

MAE Master's Program Student Guide

Hello Master's Students,

Included here is important information to help ensure you are meeting all of the requirements for the Mechanical and Aerospace Engineering master's degree program. Please review this information, and if you have any follow up questions please email the MAE Graduate Office at mae_gradoffice@ncsu.edu.

Quick Guide to Resource Links Provided in this Guide

Quick links are provided here for easy access, but many of these links will make more sense after reading through the guide.

University Calendars - <https://studentservices.ncsu.edu/calendars/>

Graduate Student Handbook - <https://www.ncsu.edu/grad/handbook/index.php>

Graduate School Forms - <https://grad.ncsu.edu/faculty-and-staff/forms/>

MyPack Portal User Guide - <https://sis.emas.ncsu.edu/students/>

[Student Information System Training Manual](#)

- [Creating a Plan of Work \(pg. 4\)](#)
- [Creating an Advisory Committee \(pg. 7\)](#)
- [Applying for Graduation \(pg. 12\)](#)

[How to create a Plan of Work](#) (video)

ETD Deadlines & Information - <https://grad.ncsu.edu/students/etd/>

MAE Graduate FAQ - <https://www.mae.ncsu.edu/graduate-faqs/>

MAE Graduate Advising Website - <https://www.mae.ncsu.edu/academics/graduate-programs/graduate-advising/>

MAE 586 - Projects in Mechanical Engineering [course description](#) page (non-thesis students only)

Table of Contents

(click heading to skip to section)

Master’s Degree Requirements	3
Thesis vs. Non-thesis track.....	3
Enrollment & Credit Hour Requirements.....	4
Plan of Work & Advisory Committee Explained	5
How to Schedule the Master’s Oral Exam (Thesis Track students only).....	7
Enrolling in MAE 586 (Non-thesis Track students only).....	9
Applying to Graduate	10
Electronic Theses and Dissertations (ETD) Information.....	10
Semester-by-Semester Program Checklist.....	11
MS Thesis	11
MS Non-thesis	11

Master's Degree Requirements

If you will be completing a thesis:

- Minimum GPA: 3.0
- Graded Courses: You must have a minimum of 21 credits from graded courses
 - o Up to 3 courses (9 credits) can be from non-MAE courses approved by your advisor
- Research Credits: You must have a minimum of 9 credits of MAE 695
- Total Credits required is 30

If you will not be completing a thesis:

- Minimum GPA: 3.0
- Graded Courses: You must have a minimum of 27 credits from graded courses
 - o Up to 3 courses (9 credits) can be from non-MAE courses approved by your advisor
- Project Work Credits: You must have 3 credits of MAE 586
- Total Credits required is 30

Thesis vs. Non-thesis track

Thesis Track

Master's students who choose the thesis track will work with a faculty advisor to write and give an oral defense of a thesis on a research topic. Faculty advisors are not assigned; students must take the initiative to connect with a faculty advisor who shares the same research interests as the student. Before defending the thesis, the student must create an advisory committee that includes their faculty advisor and at least 2 other MAE faculty members. Your advisory committee will judge your final defense.

Thesis students must conform to all ETD Deadlines set by the Graduate School to ensure their final defense is completed on time. The final defense is typically held during the final semester of the student's master's degree coursework. As this track is more research-intensive it tends to attract students who plan to have a career in research or continue on to a doctoral program, but it is not limited to only those students.

Non-Thesis Track

Master's students who choose the non-thesis track will complete MAE 586, which is an independent project course. Students will work with a project advisor (MAE faculty) to perform an analysis or experiment of mutual interest to both the student and the advisor. Students will first complete a one-page project proposal which includes a timeline of major tasks. The timeline must be approved by the project advisor and the Director of Graduate Programs before the student can enroll in MAE 586. There is no final defense and the student does not need to form an exam committee. The final grade is determined by the project advisor. As this track is more project-oriented it tends to attract students who plan to enter industry careers after graduation, but it is not limited to only those students.

Enrollment & Credit Hour Requirements

All students are required to maintain Full-Time Enrollment

- Full-Time Enrollment means you must take 9 to 15 credit hours per semester. The MAE Graduate Office recommends that students take no more than 9 credit hours per semester.
- Students who are not registered as full-time students by Census Day (the 10th day of classes each semester) lose their eligibility for student loans, international students will be out of compliance with their visa requirements, and all students lose eligibility for the Graduate Student Support Plan (GSSP).
- Read more in the Graduate Handbook: [section 3.14b Requirements for Full/Half-Time Registration](#)

All students are required to maintain Continuous Enrollment

- Continuous Enrollment means there is no break in your enrollment/registration. If you have a break in your enrollment you will need to re-apply to the program.
- It is possible to file a Leave of Absence for up to two (2) semesters during your academic career at NCSU.
- Read more in the Graduate Handbook: [section 3.14a Requirements of Continuous Enrollment](#)

Students are generally not expected to be enrolled for summer courses UNLESS you are scheduling your Master's Oral Exam

- While you are not expected to be enrolled, there are often courses available.
- If you are scheduling final defenses/exams over the summer, including the summer-fall intersession, you are required to register for at least one credit in the summer term in which you defend. Generally, defending graduate students will register for 1 credit of MAE 696 or 896 which is a 10-week summer session at a discounted price.

Enrollment for your final semester before graduating

Thesis Students:

- If you have completed all of the credit hour requirements for your degree, including MAE 695, but need to complete your research and/or writing and defending the thesis, you can register for a minimum of three (3) credit hours of MAE 699 (Master's Thesis Preparation) to maintain full-time status.
 - This should only be done in the final semester before you graduate.
- In certain cases, international Students who are in their very last semester may file a Reduced Course Load form through OIS and register for just one (1) credit hour. Please see the Graduate Office if you feel this applies to you. If you are eligible, this request must be approved before the first day of classes of the requested semester.

Non-Thesis Students:

- Students are expected to enroll in three (3) credit hours of MAE 586 during their final semester to maintain full-time enrollment.
 - If you received an "incomplete" in MAE 586 and need to re-take MAE 586, enroll in three (3) credit hours of MAE 689 the following semester instead of re-enrolling in MAE 586.

Plan of Work & Advisory Committee Explained

The Graduate Plan of Work is a document that serves both as a guide to successful degree completion and a contract between students and their programs. In this way, it serves to reduce the potential for misunderstandings about degree requirements and outlines the expected academic progress students should make. It is especially helpful when it is evaluated on at least an annual basis by students with their advisor(s), and where applicable, their advisory committees, with any needed modifications recorded at that time. It should be viewed as a “living document” that reflects changes that may occur as students continue to develop and refine their academic programs.

As such, you will be expected to fill out your plan of work in your first semester, however, you will not ‘submit for approval’ until after you know your advisor. For additional information regarding the contents of the PoW, formulation and submission process, timing of submission and revising a PoW can be found in the Graduate Handbook ([section 3.3 Graduate Plan of Work](#)).

Plan of Work Completion Schedule

Semester 1: create & save your Plan of Work in your MyPack Portal

- Do not submit your Plan of Work for review yet
- Note: If you “submit” your Plan of Work for review at this point it will be rejected. If your Plan of Work is rejected you can continue to make changes and save it until it is ready for review.

Semester 2: submit your Plan of Work for approval

- Identify your faculty advisor and advisory committee and submit your Plan of work for approval

Continuously: review & save your Plan of Work

- The review and modification process can be done continuously, especially if the classes you take do not match your original Plan of Work.
- We recommend that you review your Plan of Work with your advisor at least once a year, especially if you are a thesis track student.

Second-to-last Semester: review & submit your Plan of Work for approval

- This must be done prior to scheduling the Final Exam (thesis track) or when approved to enroll in MAE 586 (non-thesis track).

Who is your “Committee”?

If you are a non-thesis track student: Your committee will consist of only one person – the MAE Director of Graduate Program (DGP). You should designate the DGP as the Committee Chairperson. No other committee members are required for non-thesis track students.

If you are a thesis track student: Your committee must consist of three people – your MAE advisor, and two other MAE faculty members. During your third or second-to-last semester, you should work with your advisor to find two other faculty members to serve on your thesis review committee. Your MAE advisor will be your Committee Chairperson. You can have up to two Co-chairs if you would prefer (one of which would be your faculty advisor). Once complete, you should be ready to submit your PoW for committee approval. It is best to ask the faculty member if they will serve on your committee before selecting them, that way they expect the alert.

The Plan of Work Review Process:

- 1) Submit your PoW through MyPack Portal.
 - a. Your Advisory Committee must be created to complete this step.
- 2) Committee member (thesis-track students) or the DGP (non-thesis track students) will review your PoW for committee approval.
- 3) The DGP then reviews the PoW for departmental approval.
- 4) If the DGP approves your PoW, it is sent to the Graduate School for final approval.
- 5) Once the Graduate School approves your POW you have met the POW requirement!

Note: If at any time in the process your POW is denied, it will be sent back to you for modification. Once you make the necessary changes and re-submit your POW the process begins again.

If this happens in your third or second-to-last semester, we recommend contacting your advisor or the DGP for help to determine why it was not approved and what changes you can make to ensure it is approved the next time you submit it.

Helpful Resource: [Student Information System Training Manual](#)

- Creating a Plan of Work (pg. 4)
- Creating an Advisory Committee (pg. 7)
- Applying for Graduation (pg. 12)

How to Schedule the Master's Oral Exam (Thesis Track students only)

Step 1) Create your Graduate Plan of Work (Pow)

Note: You can create your POW and "save" them in MyPack Portal.

- Create your PoW through SIS in your MyPack Portal by navigating to **Student Homepage > Planning and Enrollment tile > Graduate Plan of Work > Plan of Work tab**
 - We recommend that this be completed by the end of your first semester, but it must be done before you can schedule your Master's Oral Exam (thesis track) or enroll in MAE 586 (non-thesis track).
 - Plan of Work Guidelines:
 - Your PoW should include the minimum credit hour and course requirements specific to your degree.
 - Only one 400-level course can be included on your POW or counted toward your master's degree. You can take other 400-level courses but they will not count toward your master's degree.

- Create your advisory committee through SIS in your MyPack Portal by going to **Student Homepage > Planning and Enrollment tile > Graduate Plan of Work > Committee tab**

Note: Committee members cannot accept member role until Pow is submitted for approval.

- Thesis students should know who your Advisory Committee Chair (aka faculty advisor) is by the end of your 1st or 2nd semester.
- We recommend you create your committee at the same time as your PooW, but it must be done before you can schedule your Master's Oral Exam (which is typically held in your final semester).
- Committee Guidelines:
 - Thesis track students must have a minimum of three (3) committee members– the Chair and two MAE faculty members. Your Chair is also be your faculty advisor. You can have up to two (2) "co-chairs" if necessary.
 - Non-thesis track students should only list the Director of Graduate Programs on their advisory committee. The DGP should be listed as "Chair".

Step 2) Submit PoW for approval

- Once you submit your PoW for approval, each advisory committee member will receive a notification to review and approve your PoW. Non-thesis student's, only the Chair (DGP) will receive this notification.
- Once your advisory committee approves the PoW the Director of Graduate Programs (DGP) will review your PoW for departmental approval.
- Once the DGP approves your PoW the Graduate School will review it for final approval.

Step 3) Request to schedule your Master's Oral Exam (after PoW has received final approval)

- Exam must be performed before the ETD Review Deadline you chose (Registration Required vs. No Registration Required)
- Print and complete a Master's Schedule Oral Final form.
 - Located on the Graduate School's [Forms](#) website.
 - **Note:** Only committee member names need to be listed– their signature is not required.
 - (Optional) Reserve a conference room with the MAE Front Office and include it on the form

- Submit the exam request to the MAE Graduate Office (3113 EB3) for departmental approval.
 - The MAE Graduate Office will have the Director of Graduate Programs sign the request form before forwarding it to the Graduate School for final approval. The Graduate School must receive your exam at least 10 business days prior to your proposed exam date.
- It is recommended that you **Apply to Graduate** at this time, as well, if you have not already.

NOTE: It can be very difficult to coordinate an exam time that works for all committee members. Planning your exam day and time in advance can help ensure all committee members are present and prevent any delays in your exam and graduation.

Step 4) If you receive an “Unconditional Pass”

- Your thesis must be submitted to the Electronic Thesis Dissertation (ETD) Editor within 5 days after the exam (but absolutely before ETD deadline).
- The ETD Editor will review your thesis then send you formatting and layout corrections.
- Make the necessary formatting corrections then submit your thesis back to the ETD Editor for final approval. Final approval by the ETD editor must occur prior to the Final Error Free ETD Deadline
- Additional information is included on page eight (pg. 8) of this handout.

Step 5) Apply to Graduate by the ETD Apply to Graduate Deadline if you have not done so yet

- Additional information is included on page eight (pg. 8) of this handout.

Step 6) Keep an eye on your email for important information from the Graduate School, the MAE Graduate Office, or your advisor.

- You may still have important deadlines to meet regarding graduating and officially finishing your degree. Important deadlines and information will be emailed to you by the Graduate Office, but the Graduate School and/or your advisor may have more information as well.

Enrolling in MAE 586 (Non-thesis Track students only)

MAE 586 – Project work in Mechanical Engineering is an independent project course with no formal lectures. Instead, you will perform an analysis or experiment under the advisement of a project advisor.

During your second to last semester (or during the term 27 credit hours will be completed), students should identify a MAE faculty member to serve as their project advisor. The MAE Graduate Office recommends non-thesis students consult MAE faculty member that shares your [research interest](#) to develop your own project idea. If necessary, the Director of the Graduate Program will help you secure an advisor or will serve in that capacity.

Project proposal and course enrollment

Non-thesis students should prepare a one-page project proposal that includes a description of the project and timeline of major tasks. Once the project proposal is approved by your project advisor, the proposal should be forwarded– via email, to the Dr. Kara Peters (MAE Director of Graduate Programs) for departmental approval. Upon receiving department approval for your project proposal, the MAE Graduate Office will manually enroll you in MAE 586.

Since the project proposal development process can take some time it's best for non-thesis students to begin their project search during their third semester. Ideally, students should be enrolled in MAE 586 before the end of their third semester.

Applying to Graduate

IMPORTANT: All students must Apply to Graduate during their final semester

- A student must Apply to Graduate to participate in commencement, have the degree posted on the transcript, and receive a diploma.
- Apply to Graduate in MyPack Portal: **Student Homepage > Planning & Enrollment tile > Apply for Graduation.** Detailed instructions are available [here](#).
- It is advised that students apply to graduate at the same time they schedule their defense, or enroll in MAE 586 but must be done by “Apply to Graduate Deadline Date” (see below)

After Applying to Graduate, students will receive a Graduation Survey from the Graduate Office. This must be completed before the student’s graduation can be approved.

Electronic Theses and Dissertations (ETD) Information

Only Thesis-track MS students, Direct-to-PhD students, and PhD students need to follow ETD guidelines.

The ETD Deadlines change each semester it is your responsibility to be aware of (and meet) [ETD deadlines](#). **Every master’s student completing a thesis has 3 ETD deadlines to meet in sequential order:**

- 1) **ETD Review Deadline** – all students must unconditionally pass the final exam and submit for the ETD Review by this deadline. Students who meet this deadline will not be allowed to register in the same academic program for any subsequent semester. The final ETD file is to be submitted before the Final ETD Approval Deadline and committee approval must be completed by the Final ETD Committee Approval Deadline. You may choose between:
 - a. No Registration Required Deadline – meet this date in order to avoid registering for the semester in which you are graduating
 - b. Registration Required Deadline – meet this date if you are/will be registered for the semester in which you are graduating
- 2) **Final Error-Free ETD Deadline** – applies to both “No Registration Required” and “Registration Required” students. Date by which a thesis or dissertation student who met that semester’s review deadline (either the No Registration or Registration Required), must submit the final error-free ETD to the ETD Reviewer in order to graduate at the end of the semester. Graduation will still be contingent upon approval of the final ETD by the student’s advisory committee before the expiration of the Final ETD Committee Approval Deadline.
- 3) **Final Committee Approval Deadline** - applies to both “No Registration Required” and “Registration Required” students. Date by which a thesis or dissertation student must submit and have the final ETD approved by all members of their advisory committee in order to graduate at the end of the semester.

Additional information about the Electronic Thesis and Dissertation process can be found on the Graduate School’s [Electronic Thesis and Dissertations](#) website.

Semester-by-Semester Program Checklist

MS Thesis

First Semester – or prior to completing 9 credit hours of coursework

- Create your plan of work and begin to consider who will be your faculty advisor.

Second Semester – or during the term 18 credit hours will be completed

- Identify your faculty advisor and review your PoW with them.
- Consult with your faculty advisor to identify remaining members of your Advisory Committee.
- Submit POW for approval in MyPack Portal by the end of the 2nd semester.

Third Semester – or during the term 27 credit hours will be completed

- Review ETD Deadlines for the term you expect to graduate.
- Review your PoW for accuracy after enrolling in classes for the following semester (final semester).
- Resubmit your PoW for approval by the end of the 3rd semester if necessary.

Fourth Semester – or final semester

- Schedule and perform the final exam– adhering to all applicable ETD deadlines.
- Apply to graduate in MyPack Portal.

MS Non-thesis

First Semester – or prior to completing 9 credit hours of coursework

- Create your plan of work in MyPack Portal.
- Designate the MAE Director of Graduate Programs as the Chair of Advisory Committee.

Second Semester – or during the term 18 credit hours will be completed

- Begin to think about MAE 586 project idea
- Submit your PoW for approval by the end of the 2nd semester

Third Semester – or during the term 27 credit hours will be completed

- Identify the MAE 586 project you will work on (faculty advisor):
 - Consult with a MAE faculty member to develop your own project idea.
- Create a Project Proposal- this must be approved by the project advisor and DGP before the end of the 3rd semester. The MAE Graduate Office will enroll you in MAE 586 upon DGP approval.
- Review Plan of Work for accuracy after enrolling in final semester courses and resubmit for approval by the end of the 3rd semester if necessary.

Fourth Semester – or final semester

- Complete MAE 586.
- Apply to graduate in MyPack Portal.