



University at Buffalo

Department of Engineering Education

School of Engineering and Applied Sciences

Graduate Student Handbook Fall 2023

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General Information, Policies, and Procedures for Graduate Students in the Department of Engineering Education beginning their studies in Fall 2023/Spring 2024 or prior.

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<https://engineering.buffalo.edu/engineering-education.html>

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1 Introduction

Welcome to your graduate studies in the Department of Engineering Education at University at Buffalo (UB). Our graduate programs are designed to prepare students to become leaders in the field of engineering education through scholarship and dissemination.

Diversity, equity, inclusion, accessibility, and justice are central to the core beliefs of our department. We welcome a broad range of opinions, scholars, and students to be part of our journey. In addition, in accordance with federal and state laws, no person in whatever relationship with the University at Buffalo, State University of New York shall be subject to discrimination on the basis of age, religion or creed, color, disability, national origin, race, ethnicity, sex or sexual orientation, marital, or veteran status.

Nature of this Document

These are policies and procedures for graduate students in the Department of Engineering Education, University at Buffalo, State University of New York. They are based on what we perceive to be best for most students. Policies and procedures of the Department, the School of Engineering and Applied Sciences (SEAS) and the Graduate School of the University at Buffalo (UB) are listed where applicable.

For additional information, please consult the following:

- [Policy Library – The Graduate School](#)
- [Policies for SEAS Graduate Students](#)

Students should be aware that departmental programs may specify more rigorous requirements for a degree than those listed in the SEAS or general graduate school documents. Therefore, when there appears to be a conflict in requirements as listed in the various booklets, the more rigorous requirements must be satisfied. Students should also be aware of the [Student Code of Conduct for UB students](#), which outlines code of conduct rules for all students at the university.

Revisions

This document may be revised annually. When this happens, a new edition will be issued. The edition for the academic year in which you were admitted is the one that governs your entire graduate career, unless you choose to abide by a later edition (in which case, you must abide by all relevant regulations of that later edition).

Petitions

A student who wishes to petition for waiver from any of the policies and procedures presented in this manual should consult with his or her advisor first and gain approval for the waiver from the Director of Graduate Studies (DGS).

Other Documents

There are several other documents and websites, updated regularly, with which you should be familiar, because they contain University policies and procedures. Table 1 is a summary of the documents and websites mentioned so far with additional helpful resources.

Table 1 – Useful UB, SEAS and DEE Electronic Resources

Title	Publisher	URL Address
UB	The University at Buffalo	http://www.buffalo.edu
Student Code of Conduct	Student Conduct and Advocacy	https://www.buffalo.edu/studentlife/life-on-campus/community/rules.html#studentcode
Student Life Gateway	Student Life	https://www.buffalo.edu/studentlife.html
International Student Services	ISS	http://www.buffalo.edu/international-studentservices.html
1Capen (financial aid, billing, registration, financial records)	Student Services	https://www.buffalo.edu/1capen.html
The Graduate School	The Graduate School	http://www.grad.buffalo.edu
Policy Library	The Graduate School	http://grad.buffalo.edu/succeed/currentstudents/policy-library.html
Fellowships & Scholarships	The Graduate School	http://grad.buffalo.edu/explore/funding/fellowships.html
SEAS Graduate Education	SEAS	http://engineering.buffalo.edu/home/academics/grad.html
DEE	DEE	https://engineering.buffalo.edu/engineering-education.html

2 Graduate Programs in DEE

Degrees and Certificates Offered

The Department of Engineering Education offers two graduate degrees and one graduate certificate:

- the Advanced Certificate in Engineering Pedagogies and Practices
- the Master of Science (MS)
- the Doctor of Philosophy (PhD)

Admission to the Programs

The admission process and requirements differ between the degree programs (MS and PhD) and the advanced certificate. Please ensure you are consulting the proper section for admission information.

Admission to the MS and PhD Programs

Prospective students with a bachelor's degree in engineering, computing, or related field and a minimum GPA of 3.0 are invited to apply. The GRE is not required. International applicants will also need to demonstrate English proficiency. For IELTS, PTE or TOEFL requirements please visit <https://www.buffalo.edu/grad/explore/admissions/requirements.html>.

Application Process

All applications should be submitted online through our Application Management System (<https://engineering.buffalo.edu/home/academics/grad/admissions.html>). We will not accept paper applications mailed to our offices.

Required materials for the application include:

- Transcripts
- Statement of Purpose
- Resume and/or Curriculum Vitae
- Three Letters of Recommendation
- Demonstration of English Language Proficiency (IELTS, PTE or TOEFL scores) for international students. See the requirements for demonstration of English language proficiency: <https://www.buffalo.edu/grad/explore/admissions/requirements.html>
- Application Fee

Application Requirements

Students entering the program must have a bachelor's or master's degree in engineering or computer science. Students who have degrees in other areas may be considered on a case-by-case basis.

Transcripts

Official copies of your transcripts of all your educational experiences should be uploaded to your online application.

Statement of Purpose

Your statement of purpose is an important document that allows the Department of Engineering Education at University at Buffalo better understand you as an applicant and how you may fit into the department. This statement of purpose should succinctly (1-2 pages) describe your:

- Motivation to pursue your degree in engineering education
- Preparation for this field of study (e.g., prior research experience (in any area) - formal research experience, independent study, coursework, internships, etc.))
- Topics or areas of research interests
- Future career path and goals
- Other aspects of your background that may aid the admission committee in evaluating your fit and motivation for graduate study in the DEE at UB

Resume/Curriculum Vitae

An account of your education and experience that describes your qualifications for the program.

Letters of Recommendation

Three letters of recommendation are required for PhD and MS applicants. We will accept letters from references who are familiar with your academic interests, achievements, and abilities. These may often be from professors but may also include other professional sources.

Deadlines

We accept applications on a rolling basis throughout the year, however, there are deadlines to be considered for funding opportunities and to account for the time needed to process visas for international applicants.

Fall Admission

December 1: Full consideration for funding/fellowships

December 15: Consideration for department funding

April 1: International applicants requiring a visa

April 15: Domestic applicants who are not requesting financial aid

Spring Admission

September 15: Full consideration for funding/fellowships

October 15: International applicants requiring a visa

December 15: Self-funded applicants

Admission to the PhD Program from the MS Program

Any MS student who is completing the core course requirements specified in the PhD Qualifying Process and who has made arrangements with a major professor may apply to the Graduate Admissions Committee for admission to the PhD program.

This must be done before the beginning of the semester prior to the desired start of the PhD program, and in all events before the end of the second year of study.

University policy is that a change of program requires a new application on the [Application Management System](#). The most important materials for an MS-to-PhD program application are:

- A letter from the prospective major professor testifying that the two of you have established a research relationship and speaking to your promise for PhD study. Your proposed major professor is the name for the letter of reference you should supply to the system.
- A Statement of Purpose describing:
 - Motivation to pursue your degree in engineering education
 - Preparation for this field of study (e.g., prior research experience (in any area) - formal research experience, independent study, coursework, internships, etc.))
 - Topics or areas of research interests
 - Future career path and goals
 - Other aspects of your background that may aid the admission committee in evaluating your fit and motivation for graduate study in the DEE at UB
- A copy of your UB transcript.
- Financial documentation (international students only).

Admission to the Advanced Certificate Program

Information coming soon.

3 Program for the Degree of Doctor of Philosophy in Engineering Education

Introduction to the PhD Program

In this section, the milestones for the completion of the PhD are explained. Table 2 provides an overview of the milestones and the sections that follow describe the rows of the table in more detail.

Table 2: Milestones and timelines for PhD Program

Student Action	Frequency and Deadline Information	Process
Initial Course Registration	First semester of program	Meet with your preliminary advisor to map out courses and register for the first semester.
Continuing Registration	Every semester after the first, until graduation	Meet with your advisor to select appropriate coursework.
Major Advisor Selection	End of 2nd week of 2nd semester	Meet with DEE faculty. Complete required form and turn in to DEE Academic Coordinator. More information in PhD Major Professor/Advisor Selection section.
Annual Review Reports	Once annual at end of spring semester	See Annual Progress Reviews, Probation, Academic Integrity, and Discontinuance of Study section for information about the annual review.
Required Course Completion (except DEE 504)	End of 4th semester	Meet with your advisor to ensure requirements are being met and register for appropriate courses. See Course Information for required course information.
Qualifying Examination	Prior to start of 3rd year	The qualifying exam can be completed after DEE 501, 502, learning theories, and methods courses are complete. See Qualifying Examination section for information about the qualifying exam.
Completion of DEE 504, create draft of dissertation proposal	After successful completion of qualifying exam	Enroll in this course which will help you complete a first draft of your dissertation proposal
Choose dissertation committee	After successful completion of qualifying exam, while enrolled in DEE 504	Meet with your advisor to discuss preliminary ideas for dissertation and possible committee members. Form committee after discussions with potential members.
Application to Candidacy	As soon as possible after passing the Qualifying Exam	Fill out Application to Candidacy (ATC) Form in conjunction with advisor. Student, advisor, and committee members will sign, then give form to DEE Graduate Academic

		Coordinator for further signatures. Most changes to the ATC form can be done with a Graduate Student Petition Form.
Certification of Full Time Status	Upon approval of ATC	Fill out Certification of Full Time Status form and submit to DEE Graduate Academic Coordinator for further signatures.
Dissertation Proposal Defense	By end of 4 th year	Write and defend your dissertation proposal. More information about the proposal can be found in the PhD Dissertation Proposal Defense section.
Dissertation and Defense	At end of program	Write and defend dissertation. More information can be found in the PhD Dissertation and Defense section.
Submission of M-form	At the completion of a successfully defended dissertation	Advisor and committee members sign M-form and dissertation submitted according to university regulations.

Initial Course Registration

In beginning your graduate degree, you will want to plan out the initial courses to take and register for them. You should meet with your preliminary advisor for this process, who may be the Director of Graduate Studies (DGS) in the department. Some recommendations for your first semester include DEE 501 a course that surveys and introduces students to the field of engineering education, LAI 649 or another class from the Graduate School of Education which introduces learning or educational theories, and an Engineering Graduate Course in the technical area you will specialize in. You can find more detailed degree pathway suggestions in the [Course Information](#) section. Your registration plan will depend on what classes are available and your own experience or past classwork.

Preliminary Advisor Assignment (Upon Admission)

During orientation, you will be assigned an academic advisor. This person is not necessarily your “major professor” (i.e., research supervisor) for the PhD dissertation (see [PhD Major Professor/Advisor Selection](#)) but will help you navigate your first semester of coursework and help you acclimate to the department. You will begin the process of selecting a major professor during the first semester.

Continuing Registration

Every semester going forward you should meet with your preliminary advisor or permanent advisor (when selected) to discuss what classes you should take the following semester. You can find more detailed degree pathway suggestions in the [Course Information](#) section. Your registration plan will depend on what classes are available and your own experience or past classwork up to this point in your graduate degree.

All DEE graduate students must maintain continuous registration for the duration of their graduate degree. Continuous registration requires a minimum of one graduate credit hour in each fall and spring semester until degree conferral. Registration in summer sessions is not required. In particular, you must be registered for at least one graduate credit hour in the semester prior to degree conferral. If such registration is impossible for any reason, students should secure a formal leave of absence, which must be approved by the DEE DGS and the Graduate School.

PhD Major Professor/Advisor Selection

One of the most important people you will interact with throughout your PhD process is your major professor/advisor. Choosing an advisor for your PhD will be one of the first and most critical choices you will make during your time in the program. Your advisor will work with you to navigate your classes, support you in developing key research skills, and mentor you through your dissertation research proposal, implementation, and defense. You may or may not have entered the department having talked with or considered a faculty member as a potential advisor, but as part of this process you will be expected to identify and reach out to at least three faculty members and discuss the possibility of working with them. In preparation for choosing your advisor, students are encouraged to attend all DEE seminar presentations, any DEE speaker presentations, the DEE open house, engage in informal chats with faculty members, and discuss advisor choices with current and former DEE students.

Students are expected to fill out an advisor selection form no later than the end of the second week of their second semester of study. This time frame was selected to give you an opportunity to consider advisor selection after finishing your first semester. The form is available in the DEE Graduate Student Documents Folder. The process for filling out the form involves meeting with at least three DEE faculty members who you believe could be potential advisors and discussing your interests and their current interests and projects. You should also discuss their expectations for students and ask any questions you may have. Each faculty member should sign your Advisor Selection Form at the end of these meetings. You may meet with more than three faculty members in your search for an advisor, but only three need to sign the form. After your meetings are complete, you should fill in the bottom of the form indicating your preference for advisor based on your meetings. You should turn your form into the DEE graduate academic coordinator by the end of the second week of classes of your second semester, however you should start your search in the first semester. The DGS will then look at your choices and consult with your preferred faculty member about your selection. Please note the DGS and faculty members will work to match you with your preferred faculty member, but there may be circumstances where this is not possible (e.g., due to limits in funding or the current size of a faculty members lab).

Upon their agreement, the DGS will inform you of your placement with your advisor. At that point, you should begin regular meetings with your advisor to discuss progress in your coursework and towards your dissertation as well as any research projects that you may be able to start working on.

If at any point during the course of your study, you feel that you need to change advisors, please reach out to the Director of Graduate Studies to discuss your situation and options. Changing advisors is possible after initial selection but can affect degree timelines. Please make sure to have these discussions as soon as you feel necessary with the DGS.

Required Courses Completed (Except DEE 504)

By the end of your fourth semester, you should be finished with most of your required courses with the exception of DEE 504, which is not taken until you complete your Qualifying Examination. Your timeline to completion of these courses may vary depending on class availability and what coursework experience you bring to the degree. You should meet with your advisor to make sure you have addressed all required coursework so you can proceed to the next milestone, the Qualifying Exam.

Qualifying Examination

The goal of the Qualifying Examination is to assess what you have learned from the required courses covering the field of engineering education, education research methods, and engineering content and are prepared to advance to conducting independent research as part of your dissertation. In order to begin the Qualifying Exam, you should have completed DEE 501, 502, a learning theories course, and two methods courses. The Qualifying Exam involves reviewing existing work, identifying a research gap, and proposing a new study to address this gap. Typically, the Qualifying Exam is done before the start of your third year in the program.

Process

At the beginning of each semester, the DGS will ask students who have yet to qualify if they will have fulfilled the requirements for qualifying in that semester and would be prepared to take the qualifying exam before the start of the next semester. If a student is anticipating taking the qualifying exam, the DGS will create a DEE Qualifier Committee of faculty and set dates for the qualifying exam to be completed before the start of the next semester of study (not including summer).

Upon the start of the qualifying process, the DGS will communicate to the students taking the qualifying exam via a kickoff meeting where the requirements of the qualifying exam are formally introduced, and students have the opportunity to ask questions about the process before they begin. After the meeting, the students have two weeks to turn in the qualifying paper to the DGS and will then present their work to the DEE Qualifier Committee approximately one week later. Dates and times will be confirmed before the process begins.

Additional Details on the Qualifier Process

The purpose of this benchmarking process is for you to combine different skills you have built during your coursework and demonstrate your skills as a researcher, and for the DEE faculty to understand where you are in your progress as a researcher and provide feedback on your current skills and abilities.

Through this benchmarking process, you will be assessed on your ability to integrate skills previously mastered in coursework you have engaged so far. In particular, your ability to:

- critique existing literature (501/520 and 502)
- evaluate research methodology (GSE courses)

- use foundational theories of education and engineering or computing education (501/520)
- design original research

This process will allow the committee to realistically evaluate your developing ability to conduct independent research, which is the larger goal of your Ph.D. training. There are three tasks to complete for this benchmark examination. There are two deliverables. This document gives the specifications for those tasks and deliverables as well as a timeline for the overall examination.

Task 1: You will be provided a list of three empirical papers, selected by your advisor that aligns reasonably well with your area of interest. You will select one of those papers on which to build out the rest of the qualifying benchmark task.

Task 2: You will critically analyze your selected paper. After the analysis of this first paper, you will select and critically analyze four additional empirical research papers that investigate the same topical area. The key output from this analysis, is to identify which gap still exists in researching the topic at hand. The identified gap can be methodological, theoretical, or of a complex mixture.

Task 3: Based on the outputs of the previous two tasks you will propose an original research design aiming to address the identified gap in literature.

You are expected to produce two deliverables for this task, a written document (5 pages) and an oral presentation (15-20 minutes) that explains the work described in your written document.

DEE 504 and an Initial Draft of your Dissertation Proposal

DEE 504: Conducting Engineering Education Research: Starting the Dissertation Proposal is the final required class as part of the core DEE sequence of classes. You can sign up for DEE 504 once you have completed your other classes required for the Qualifying Exam and have successfully passed the Qualifying Exam. It is typically offered in the Fall. This class is intended to give students an opportunity to identify and start to craft their initial dissertation proposal. In the class you will work with the instructor and your advisor to identify a topic, take a deeper dive into several key topics including academic writing, literature reviews, problem or thesis statements, methodological and logistic challenges, and review how others in the field of EER have crafted their own dissertation work. The goal of this class is to create an environment and space where you and your cohort of graduate students can begin this work with more support from faculty in beginning the research design of your proposal. It is not the intent of DEE 504 that your final paper will be a complete dissertation proposal, but it is intended to be a reasonable draft through which you can work with your advisor to prepare your dissertation proposal.

Choosing your Dissertation Committee

While taking DEE 504 you will also be expected to create your dissertation committee. Dissertation committees include your Major Advisor and two other graduate faculty members. You may have more than three committee members, but a majority of the committee members should be from DEE. You should work with your Major Advisor to select committee members who can help support and evaluate the work you are proposing and eventually undertaking in your dissertation. As you identify members who may serve as committee members, you should have a discussion with each

faculty member to help them understand your project and where they may be able to help and discuss issues of fit and expectations. Some reasons you might select a committee member is because they are familiar with a research topic or research method you plan to use or because they have complementary skills or experience to other committee members.

Advancement to Candidacy and Certification of Full-Time Status

A student who passes the qualifying exam is considered a PhD candidate and should submit the Application to Candidacy (ATC) form. The Application to Candidacy form requires signatures from the student, advisor, and committee members. The completed form should be given to the DEE graduate academic coordinator for further signatures and filing with the graduate school. The exact timing of the submission of the ATC varies depending on the student, but it will generally be filed the semester after successful completion of the qualifying exam and usually no later than their sixth semester of full-time study. The ATC must be submitted at least three months prior to the expected degree conferral date.

In conjunction with the ATC, all PhD students are required to document successful completion of “Responsible Conduct of Research” (RCR) training. This training requirement may be fulfilled by completing the Collaborative Institutional Training Initiative (CITI) Online Program in Responsible Conduct of Research with a score of 80% or higher. Current details regarding this requirement, as well as alternative ways of satisfying it, are summarized in the online [Graduate School Policies and Procedures](#).

Amendments to an ATC may be made with the approval of the advisor and DGS using an Amend ATC form available from the Graduate School. Amendments are not uncommon and may include a change of expected conferral date, adding a committee member, a change in course credits planned, or other changes needed in the lead up to the completion of the degree.

After successful submission of the ATC, students are eligible for certification of full-time status, which allows students to register for less than the normal full-time load (12 credit hours, 9 credit hours with Research/Teaching Assistantship).

Ph.D. Dissertation Proposal Defense & DEE 504

The student will prepare a PhD dissertation proposal and present it to their advisor and committee members within 12 months of successful passage of the DEE PhD qualifying process. The intent of the proposal process is to evaluate the student’s ability to develop and organize a research project, project plan, and to demonstrate their potential to achieve the research goals. Students who have successfully completed DEE 504 will leave the course having worked on various parts of the proposal already. Students will work with their advisor to complete the proposal and then schedule a defense.

The student must prepare a written research proposal that should include the following information:

- Introduction
- Research goal(s) including research questions and hypotheses where appropriate
- Significance of proposed work
- Literature review

- Research plan
- Preliminary results (when applicable)

The format for the proposal should follow the same format as the PhD dissertation as given on the graduate school website.

The student must submit their proposal to their advisor and committee for review and comment before a public presentation of the proposal is scheduled. The student will schedule a proposal presentation upon agreement between the student and advisor that the proposal is ready to present.

The student must present their proposal orally to their advisor and committee. The presentation of the proposal should be approximately 30-45 minutes. This will be followed by a period of questions from the committee and other attendees. This presentation will be publicly announced and all interested members of the DEE, UB or external community are welcome to attend.

After the presentation, the student's advisor and committee will offer written and/or oral comments on the proposal and advise the student for the proposed future work. The advisor and committee will then vote to formally accept the proposal and instruct the student to move forward with their dissertation. A copy of the written proposal will be turned into the DEE graduate academic coordinator for inclusion in the student's file. Students should aim to complete this process no later than the end of their fourth year of study in the PhD program. Failure to do so could result in your removal from the PhD program.

Ph.D. Dissertation and Defense

The PhD candidate will work with their major professor and committee to complete the dissertation. For information on the format of the thesis (binding, electronic submission, copyrighting, etc.), see the webpage [“PhD Candidate Requirements”](#) and, in particular, the [“Guidelines for Electronic Thesis/Dissertation Preparation and Submission”](#) from UB's Graduate School. The [Electronic Thesis and Dissertation FAQs](#) should answer all of your questions regarding electronic submissions and formatting requirements.

Students will be sure to circulate the final copy of their dissertation to their committee at least one month before a scheduled public defense. The defense should be scheduled in consultation with the major professor and committee and announced publicly at least two weeks before the defense date. A dissertation defense should happen no sooner than one year after defense of the dissertation proposal.

The student will present the work of their dissertation orally to their major professor, committee, and other interested members of the DEE, UB, or external community. The presentation should be approximately 1 hour long. This will be followed by a period of questions from the attendees and then followed by a closed session for deliberations and final conversations by the committee.

After the presentation, the student's advisor and committee will offer written and/or oral comments on the proposal and advise the student for the proposed future work. The advisor and committee will then vote to formally accept the proposal and instruct the student to move forward with their dissertation. A copy of the written proposal will be turned into the DEE graduate academic coordinator for inclusion in the student's file. Students should aim to complete this process no later

than the end of their fourth year of study in the PhD program. Failure to do so could result in your removal from the PhD program.

4 Program for the Degree of Master's of Science in Engineering Education

Coming Soon

5 Program for the Advanced Certificate in Engineering Pedagogies and Practices

Coming Soon

6 Course Information

The following courses are required to complete the PhD in Engineering Education. Students will need 72 credit hours to graduate with the PhD.

- DEE 501: Foundations of Engineering Education
- DEE 502: Equity and Inclusion in Engineering Education
- DEE 504: Introduction to Research in Engineering Education
- Learning Theories Course [one of the following]
 - LAI 649: Learning Theories
 - CEP 560: Psychology of Learning and Instruction
 - CEP 564: Cognitive Psychology
 - ELP 585: Sociological Bases in Education
 - ELP 580: Contemporary Social Theory & Education
 - CEP 501: Psychological Foundations of Education
- Two Methods Courses [two of the following]
 - Quantitative Courses:
 - LAI 657 & 658: Analysis of Quantitative Research
 - CEP 522 & 523: Statistical Methods
 - Qualitative Courses:
 - LAI 669 – 619: Qualitative Research Design
 - ELP 593 & 594: Qualitative Methods 1 & 2 [must take both]
 - LAI 626 [LAI 619 is prerequisite]
 - Other Courses:
 - LAI 627: Mixed Research Methods
 - CEP 510: Psychometric Theory in Education
- Four engineering courses outside of DEE
 - Courses from any department that is not prefixed DEE – do not have to be from same department
- Elective Courses [in consultation with your advisor]
 - Courses offered by DEE (not a comprehensive list)
 - DEE 500: Special Topics
 - DEE 520: Computing Education Research
 - Courses offered in Graduate School of Education in the departments of LAI, ELP, and CEP
- Supervised Research/Thesis Guidance [in consultation with your advisor]

The following tables provide sample progressions through the courses for those interested in focusing on quantitative methods, qualitative methods, or mixed methods courses.

Table 3: PhD Qualitative methods progression

Semester	Fall	Spring
Year 1	DEE 501 LAI 649 (or other theories course) Engineering course (1)	DEE 502 Engineering course (2) or LAI 669 Engineering course (3) or DEE 520
Year 2	LAI 669 or LAI 619 or Engineering course (2) Elective or Engineering course (3) Engineering course (4)	LAI 619 or Elective Elective Elective
Summer	Qualifying in August	
Year 3	DEE 504 Elective or LAI 626 (3rd qual course) Elective	

Table 4: PhD Quantitative methods progression

Semester	Fall	Spring
Year 1	DEE 501 LAI 649 (or other theories course) Engineering course (1)	DEE 502 Engineering course (2) or DEE 520 Engineering course (3)
Year 2	CEP 522 Electives or Engineering course (3) Engineering course (4)	CEP 523 Elective Elective
Summer	Qualifying in August	
Year 3	DEE 504 Elective or CEP 529 (popular higher level quant) Elective	

Table 5: PhD mixed methods progression

Semester	Fall	Spring
Year 1	DEE 501 LAI 649 (or other theories course) Engineering course (1)	DEE 502 Engineering course (2) or LAI 669 [qual intro] Engineering course (3) or DEE 520
Year 2	CEP 522 [quant intro] Engineering course (4) or elective Elective or Engineering course	LAI 619 or CEP 523 or Engineering course Elective Elective
Summer	Qualifying in August	
Year 3	DEE 504 Elective Elective	

7 General Graduate Student Policies

Full Time Status

As per immigration regulations, international students must maintain full time status. All international students must register for at least one (1) credit in the semester prior to graduation.

Under certain circumstances, including immigration requirements (for international students) and financial aid or scholarship regulations, students need to maintain full-time status. Full-time status is defined as registration for a minimum of 9 credit hours if the student holds a graduate, teaching, or research assistantship or a minimum of 12 credit hours during each fall and spring semester if they do not have an assistantship. These definitions are used by agencies/organizations such as lending institutions, health insurance carriers, and the U.S. Citizenship and Immigration Service. Per immigration regulations, international students must maintain full time status during their entire period of graduate study at UB, subject to two exceptions noted below.

- For students in their first semester of study it is possible to petition the International Student Services office for a reduced course load (typically 9 credits instead of 12). This reduction allows students to better address cultural, language, or other transition issues, and is available one time.
- Students who have completed or will complete all of their credits in the current semester may request designation of “full-time status” by completing a Full-Time Status Form when registering for fewer than 12 credits (or fewer than 9 credits with assistantship). This scenario is primarily applicable to students working on a thesis or dissertation. Typically, full-time status will be granted for one semester only. For example, students in an all-course M.S. program with 6 credits remaining to fulfill degree requirements cannot distribute those credits into two semesters.
 - The Certification of Full-Time Status form requires the signature of the student’s advisor and the department DGS. For Ph.D. students an Application to Candidacy (Section 3.3.4) must be submitted before full-time status will be approved.

Residency Requirement

M.S. degree programs require a 24 credit-hour residency requirement at UB.

Ph.D. degree programs require a minimum residency requirement of the equivalent of two complete academic years of full-time study at UB. This includes two semesters of continuous full-time study not already applied to the master’s degree.

Leave of absence

Students are required to register continuously during their period of graduate study until all requirements for the degree are completed. Students who, for one reason or another, cannot maintain continuous registration must request a Leave of Absence before the start of the semester

for which the leave is being requested. For this purpose, the student must petition the Dean of the Graduate School and obtain the approval of the Director of Graduate Studies. A leave of absence will only be granted to students in good academic standing.

Documented cases of financial hardship, illness, or compulsory military service constitute valid justification. Students who leave the program after completion of some graduate work but have not been given an approved leave of absence, must reapply and be readmitted as a new student. Continued leaves of absence beyond two (2) semesters will not be granted.

Distance Education

In accordance with New York State Education Department (SED) regulations, the percentage of courses taken through distance education must be less than 50% of a graduate student's degree requirements. The pertinent SED policy is summarized on the following website:

<http://www.highered.nysed.gov/ocue/ded/reviewoptions.html>

Transferring Credits

The Graduate School policy states that no more than 6 of the 30 credits required for the MS and no more than 36 of the 72 credits required for the PhD program can be transferred. Approval for transfer of courses is made by the Director of Graduate Studies. Only those relevant graduate courses completed with grades of B or better are eligible for consideration as transfer credit and the transferred courses will not be counted towards the student's UB grade point average.

To transfer courses, you need to complete a "Transfer Credit Form" (available from the Graduate School's website: <https://www.buffalo.edu/grad/succeed/current-students/forms.html>), attach the transcript, the syllabus of the course being transferred, and other relevant information, and submit them to the Director of Graduate Studies for approval. This must be done by the time the Application to Candidacy (ATC) is filed and should be done as soon as you have determined which credits you wish to transfer.

Internships

International MS students are never allowed full-time Curriculum Practical Training (CPT) during the regular Fall/Spring semesters (even if they are only working on a project or thesis). Full-time CPT (40 hours) is only allowed during the summer. International MS students can do part-time CPT (20 hours) during their final semester.

Students doing internships or "co-ops" may register for 1 credit of DEE Internship. This must be approved by the DGS. A student who has not completed the "classroom" type courses cannot go on a full-time internship/CPT during academic semesters. They can only work on a part-time internship, and the internship must be based locally in Buffalo or they need to be able to complete the work remotely from Buffalo. Only students who have completed all "coursework" where only remaining work is a project, thesis, or dissertation, are eligible for full-time internship during academic semesters, provided that the semester is not their final semester.

A co-op in a Fall or Spring semester that interrupts the normal program of study may be approved only if all of the following are satisfied:

- the semester is not the student's final semester,
- the student is in good academic standing,
- the student is doing (or has completed) an independent project or MS thesis,
- the student's co-op is integral to the established curriculum of the degree program,
- the student is registered for at least 1 credit of a course related to the project in that semester, and
- the student has filed an Application to Candidacy (ATC) that has been approved at the department level.

S/U Grading

According to the [UB Graduate School's Grading Procedures](#), "No more than 25 percent of required course credits in a student's graduate program (not including courses taken as research, thesis, project, portfolio, or dissertation guidance) shall be graded on an S/U basis." In practice, this means that at most 7 credits of courses that are graded S/U can be counted towards the MS degree, and no more than 18 credits of courses that are graded S/U can be counted towards the PhD degree.

Incomplete Grades

For all graduate-level courses, an interim grade of incomplete (I) may be assigned if the student has not completed all requirements for the course. A grade of I can be assigned only if the student has a passing average in course requirements already completed and successful completion of unfinished coursework could result in a final grade better than the default grade. The instructor shall provide the student specification, in writing, of the requirements left to be fulfilled. An interim grade of I shall not be assigned to a student who did not complete assignments due to non-attendance in the course.

Assignment of an incomplete grade is at the discretion of the instructor. The instructor must specify a default grade when the I grade is submitted. A default grade is the letter grade the student will receive if no additional coursework is completed and/or a grade change form is not filed by the instructor. The default grade can be A-, B+, B, B-, C+, C, C-, D, F, S or U.

The default grade shall become the grade of record if the I grade is not replaced by a permanent grade 12 months after the close of the term in which the I was assigned according to the following chart:

Courses Taken in (Semester):	Will default in 12 months on:
Summer	August 31
Fall	December 31
Winter	January 31
Spring	May 31

If an extension to the incomplete timeframe is sought, the above chart indicates the due date for the corresponding [Petition for Incomplete Extension](#) form to be filed with the Graduate School.

When assigning an incomplete grade, the instructor may set an earlier deadline for completion of the outstanding course requirements. If an earlier date for completion is set, the instructor shall inform the student thereof in writing.

Any course graded with incomplete that will count toward a graduate degree must be changed to a permanent grade before that degree is conferred. At any time prior to the default date, a student may elect to change the I grade to the default grade using the [Grade Retrieval Form](#).

Travel Policy

Graduate students in DEE are eligible to travel for DEE-related purposes. Funding for the travel may be provided by the department (in certain circumstances), from their advisor, or from funded projects that they are associated with. It is up to the student to understand the financial arrangements for the reimbursement of their travel-related expenses. All expense reimbursements must follow UB guidelines and procedures for allowable expenses and limits, (<https://www.buffalo.edu/administrative-services/business-travel/travel-guidelines.html>). Please note that currently, all UB-related travel must go through a pre-approval process. If you have any questions about travel-related reimbursements, please see DEE's Director of Administration.

Resources for moving into New York State

Below are some resources for finding housing or roommates for those moving to the Greater Buffalo area to attend UB.

- University at Buffalo Housing, Sublets, and Roommates:
<https://www.facebook.com/groups/417050568456725/?ref=share&mibextid=KtfwRi>
- Buffalo Student Off-Campus Housing
<https://www.facebook.com/groups/buffalostudentoffcampus/?ref=share&mibextid=KtfwRi>
- UB Housing Resources:
<https://www.buffalo.edu/international-student-services/life-in-buffalo/housing.html>

Tuition Reduction through New York State Residency

When students have met all other requirements for the RA/TA/GA position, in their second semester they will be eligible for the Tuition Differential Scholarship (TDS). TDS allows students who are United States citizens and not currently New York State (NYS) residents to apply for NYS residency and subsequently pay in-state tuition instead of out-of-state tuition. For more information on the application and deadlines for this scholarship and residency change, please visit <https://www.buffalo.edu/studentaccounts/nys-residency/ta-ga-ra-fellow.html>

8 Annual Progress Reviews, Probation, Academic Integrity, and Discontinuance of Study

DEE PhD Student Progress Annual Review

Each PhD student's academic progress must be evaluated annually by the director of graduate studies (DGS) and, if appropriate, the student's dissertation advisor. The most appropriate time for annual review is mid-May, thereby permitting appropriate academic planning for the following semester and allowing for timely responses to inquiries about students in jeopardy of losing federal financial aid. Alternatively, though not ideal, review can take place in mid-October.

Additionally, each PhD student's academic progress must be reviewed after their first semester of enrollment to identify any academic problems early in the program. The Director of graduate studies is required to communicate the annual academic evaluation to the student in writing.

As part of the Department of Engineering Education review, the following components, as relevant for the student's case, will be part of the review:

- Review of the student's academic record including:
 - Checking the overall grade point average.
 - Addressing any incomplete and/or resigned courses.
 - Monitoring overall progress toward completing the coursework phase of the program.
- Checking on progress in completing or preparing for the preliminary or qualifying exam(s) or paper(s).
- Planning for a timely defense of the dissertation research proposal or prospectus.
- Monitoring adequate progress in research including timeliness of degree completion.

A copy of the review form that the DGS will complete for the review process can be found [here](#)

Timeline for the review process:

- The DEE DGS works with appropriate parties to get information about grades and PhD progress for students for the current academic year in the first week of May.
- The completed form due to DGS on the last day of classes for the semester. DGS flags any academic concerns as listed above (1, 2, 3, or 4) before returning the form to academic advisors.
- Academic advisors meet with students during final exam week of spring semester to discuss academic progress and create action plans for the next academic year.
- Students who are found to be not in good academic standing are officially notified by May 31 of the situation.

Probation

If at any time while pursuing graduate studies in DEE your cumulative GPA falls below 3.00, or you are not otherwise making satisfactory progress toward the degree, you will be put on academic

probation. If your cumulative GPA falls below 3.00 at the end of any semester, you are automatically on probation from the start of the next semester.

To get off probation, you will be given two semesters to raise your cumulative GPA to 3.00 or higher, on condition of performing at 3.00 or higher in the first of these two semesters. If you have been put on academic probation because of inadequate progress toward your degree, the DGS and your academic advisor will work together to identify milestones that can establish adequate progress for the degree. For part-time students, the time available to get off probation is doubled. Failure to meet these conditions will result in your dismissal from the program.

Academic Integrity

Academic integrity is a critical issue at the University at Buffalo, SUNY and in the Department of Engineering Education. If we do not maintain reliably high standards of ethics and integrity in our academic and scholarly work, we have nothing of value to offer one another or to offer the larger community outside this Department.

For this reason, the principles of academic integrity have priority and we will defend these principles vigorously. It is essential that every student be fully aware of these principles, what the procedures are by which possible violations are investigated and adjudicated, and what the punishments for these violations are. Wherever they are suspected, potential violations will be investigated, and determinations of fact sought. In short, breaches of academic integrity will not be tolerated.

Violations of academic integrity may include but are not limited to aiding in **academic dishonesty, cheating, plagiarism, falsifying academic materials, and misrepresenting documents.**

Any student accused of a violation of academic integrity will be so notified by the course director. An informal review will be conducted, including a meeting between these parties. After this review and if there is a determination that a violation has occurred, reasonable sanctions will be levied depending on student involvement and the severity of the violation.

DEE endorses and adheres to the University policy on academic integrity. Students should be familiar with that policy, which provides definitions of violations of academic integrity and potential sanctions: [UB Graduate School Academic Integrity Policies and Procedures](#)

Discontinuance of Study

You may be asked to leave the Department for any of the following reasons:

- receiving 4 or more grades of C or below in the courses you take;
- failing to meet a requirement for some degree—e.g., failing to complete the core course requirements in the PhD Qualifying Process before the end of your 2nd year, or failing to have an approved dissertation proposal by the end of your 4th year;
- completing your MS degree and not being judged qualified to study for the PhD;
- conduct warranting dismissal such as dishonesty or cheating.

If you are asked to leave the Department, you may apply by letter for permission to take additional courses on a non-degree basis.

9 Assistantships

Overview of Assistantship Opportunities

Most funded students start out as Teaching Assistantship or Graduate Assistantship, unless approached prior to arrival by a faculty member with a Research Assistantship offer. Later, when you choose a major professor, that faculty member may have funding to support you as a Research Assistantship.

What each of these assistantships involve:

Research Assistantships (RAs): in which you work with a faculty member or group of faculty members on a (usually externally funded) research project as part of their research lab(s). This is managed by the faculty member(s).

Teaching Assistantships or Graduate Assistantships (TAs & GAs): in which you assist a faculty member in teaching and/or grading an undergraduate or graduate course. In these roles you may oversee leading one or more recitation sections for a course. You may occasionally teach an undergraduate course yourself. Under current policy, TAs are reserved for students in the PhD program. TAs and GAs are managed by the Department.

The TA/GA support is guaranteed for 5 years (10 semesters) for PhD students. Support for advanced students as an RA beyond 10 semesters is negotiated on an individual basis with the research advisor.

Classes that are available for TAs and GAs

There are several classes you may be a TA or GA for. The list below is not meant to be comprehensive but to highlight some of the classes available within the department, keep in mind not all classes are taught all semesters.

- EAS 198/199 – UB Seminar
- EAS 200 – Electrical Engineering Concepts for Non-Majors
- EAS 207 - Statics
- EAS 208 - Dynamics
- EAS 209 – Mechanics of Solids
- EAS 230 – Engineering Computations
- EAS 240 – Introduction to Programming for Engineers

Tuition Scholarship

A student with one of the three types of assistantships (RA, TA, or GA) or with certain fellowships is eligible to have a tuition scholarship.

It is *university* policy that tuition scholarships are limited to 4 semesters of support for MS students and to 8 semesters of support for PhD students. Certain other restrictions are spelled out in “Principles and Policies for the Allocation and Award of Graduate Tuition Scholarships”, online at:

<https://grad.buffalo.edu/explore/funding/tuition-scholarship.html>

Tuition scholarships normally cover up to 9 hours of credit per semester towards a degree for students whose full-time requirements are 9 credits. Students are eligible for tuition scholarship only up to the number of credits required in any given semester for the degree for which they are working toward. For example, students who only need to register for 1 credit of thesis guidance, as is often the case for PhD Candidates, are only eligible for 1 credit of tuition scholarship. The maximum number of credits of tuition scholarship is 30 for an MS student and 72 for a PhD student through the first 4 years. University policy strictly prohibits tuition scholarships during the summer.

Your Responsibilities as an Assistant

This policy is stated formally to:

- set forth assistantship obligations clearly for graduate students and their supervisors, and
- establish commensurate obligations for the three kinds of assistantships we have—research assistantships (RA), teaching assistantships (TA), and graduate (laboratory) assistantships (GA).

The responsibilities of RAs, TAs, and GAs are as follows:

- A student's work obligation is an average of 16–20 hours a week. This is an average over the term of appointment rather than a fixed amount each week.
- Assistants are appointed for either one or two semesters. Assistants appointed for two semesters are appointed for 10 months (normally from the second part of August to the end of May).
- Academic holidays (and the inter-semester break) will normally be holidays for assistants. Some assistants may be asked to work during such holidays in return for time off at some other time.
- TAs are expected to work throughout the semester including the final exam period, starting a week before the semester begins and continuing until the grading for the courses they are assigned to is completed. TAs who are not available during the work period may have their assistantships removed.
- The obligation of RAs does extend after the end of classes in May until May 31, and extends further if they have summer support. The obligation of TAs ends when they are released by their supervisor, presumably after final exams are graded.
- TA performance is monitored by the instructor who fills out a TA evaluation form.

No supported student is required to accept an RAship with a particular faculty member. If you accept an RAship, you should know that research is not a 9-to-5 activity. *Accept an RAship only if you desire to work with the faculty member for academic and scientific reasons, not just for the money.* The work you do as an RA should always be integrated into your academic career. For these reasons, the guidelines given above (e.g., 16–20 hours per week) are open to negotiation. You should understand clearly what the faculty member expects from you before you accept the RAship. Faculty members and their RAs may agree to variations from the above guidelines.

Department Resources

TAs may use the Department's office supplies and equipment, but only for the courses they are helping to teach. When you write a dissertation or project, we expect that you will pay for the materials and copying.

The University prohibits graduate students from using the telephones for long-distance calls. If you must make a long-distance call in an emergency, please notify the office so that we can arrange for you to pay for your call.

You may not take university-owned equipment out of the Department unless you fill out a Property Removal Authorization form and have it signed by the Director of Administration.