not receive a desk-space or may be asked to vacate one that they have been occupying.

What resources are there for printing and copying?

- City Campus: The College of Engineering in Lincoln allows 1000 B&W prints per student in their computer labs. Otherwise, there are printing stations around campus that can be accessed through a paid smartphone/tablet app called INK. Information can be found here:
- Scott Campus: There are printing kiosks in the hallways of PKI. You can use your MavCARD to pay for printing at the kiosks.

As an international student, how do I check in with the International Student and Scholar Office (ISSO)?

- Visit the Graduate Student Check-In page provided by ISSO and follow the procedures described there.

Do I need a health screening or vaccinations?

- Yes, there are vaccination/screening requirements. See New Student Health Requirements.

Is there a payment plan for my Student Account?

- Lincoln: Husker Payment Plan
- Omaha: Maverick Payment Plan

Is my health insurance valid in my country?

- The health insurance currently provided to graduate assistants is a global policy and should be valid throughout the world.

How do I report a change of address if I move?

- If you move, you must report your new address to the university.
    - Lincoln: Log in to MyRED, click on 'Profile', then click 'Edit profile'. Edit your address and save changes.

    - Omaha: Log in to MavLINK, click on 'Profile', then click 'Edit profile'. Edit your address and save changes.
- If you are employed, you must also report the change to Human Resources (HR) through the Firefly employee portal.
- Submit a Change of Address with the US Postal Service
    - The postal service will place a new address sticker on any mail that was being sent to your previous address, thus re-routing it to your new address.
    - Forwarding of your mail by the post office will only happen for 60 days after you submit your change.
- Within 60 days, inform any other entity from whom you expect to receive mail of the new address.