

# *UNM Mechanical Engineering Graduate Manual*

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Apodaca*

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The purpose of this web manual is to outline the requirements and procedures for the Master of Science in Mechanical Engineering (MSME) and Doctor of Philosophy (PhD) Degrees with a concentration in Mechanical Engineering.

The requirements for the degrees are specified by the department or school; however, some of the requirements are university wide. The student should carefully study the [University catalog](#) that is applicable at the time of admission to become familiar with both general and specific requirements. The catalog is located on the UNM Registrar's website <https://registrar.unm.edu/>.

This manual will assist the students in understanding procedures for satisfying the Mechanical Engineering (ME) graduate degree requirements awarded through UNM Graduate Studies. The ME Department may change any requirements in this manual, as it thinks is necessary. Such changes will become effective at a time determined by the Mechanical Engineering faculty.

It is the student's responsibility to make sure that all requirements are satisfied at the intended time of graduation. A student's degree requirements are fixed at the time the MSME Program of Studies or PhD Advancement to Candidacy Forms are completed and approved by the student's Committee-on-Studies, the Mechanical Engineering Graduate Director, and the Dean of Graduate Studies. Questions regarding these regulations and requirements should be directed initially to the appropriate staff/faculty in the ME program and then, if necessary, to Graduate Studies staff.

ME graduate students are added to a LISTSERV once they enroll, this is another way in which important program information is conveyed to ME graduate students. *READ emails!*

### **Admission**

Leveling courses for holders of non-ME BS degree in Engineering, Physical Sciences, Computer Sciences or Math. A typical set of make-up (leveling) courses are:

- CE 202 - Engineering Mechanics: Statics
- CE 302 - Mechanics of Materials
- CS 151 - Computer Programming Fundamentals (or equivalent)
- \*\* Math 316 - Applied Ordinary Differential Equations
- ME 301 - Engineering Thermodynamics (Classical Thermodynamics taught by Physics Dept. is not an acceptable substitute.)
- ME 306 - Engineering Mechanics: Dynamics (Classical Mechanics taught by Physics Dept. is not an acceptable substitute.)
- ME 317 (or CE 331) - Fluid Mechanics (May be waived for students who do not intend to pursue Energy/Thermo-Fluid areas upon approval of the student's advisor.) • ME 320 - Heat Transfer (May be waived for students who do not intend to pursue Energy/Thermo-Fluid areas upon approval of the student's advisor.)
- ME 357 - Vibrations (This subject will be required if the student intends to take ME 516 or ME 580 as a Core graduate course.)
- ME 370 (or CE 305) - Engineering Material Science (May be waived for students who do not intend to pursue Materials and Solid Mechanics areas upon approval of the student's advisor.)

- ME 380 - Controls (This subject will be required if the student intends to take ME 580 or ME 581 as a Core graduate course.)

Note:

- The ME Graduate Director, your faculty advisor or committee may require additional leveling courses.
- Course descriptions and pre-requisites are available in the UNM Catalog.
- A grade of at least "B" will be required in all make-up courses.
- None of the above-listed courses (except for Math 316) may be applied towards an ME graduate degree.

### **Deferralment of an Offer of Admission**

Domestic Students: Offers of admission are made only for the semester for which the student has applied. Students who do not enroll during the semester for which admission is granted will forfeit their admission, unless they submit to the ME Department a written request for deferral no later than the Friday of the second week of classes of the semester of admission. A deferral is limited to a period within one calendar year. After one year's deferral period a student must re-apply. The Dean of Graduate Studies makes final approval for the requested deferral. For the Admission Deferral Request Form, please visit the UNM Graduate Studies website <https://grad.unm.edu/home/> for contact information.

International Students: Please use the contact the UNM Office of International Admissions website <https://international.unm.edu/> then click on "Contact Us".

### **Emergency Contact Form**

All ME students should fill out the Emergency Contact Form and submit it to their ME academic advisor for the student's record. *See Addendum I*

### **Advisement and Registration**

All MSME and PhD students should receive their first advisement in the program with the ME Graduate Director for their first semester registration. Once the student identifies a faculty advisor the student will transition to advisement through their faculty advisors for future registration.

### **Assistantships**

Teaching Assistant (TA) positions typically provide recipients with tuition coverage and a salary, requiring 20 hours of work per week. Grading Assistant (GA) positions typically require 10 hours of work per week, to serve as a grader for a course. The following are the application deadlines for current students:

Spring	Fall
November 1	April 15

The ME Teaching/Grading application, in the case of current TAs and GAS, must be submitted to ME Graduate Director each time (i.e., each semester) a student is requesting to be considered for these positions. The application is located on the ME website <https://me.unm.edu/>, click on Students then Graduate, look under "Graduate Forms." These applications have the same deadlines (Nov. 1 and April 15) noted above. Note: contract renewals are subject to the

availability of funds as well as the students' performance (both academic and job-related) and progress towards a degree.

### **Transfer Credit**

Students who have completed graduate-level coursework at an accredited institution other than the University of New Mexico, whether they were in graduate or non-degree status, may request that these credit hours be used toward their degree program. Such credit hours may be transferred into a degree program by listing them on the Program of Studies or the Application for Candidacy, within the limits described in the Catalog sections on Master's, Master of Fine Arts, and doctoral degrees.

The student must have earned a grade of "B" or better in the courses for which transfer credit hours are requested. Courses taken on a Pass/Fail basis and/or courses taken as extension credit at other universities are not accepted for graduate credit at the University of New Mexico.

The number of transfer and/or applied (including non-degree) credit hours used toward a program may not exceed fifty percent of the required coursework for the degree; departments may impose even more restrictive limits on transfer and/or applied credit hours.

NOTE: Coursework that has been counted toward a previous degree may not be counted again toward any other degree except master's coursework for a doctoral degree.

### **Guidelines for Non-ME Courses**

All courses taken toward the satisfaction of the M.S. and Ph.D. degree requirements must be approved by both the ME Department and Graduate Studies. Before selecting any 300- or 400-level courses, make sure that graduate credit is granted by the corresponding department. Students may wish to take certain upper division (300 and 400 level) undergraduate courses outside the Mechanical Engineering department as a graduate student and use them in their graduate degree program. Those courses marked with \*\* in front of the course number (in the official *UNM Catalog*), such as \*\* Math 314 Linear Algebra, are available for graduate credit except for graduate majors in the corresponding (in this case, Math) department. This means that the course in question is eligible to be used for graduate credit. To have a double-starred course count for graduate credit, the student must have the approval of his/her Advisor that it is acceptable to use the course in his/her degree program. When a course is chosen appropriately, the letter "G" will appear next to the course number on the student's transcript that shows that the course has been approved for graduate credit.

Any elective courses taken outside the department must be of a technical nature. Courses from the following departments are typically acceptable: Mathematics, Physics, or another department in the School of Engineering. When approving those course credits toward a student's degree, the ME Graduate Director shall be concerned about the cohesiveness and relevance of the courses to form a solid foundation of support for the student's project, thesis, or dissertation work. In other words, the MSME and PhD degrees shall not be used as a vehicle to complete a set of unrelated, hodgepodge, and irrelevant courses.

## **Grading**

### **Incomplete (I) Grades:**

The grade of "I" is given only when circumstances beyond the student's control prevent completion of the coursework within the official dates of a semester or summer session. According to academic policy, incomplete grades must be completed before a student is eligible to graduate from the University of New Mexico. Students should not re-enroll or reregister (for credit) for a course in which an incomplete has been received to resolve the "I" (incomplete) grade. If an instructor requires the student to repeat the class to resolve the Incomplete, the student must register for the course on an audit basis.

Incomplete grades received must be resolved no later than one year (twelve months) from the published end of business day of the semester in which the grade was assigned. Incomplete grades not resolved within the time frame stated in this policy are converted automatically to an F (failure) grade.

Students resolving Incompletes in their semester of graduation must have the process completed (including the reporting of the grade to the Records and Registration Office by the appropriate deadline. Students are responsible for informing instructors that they are graduating and that the grade(s) must be reported by the appropriate deadline. Failure to complete the process as described could result in the postponement of graduation until the following semester.

The instructor of record reports the final grade for the course in which the Incomplete was assigned to the Records and Registration Office.

### **Guidelines for Credit/No Credit (CR/NC) Grades:**

No more than six (6) credit hours of course work in which a grade of a C (2.0) C+ (2.33) or CR (grading option selected by student) was earned may be applied toward a graduate degree. All other courses applied towards a graduate degree (including transfer and non-degree courses) must be taken with the regular grading option; Seminar, Thesis, and Dissertation credits are exempt from this rule.

### **Grade Point Average (GPA) Requirements:**

Students failing to maintain a 3.0 GPA will be placed on academic probation in accordance with OGS policy. A student may not graduate if his/her Program of Studies includes more than six (6) hours of coursework graded C, C+, or CR (ME591/592 is excluded from this limitation). Students having a GPA of less than 3.0 are not permitted to take the Master's or Doctoral Comprehensive Examination. A student's cumulative GPA cannot be below 3.0 at the time of graduation.

## **Academic Probation and Consequences**

Students who do not maintain good academic standing are placed on academic probation by Graduate Studies.

There are three types of probation.

    Type 1: Grade Point Average

Type 2: NC-F-IF-INC Grades

Students on Type 2 probation are not eligible to hold assistantships, nor are they allowed to take master's examinations, doctoral comprehensive examinations, defend theses, dissertations, or graduate.

Type 3: Incomplete Grades

See Graduate Studies catalog <https://grad.unm.edu/home/> Click on "Current Students" then UNM Catalog then The Graduate Program.

**M.S.M.E. Plan I (Thesis) Degree**

**Requirements and Procedures:**

The student should carefully study the UNM catalog Graduate Studies section <https://grad.unm.edu/home/> Click on "Degree Roadmap and Guidelines." It is the student's responsibility to see that these requirements are satisfied.

NOTE: "Deadlines are not suggestions" per Graduate Studies.

**Time Limit for Completion of Degree:**

All work used to meet degree requirements for a master's degree, including transfer credit, must be completed within a seven (7) year period immediately preceding the granting of the degree. Course work older than seven years cannot be used to meet requirements for the master's degree.

**Summary of Course Requirements:**

The following are the course requirements for the MSME degree, Plan I. Some of these requirements are dictated by the UNM Catalog and additional ones are required by the ME Department.

A minimum of 31 semester hours is required.

Comments on Design Project course (ME 559) - Students who are pursuing the MSME Plan I program are not allowed to register and receive credit for ME 559.

A minimum of 24 hours of 500-level courses, including ME 599 Thesis.

A minimum of 15 hours of coursework in Mechanical Engineering, not including ME 599. Four courses will comprise the ME Graduate Core. All graduate students in Mechanical

Mechanical Engineering graduate students are required to complete a set of core courses as part of an MSME or PhD programs. PhD students may satisfy these requirements with equivalent courses taken as part of an MS program as approved by the ME Graduate Program Director. **Courses taken at the ME 400-level are not accepted and may not be repeated at the ME 500-level to satisfy the core requirements.**

ME Graduate Core consists of four courses:

1) One **mathematics** course, selected from:

ME 500 Numerical Techniques in Mechanical Engineering

ME 504 Computational Mechanics



ChNE 525 Methods of Analysis in Chemical & Nuclear

Engineering any Math/Stat 5XX course

Note: the following Math courses (which are intended for education majors) are not acceptable: 500, 501, 502, 503, 506, 507, 508, 509, 542, 543, and 550.

2) One **thermal science** course, selected from:

ME 520 Advanced Thermodynamics

ME 530 Theoretical Fluid Mechanics

3) One **solid mechanics** course, selected from:

ME 501 Advanced Mechanics of Materials

ME 512 Continuum Mechanics

ME 540 Elasticity

4) One **dynamics & controls** course, selected from:

ME 516 Applied Dynamics

ME 580 Dynamic System Analysis

ME 581 Digital Control of Mechanical Systems

ME 562 Spacecraft Attitude Dynamics and Control

At least 24 hours must be completed in residence at the University of New Mexico.

A maximum of 12 hours of graduate level courses in non-degree status may be applied to the course requirements.

6 hours of M.S. thesis (ME 599) are required.

Plan I students must complete a minimum of 6 hours of thesis (599) credits, and only 6 credits may be applied to the program of studies. Once initiated, continuous enrollment (fall and spring semesters) in thesis (599) is required until the Dean of Graduate Studies accepts the thesis. Students who complete degree requirements during a summer session must be enrolled in a minimum of 1 thesis hour. This rule applies whether or not the student is concurrently enrolled for other credit hours.

A maximum of three hours of Problems courses (ME 551 or ME 552, but not ME 559) may be included. (comments\* below.)

Students who start enrolling in 599 must continue enrolling in 599 every semester (not including summers) until graduation.

\*Comments on Problems courses (ME 551 or ME 552):

Some faculty members and their students find this "continuous enrollment" (Graduate Studies) rule cumbersome. For this reason, the student who is performing the initial thesis research may take these "Problems" courses in lieu of registering for thesis credits. When taken for this purpose, these courses may be repeated as many times as needed, if they are taken as CR/NC mode of grading. However, credit hours earned for these courses (and similar research-type courses from other UNM graduate programs) are not counted towards the minimum 31 hours of coursework needed for graduation (see above).

Obviously, the student's effort will eventually be reflected in the total thesis hours that he/she takes before graduation. On the other hand, if the student is genuinely working on some topic of mutual interest unrelated to their thesis research with their advisor or another professor, she/he may take the ME 551 or ME 552 courses that will count toward the satisfaction of the MSME degree requirements.

An example of scholarly activities that may justify such credits would be the research performed through independent study work that may provide a Research Assistantship (RA) job for the student, but it does not lend itself as an appropriate thesis topic. The student's report of these activities shall be kept in his/her ME academic folder and scrutinized at the time of submitting the Program of Studies to the Graduate Studies for approval. In these reports the student must clearly document why the corresponding activity is separate from his/her thesis research. 0 + 1hour Seminar. [ME 591 (fall), ME 592 (spring)].

### **Initial Advisement:**

The student is strongly encouraged to meet with the ME Graduate Director before the initial registration and work out a program of studies for the first semester. By the beginning of the 2<sup>nd</sup> semester, the student must obtain the agreement of an ME faculty member to serve as their “faculty” advisor and submit an *Advisor Assignment Form* (located on the ME website) to their ME “academic” advisor. Their faculty advisor normally, but not always, becomes the Chair of the student’s committee Committee-on-Studies (COS).

### **MSME Seminar Requirement:**

Each MSME student must have one hour of seminar credit on their record for their program. The student shall register for ME 591/592 for three semesters . It is strongly suggested that the first semester the student registers for one (1) credit hour. Then for the second and third semesters the student registers for zero credit hours. The grade will be CR/NC, based upon attendance. A student may discuss with the instructor if presenting at a seminar may be counted for attendance (1 or 2 sessions). On-campus students: Credit will be earned in each semester by attending at least ten (10) of the scheduled ME seminars, or all the ME seminars if fewer than ten presentations are given.

### **Student Committee:**

A student pursuing a MSME Plan I must form a committee in accordance with the Graduate Studies guidelines <https://grad.unm.edu/home/> then “Degree Roadmap and Guidelines”. Students are required to submit a Committee-on Studies (CoS) form to their ME academic advisor. The deadlines for CoS are:

- September 1<sup>st</sup> for spring graduation
- February 1<sup>st</sup> for summer graduation
- June 1<sup>st</sup> for fall graduation

Composition of Committee - The committee shall be composed of at least three members; at least two members shall be full-time, tenure-stream, UNM Mechanical Engineering faculty members. Students will need to select a committee chair as early as possible, preferably during the first semester in residence. The committee chair must be a full-time, tenure-stream, UNM Mechanical Engineering faculty member.

The remainder of the Committee should be chosen by consultation between the chair of the committee and the student. Approval for non-UNM faculty committee members must be obtained from the Department and the Graduate Studies office.

The chair of the committee shall have the responsibility to advise the student in planning the student's program. Approval of the MS Program of Studies (PoS) must also be obtained from the chair of the committee.

### **Program of Studies:**

The electronic Program of Studies (POS) form is located on the Graduate Studies website <https://grad.unm.edu/home/> then "Degree Roadmap and Guidelines". The POS must be submitted by the student (at the latest) the semester or summer term before graduation semester. The Graduate Studies deadlines for Program of Studies (POS) are as follows:

July 1 for a fall graduation.  
October 1 for a spring graduation  
March 1 for a summer graduation.

A student can submit their completed PoS after you have completed a minimum of 12 hours of graduate courses in graduate status. **Failure to submit this form on time will delay your graduation.** The ME department (committee chair) will require time to review and approve the form, so it is strongly recommended that you submit the form well in advance of the Graduate Studies deadline.

**Revisions** - If a student changes coursework or requests a substitution(s) of a required course(s), a memo signed by their faculty advisor, the ME graduate program director and/or the ME chair may be needed to be submitted to the Dean of Graduate Studies. If you change your program from one "plan" to another the student must submit a **revised** Program of Studies form electronically within the deadlines stated on the Graduate Studies website.

### **Intent to Graduate:**

The student must submit an *Intent to Graduate Form* to their ME academic advisor. This form is located on the ME website <https://me.unm.edu/students/graduate/index.html> . The deadlines

for the <i>Intent to Graduate Form</i> are:	Fall Graduation	July 30 <sup>th</sup>
	Spring Graduation	November 30 <sup>th</sup>
	Summer Graduation	April 30 <sup>th</sup>

**Failure to submit this form on time will delay your graduation.** Students must be enrolled in a graduate course in the semester of their graduation. If all other course work is completed, one (1) hour of ME 599 may be taken.

### **Announcement of Exam for Thesis:**

At least two weeks before the final examination is held, and no later than November 1 for Fall, April 1 for Spring and July 1 for summer, the student must submit an Announcement of Exam (AE) to Graduate Studies to notify them of the date of the exam. The AE and more information about the Announcement of Exam **is on the** Graduate Studies website.

<https://grad.unm.edu/home/> then click on "Degree Roadmap and Guidelines."

**Thesis Defense:**

The student is responsible for providing each member of the committee with a complete draft of the thesis in ample time for review prior to the defense. The student must collaborate with

their committee and schedule the time and location of the defense at least three weeks prior to defending. Students may schedule an available room through the ME Administrative office.

Information pertinent to preparation of a thesis is available on the Graduate Studies website. <https://grad.unm.edu/home/> then "Degree Roadmap and Guidelines."

The Master's (Plan I) defense usually consists of a presentation of the research work by the student and an oral examination by the committee. Results of the examination must be reported by chair of the committee to Graduate Studies via an electronic "Report of Examination" form by: November 15<sup>th</sup> for fall graduation.

April 15<sup>th</sup> for spring graduation

July 15<sup>th</sup> for summer graduation

A final exam may be passed with distinction according to the ME Department policy (see below).

**Distinction on Thesis Defenses:**

Distinction may be awarded to the student to recognize exemplary performance on an M.S. thesis defense. The student's transcript will include "Passed with Distinction." The examining committee shall consider the written work as well as the oral presentation and oral examination. Outstanding performance in all aspects of the examination is required. A committee decision to propose that a student be passed with distinction must be unanimous and is subject to approval by the Graduate Director. Normally, it is expected that the thesis recommended for "Distinction" has generated refereed, archival-quality publication(s). If the thesis requires more than minor editorial corrections, distinction will not be considered. Department standards of excellence suggest that, on average, about one in ten M.S. thesis defenses will merit distinction. The committee chair will provide this information on the "Report of Exam" sent to Graduate Studies.

**Submission of Thesis:**

The student's thesis (as well as all related documents) shall be submitted for approval by the Dean of Graduate Studies by deadlines:

Fall Graduation November 15<sup>th</sup>

Spring Graduation April 15<sup>th</sup>

Summer Graduation July 15<sup>th</sup>

Plan I degree candidates should refer to the Graduate Studies website

<https://grad.unm.edu/home/> then "Degree Roadmap and Guidelines" for comprehensive information regarding thesis.

Use the "ME Graduate Curriculum (Plan I) Worksheet" see [Addendum II](#)

## **M.S.M.E. Plan II (Project) Degree**

### **Requirements and Procedures:**

Students should carefully study the UNM Catalog Graduate Studies section.

<https://grad.unm.edu/home/> Click on “Degree Roadmap and Guidelines.” It is the student's responsibility to see that these requirements are satisfied.

NOTE: Deadlines are not suggestions per Graduate Studies.

### **Time Limit for Completion of Degree:**

All work used to meet degree requirements for a master's degree, including transfer credit, must be completed within a seven (7) year period immediately preceding the granting of the degree. Course work older than seven years cannot be used to meet requirements for the master's degree.

### **Summary of Course Requirements:**

The following are the course requirements for the MSME degree, Plan II. Some of these requirements are dictated by the UNM Catalog and additional ones are required by the ME department.

A minimum of 34 semester hours is required.

A minimum of 24 hours of 500-level courses that may include ME 559

A minimum of 18 hours of coursework in Mechanical Engineering, which may include ME 551, 552 and/or 559. Four courses will comprise the Mechanical Engineering Graduate Core.

All graduate students in Mechanical Engineering are required to complete a set of core courses as part of an MSME or PhD programs. **Courses taken at the ME 400-level are not accepted and may not be repeated at the ME 500-level to satisfy the core requirements.**

ME Graduate Core consists of four courses:

- 1) One **mathematics** course, selected from:

ME 500 Numerical Techniques in Mechanical Engineering

ME 504 Computational Mechanics

ChNE 525 Methods of Analysis in Chemical & Nuclear

Engineering any Math/Stat 5XX course

Note: the following Math courses (which are intended for education majors) are not acceptable: 500, 501, 502, 503, 506, 507, 508, 509, 542, 543, and 550.

- 2) One **thermal science** course, selected from:

ME 520 Advanced Thermodynamics

ME 530 Theoretical Fluid Mechanics

- 3) One **solid mechanics** course, selected from:

ME 501 Advanced Mechanics of Materials

ME 512 Continuum Mechanics

ME 540 Elasticity

- 4) One **dynamics & controls** course, selected from:

ME 516 Applied Dynamics

ME 580 Dynamic System Analysis

ME 581 Digital Control of Mechanical Systems

ME 562 Spacecraft Attitude Dynamics and Control

Three (3) semester hours of ME 559 Design Project are required; no more than three (3) hours of ME 559 may be included in the Program of Studies.

A maximum of three hours of Problems courses (ME 551 or ME 552) may be included.

Comments on Problems courses (ME 551 or ME552) - Since any Incomplete ("I") grade in ME 559 course must be converted to a regular grade within one year of receiving it, students who are performing the initial ME 559 research work may take these "Problems" courses in lieu of registering for ME 559. When taken for this purpose, these courses may be repeated as many times as needed, if they are taken as CR/NC mode of grading. However, credit hours earned for these courses (and similar research-type courses from other UNM graduate programs) are not counted towards the minimum 34 hours of coursework needed for graduation (see above). Obviously, the student's effort will be reflected in the ME 559 credit hours that he/she eventually takes before graduation. On the other hand, if the student is genuinely working on some topic of mutual interest unrelated to his/her ME 559 research with their advisor or another professor, the student may take the ME 551 or ME 552 courses that will count toward the satisfaction of the MSME degree requirements. Examples of activities that may justify such credits would be independent study work, efforts to obtain patents on inventions, etc. The student's report of these activities shall be filed in his/her ME academic folder and scrutinized at the time of submitting the Program of Studies to the OGS for approval. In these reports the student must clearly document why the corresponding activity is separate from his/her ME 559 research.

A maximum of 12 hours of graduate level courses in non-degree status may be applied to the course requirements.

At least 24 hours must be completed in residence at the University of New Mexico.

Two semesters of Graduate Seminar (ME 591 in Fall and/or ME 592 in Spring) with a total of one (1) credit hour, are required. See Seminar Requirement.

#### **Initial Advisement:**

The student is strongly encouraged to meet with the ME Graduate Director before the initial registration and work out a program of studies for the first semester. By the beginning of the 2<sup>nd</sup> semester, the student must obtain the agreement of an ME faculty member to serve as their "faculty" advisor and submit an *Advisor Assignment Form* (located on the ME website) to their ME "academic" advisor. Their faculty advisor normally, but not always, becomes the Chair of the student's committee Committee-on-Studies (COS).

#### **MSME Seminar Requirement:**

Each MSME student must have one hour of seminar credit on their record for their program. The student shall register for ME 591/592 for three semesters. It is strongly suggested that the first semester the student registers for one (1) credit hour. Then for the second and third semesters the student registers for zero credit hours. The grade will be CR/NC, based upon attendance. A student may discuss with the instructor if presenting at a seminar may be counted for attendance (1 or 2 sessions). On-campus students: Credit will be earned in each

semester by attending at least ten (10) of the scheduled ME seminars, or all the ME seminars if fewer than ten presentations are given.

### **Student Committee:**

A student pursuing a MSME Plan II must form a committee in accordance with the Graduate Studies guidelines <https://grad.unm.edu/home/> then “Degree Roadmap and Guidelines”. Students are required to submit a *Committee-on Studies* (CoS) form to their ME academic advisor. The deadlines for CoS are:

- September 1<sup>st</sup> for spring graduation
- February 1<sup>st</sup> for summer graduation
- June 1<sup>st</sup> for fall graduation

Composition of Committee - The committee shall be composed of at least three members; at least two members shall be full-time, tenure-stream, UNM Mechanical Engineering faculty members. Students will need to select a committee chair as early as possible, preferably during the first semester in residence. The committee chair must be a full-time, tenure-stream, UNM Mechanical Engineering faculty member. The chair will also serve as the instructor of the student's project course (ME 559).

The remainder of the Committee should be chosen by consultation between the chair of the committee and the student. Approval for non-UNM faculty committee members must be obtained from the Department and the Graduate Studies office.

The chair of the committee shall have the responsibility to advise the student in planning the student's program. Approval of the MS Program of Studies (PoS) must also be obtained from the chair of the committee.

### **Program of Studies:**

The electronic Program of Studies (POS) form is located on the Graduate Studies website <https://grad.unm.edu/home/> then “Degree Roadmap and Guidelines”. The POS must be submitted by the student (at the latest) the semester or summer term before graduation semester. The Graduate Studies deadlines for Program of Studies (POS) are as follows:

- July 1 for a fall graduation.
- October 1 for a spring graduation
- March 1 for a summer graduation.

A student can submit their completed POS after you have completed a minimum of 12 hours of graduate courses in graduate status. Failure to submit this form on time will delay your graduation. The ME department (committee chair) will require time to review and approve the form, so it is strongly recommended that you submit the form well in advance of the Graduate Studies deadline.

Revisions - If a student changes coursework or requests a substitution(s) of a required course(s), a memo signed by their faculty advisor, the ME graduate program director and/or the ME chair may be needed to be submitted to the Dean of Graduate Studies. If you change your program from one “plan” to another the student must submit a revised Program of Studies form electronically within the deadlines stated on the Graduate Studies website.



**Intent to Graduate:**

The student must submit an *Intent to Graduate Form* to their ME academic advisor. This form is located on the ME website <https://me.unm.edu/students/graduate/index.html> . The deadlines

Fall Graduation	July 30 <sup>th</sup>
Spring Graduation	November 30 <sup>th</sup>
Summer Graduation	April 30 <sup>th</sup>

Failure to submit this form on time will delay your graduation. Students must be enrolled in a graduate course in the semester of graduation.

**Project Course:**

The student will register for ME 559 Design Project. Three (3) semester hours of Design Project are required; no more than three (3) hours of ME 559 may be included in the Program of Studies.

**Project Report:** The project shall be reported in written form and in English. The report should contain all the elements of a thorough engineering report including abstract, introduction, review of pertinent literature and related recent investigations, description of project, presentation and discussion of results, conclusions, recommendations, and references.

Information pertinent to preparation for the examination is available on the Graduate Studies website <https://grad.unm.edu/home/> then “Degree Roadmap and Guidelines.”

**Project Presentation and Master's Examination:** The student is responsible for providing each member of the committee with a complete draft of the project report at least 3 weeks before the scheduled project presentation, which normally serves as the Master's Examination. Students must collaborate with their committee and schedule the time and location of the examination at least three weeks prior to defending. Students may schedule an available room through the ME Administrative office.

Results of the examination must be reported to the Office of Graduate Studies, on the Report of Examination form by:

Fall Graduation	November 15 <sup>th</sup>
Spring Graduation	April 15 <sup>th</sup>
Summer Graduation	July 15 <sup>th</sup>

**Students on Probation:** Students having a GPA of less than 3.0 are not permitted to take the Master's Examination. If the project course ME 559 is to be the grade which raises the GPA to 3.0 the project presentation and Master's Examination must be separate events.

Use the “ME Graduate Curriculum (Plan II) Worksheet” see <a href="#">Addendum III</a>
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### **M.S.M.E. Plan III (Coursework Only) Degree**

#### **Requirements and Procedures:**

Students should carefully study the UNM Catalog Graduate Studies section.

<https://grad.unm.edu/home/> Click on "Degree Roadmap and Guidelines." It is the student's responsibility to see that these requirements are satisfied.

NOTE: Deadlines are not suggestions per Graduate Studies.

#### **Time Limit for Completion of Degree:**

All work used to meet degree requirements for a master's degree, including transfer credit, must be completed within a seven (7) year period immediately preceding the granting of the degree. Course work older than seven years cannot be used to meet requirements for the master's degree.

#### **Summary of Course Requirements:**

The following are the course requirements for the MSME degree, Plan III. Some of these requirements are dictated by the UNM Catalog and additional ones are required by the ME department.

A minimum of 34 credit hours is required.

The coursework must include a minimum of 24 hours of 500-level courses.

A minimum of 18 hours of coursework in Mechanical Engineering. Four courses will comprise the ME Graduate Core.

All graduate students in Mechanical Engineering are required to complete a set of core courses as part of an MSME program. **Courses taken at the ME 400-level are not accepted and may not be repeated at the ME 500-level to satisfy the core requirements.**

ME Graduate Core consists of four courses:

- 1) One **mathematics** course, selected from:
  - ME 500 Numerical Techniques in Mechanical Engineering
  - ME 504 Computational Mechanics
  - ChNE 525 Methods of Analysis in Chemical & Nuclear Engineering
  - any Math/Stat 5XX course

Note: the following Math courses (which are intended for education majors) are not acceptable: 500, 501, 502, 503, 506, 507, 508, 509, 542, 543, and 550.

- 2) One **thermal science** course, selected from:
  - ME 520 Advanced Thermodynamics
  - ME 530 Theoretical Fluid Mechanics
- 3) One **solid mechanics** course, selected from:
  - ME 501 Advanced Mechanics of Materials
  - ME 512 Continuum Mechanics
  - ME 540 Elasticity
- 4) One **dynamics & controls** course, selected from:
  - ME 516 Applied Dynamics
  - ME 580 Dynamic System Analysis
  - ME 581 Digital Control of Mechanical Systems
  - ME 562 Spacecraft Attitude Dynamics and Control

A maximum of 12 hours of graduate level courses in non-degree status may be applied to the course requirements.

A maximum of three hours of Problems courses (ME 551 or ME 552) taken with a letter grade may be included.

At least 24 hours must be completed in residence at the University of New Mexico.

Two semesters of Graduate Seminar (ME 591 in Fall and/or ME 592 in Spring) with a total of one (1) credit hour, are required. See Seminar Requirement.

### **Initial Advisement:**

The student is strongly encouraged to meet with the ME Graduate Director before the initial registration and work out a program of studies for the first semester. The faculty advisor for Plan III is the ME Graduate Director by the beginning of the 2<sup>nd</sup> semester the student must an *Advisor Assignment Form* (located on the ME website) to their ME “academic” advisor.

### **MSME Seminar Requirement:**

Each MSME student must have one hour of seminar credit on their record for their program. The student shall register for ME 591/592 for three semesters . It is strongly suggested that the first semester the student registers for one (1) credit hour. Then for the second and third semesters the student registers for zero credit hours. The grade will be CR/NC, based upon attendance. A student may discuss with the instructor if presenting at a seminar may be counted for attendance (1 or 2 sessions). On-campus students: Credit will be earned in each semester by attending at least ten (10) of the scheduled ME seminars, or all the ME seminars if fewer than ten presentations are given.

### **Program of Studies:**

The electronic *Program of Studies* (POS) form is located on the Graduate Studies website <https://grad.unm.edu/home/> then “Degree Roadmap and Guidelines”. The POS must be submitted by the student (at the latest) the semester or summer term before graduation semester. The Graduate Studies deadlines for Program of Studies (POS) are as follows:

- July 1 for a fall graduation.
- October 1 for a spring graduation
- March 1 for a summer graduation.

A student can submit their completed PoS after you have completed a minimum of 12 hours of graduate courses in graduate status. Failure to submit this form on time will delay your graduation. The ME department (committee chair) will require time to review and approve the form, so it is strongly recommended that you submit the form well in advance of the Graduate Studies deadline.

Revisions - If a student changes coursework or requests a substitution(s) of a required course(s), a memo signed by their faculty advisor, the ME graduate program director and/or the ME chair may be needed to be submitted to the Dean of Graduate Studies. If you change your program from one “plan” to another the student must submit a revised *Program of Studies* form electronically within the deadlines stated on the Graduate Studies website.

**Intent to Graduate:**

The student must submit an *Intent to Graduate Form* to their ME academic advisor. This form is located on the ME website <https://me.unm.edu/students/graduate/index.html> . The deadlines for the *Intent to Graduate Form* are:

Fall Graduation	July 30 <sup>th</sup>
Spring Graduation	November 30 <sup>th</sup>
Summer Graduation	April 30 <sup>th</sup>

Failure to submit this form on time will delay your graduation. Students must be enrolled in a graduate course in the semester of their graduation.

Use the “ME Graduate Curriculum (Plan III) Worksheet” see [Addendum IV](#)

**PhD. Engineering with Mechanical Engineering (ME) Concentration Degree****Requirements and Procedures:**

The student should carefully study the UNM catalog Graduate Studies section and use this website for complete details: <https://grad.unm.edu/home/> Click on “Degree Roadmap and Guidelines.” It is the student's responsibility to see that these requirements are satisfied.

NOTE: Deadlines are not suggestions.

**Time Limit for Completion of Degree:**

Doctoral candidates have five (5) calendar years from the semester in which they pass their doctoral comprehensive examination to complete the degree requirements. The final requirement is the acceptance of the students’ dissertation by the Dean of Graduate Studies.

**Summary of Course Requirements:**

A minimum of 54 credit hours of course work beyond the Bachelor of Science Degree, excluding dissertation credit hours is required.

Comments on Design Project course (ME 559) – Students who are currently enrolled in the PhD program are not allowed to register and receive credit for ME 559. The credit hours that a student may have earned for this course during their MSME (Plan I) program of studies, however, will be accepted as part of the 30 credit hours of coursework that is normally transferred from a master’s degree program to the PhD program (see below).

A minimum of 18 hours of dissertation (ME699) credit hours are required.

During their dissertation work, doctoral candidates are required to enroll in a minimum of 18hrs of dissertation (ME699) credit. Enrollment in 699 should not begin prior to the semester in which the student takes the doctoral comprehensive examination. Only those hours gained in the semester during which the comprehensive examination is passed and in succeeding semesters can be counted toward the 18 hours required. A student who fails the comprehensive examination cannot apply any ME 699 credits towards their program of studies until the semester in which the comprehensive examination is retaken and passed,

Enrollment for dissertation (ME 699) may be for 3, 6, 9 or 12 hours per semester, with 9 hours the maximum in the summer session. Minimum enrollment in ME 699 for one semester is 3 hours. Students who start enrolling in ME 699 must continue registering in ME 699 every semester until completion of the degree.

Comments on “Problems” courses (ME 551 or ME 552)- Some faculty members and their student find this “continuous” Graduate Studies rule cumbersome. From this reason, the student who has not passed the PhD comprehensive examination and is performing research directly related to their dissertation topic may take these “Problems courses” in lieu of registering for dissertation credits. These courses may be repeated as many times as needed for this purpose, if they are taken as CR/NC mode of grading (i.e., the same mode of grading as the Dissertation hours). However, credit hours earned for these credits (and similar research-type courses from other UNM graduate programs) are not allowed to be counted towards *the minimum 54 hours of coursework needed for graduation (see below)*. Obviously, the student’s effort will eventually be reflected in the total dissertation hours that they take upon passing the PhD comprehensive examination.

On the other, if the student is genuinely working on some topic of mutual interest unrelated to their dissertation research with their faculty advisor or another professor, they may take the ME 551 or ME 552 courses that will be allowed (max. 3 credit hours) to count toward the satisfaction of the PhD degree requirement. An example of scholarly activities that may justify such credits would be the research performed through independent study work that may provide a Research Assistantship (RA) job for that student, but it does not lend itself as an appropriate dissertation topic. The student’s report of such activities shall be kept in the student’s record and scrutinized at the time of the Application of Candidacy. In these reports the students must clearly document why the corresponding activity is separate from their dissertation research.

At least 24 hours of graduate credit coursework must be completed at UNM of which at least 18 hours must be in courses numbered 500 and above.

At least 18 hours of graduate credit coursework must be completed after admission to the doctoral program.

Mechanical Engineering graduate students are required to complete a set of core courses as part of an MSME or PhD programs. PhD students may satisfy these requirements with equivalent courses taken as part of an MS program as approved by the ME Graduate Program Director. **Courses taken at the ME 400-level are not accepted and may not be repeated at the ME 500-level to satisfy the core requirements.**

ME Graduate Core consists of four courses:

1) One **mathematics** course, selected from:

ME 500 Numerical Techniques in Mechanical Engineering

ME 504 Computational Mechanics

ChNE 525 Methods of Analysis in Chemical

Nuclear Engineering any Math/Stat 5XX course

Note: the following Math courses (which are intended for Education majors) are not acceptable: 500, 501, 502, 503, 506, 507, 508, 509, 542, 543, and 550.

- 2) One **thermal science** course, selected from:
  - ME 520 Advanced Thermodynamics
  - ME 530 Theoretical Fluid Mechanics
- 3) One **solid mechanics** course, selected from:
  - ME 501 Advanced Mechanics of Materials
  - ME 512 Continuum Mechanics
  - ME 540 Elasticity
- 4) One **dynamics & controls** course, selected from:
  - ME 516 Applied Dynamics
  - ME 580 Dynamic System Analysis
  - ME 581 Digital Control of Mechanical Systems
  - ME 562 Spacecraft Attitude Dynamics and Control

Courses taken as part of a master's degree at another school may satisfy one or more of the core requirements. The student must contact the ME Graduate Director to discuss the situation and may be required to provide course description and syllabi for each class proposed as equivalent to one of the core classes.

No more than 50% of the doctoral coursework completed at UNM can be taken with a single faculty member, including courses taken as part of a master's degree. Thesis and dissertation hours are excluded. Up to 30 hours of the doctoral coursework may be transferred from a master's degree provided that:

1. Each course carried graduate credit.
2. Each course was offered by an accredited institution, and
3. The student received a grade of a "B" or above.
4. A maximum of 6 hours of non-graded work (e.g., master's thesis work, etc.) may be included.

#### **Initial Advisement:**

The student is strongly encouraged to meet with the ME Graduate Director before the initial registration and work out a program of studies for the first semester. The faculty advisor for Plan III is the ME Graduate Director by the beginning of the 2<sup>nd</sup> semester the student must an *Advisor Assignment Form* (located on the ME website) to their ME "academic" advisor.

#### **Ph.D. Seminar Requirement:**

Each Ph.D. student must have one hour of seminar credit on their record for their program. The student shall register for ME 591/592 for three semesters . It is strongly suggested that the first semester the student registers for one (1) credit hour. Then for the second and third semesters the student registers for zero credit hours. The doctoral seminar requirement may be transferred from a UNM-granted master's degree program.

#### **Seminar Attendance:**

The grade will be CR/NC, based upon attendance. A student may discuss with the instructor if presenting at a seminar may be counted for attendance (1 or 2 sessions). On-campus students: Credit will be earned in each semester by attending at least ten (10) of the scheduled ME seminars, or all the ME seminars if fewer than ten presentations are given. Additional Information- a student may make up one missed seminar by attending a 1-hour

research seminar in other School of Engineering departments or at one of the national labs. The student will be required to provide the published announcement and a summary (maximum, one page) for each. A strict deadline for receipt of this report is one week prior to the last day of classes. Students attending national or international conferences may write up an equivalent summary (e.g., two 30-minute talks for each missed seminar) with the same deadline.

### **Academic Standards:**

Academic standards are set forth in the UNM catalog in the Graduate Studies section. In addition, the ME department has a “two-C’s” rule: a Ph.D. student who has received two or more grades of C in post-master’s coursework will be dropped from the program before or after the student’s committee is formed.

Only ME 699 dissertation hours taken during the semester in which the comprehensive exam is passed, and in succeeding semesters, may count towards the required 18 hours required. The student must maintain continuous enrollment in ME 699 (at least 3 hours per semester, not including summers prior to graduation) through the semester/term of graduation.

### **Qualifying Examination:**

Ph.D. students must pass the ME Qualifying Examination before they form a committee and file their Application for Candidacy through Graduate Studies. The department policy on Qualifying Examination is as follows:

1. Students must take the Qualifying Examination no later than the second semester in the Mechanical Engineering Graduate program as a Ph.D. student. Students may request an extension to this deadline for extenuating circumstances that are clearly beyond the student’s control. Such an extension must be approved by the ME Graduate Director. Students who do not take the Qualifying Examination at this time will be placed on non-degree status.
2. The student must pass the Engineering Mathematics examination and two (2) other areas examinations from the categories listed below:
  - Thermal Sciences (Thermodynamics, Fluid Mechanics, or Heat Transfer)
  - Mechanical Sciences and Engineering (Dynamics, Mechanics of Materials, or Controls)
  - Other Physical Sciences (Materials Science)

Each examination will cover the topic at the advanced undergraduate level. Some previous examinations are available on the ME website, <https://me.unm.edu/> click on Students then Graduate look at Helpful Links.

The individual examinations in these areas will be developed and evaluated by a committee composed of at least two members of ME faculty. The chairperson of the committee shall be a tenured or senior faculty member (Associate Professor or higher ranked faculty). These examinations will each be a two- to three-hour written examination such as is often given as the final examination in a class.

3. Students will inform the ME Graduate Director regarding the area examinations they are planning to take in the next Qualifying Examination round according to the schedule set by the department/faculty. Accordingly, information about the nature of the area examinations will be made available to the students so that they may better prepare for the examinations.
4. The Qualifying Examination will normally be scheduled once per year, usually in July and administered by the ME Graduate Director. The Graduate Director will appoint a committee of the ME faculty to be responsible for the following items related to each area examination:
  - I. Inform the Graduate Director of the nature of the examinations.
  - II. Develop and deliver a copy of the examination to the Graduate Director.
  - III. Evaluate the results of the examination and inform the Graduate Director of Pass/Fail status of each student who took the examination within one week of the examination day.
5. The segments comprising the Qualifying Examination will be scored as either passing or failing by the committee responsible for each examination. Once a student has passed an area examination, they are not required to retake that examination.

Students who fail one or more subjects upon their first attempt at the Qualifying Examination must retake the Qualifying Examination during the next scheduled examination. Students may elect to take different subjects when they retake the Qualifying Examination, subject to the above guidelines in section 2. A student who fails to earn passing grades on the Engineering Mathematics and two (2) other subjects in two (2) attempts at the Qualifying Examination will have failed the ME Ph.D. Qualifying Examination and is not eligible to earn a PhD. degree from the Mechanical Engineering (ME) Department at UNM.

Engineering Mathematics:

The mathematics examination may cover the following topics:

1. Differential and integral calculus of one or more variables.
2. Vector algebra and vector calculus.
3. Ordinary differential equations.
4. Series and sequences
5. Linear Algebra

Engineering Subjects:

The engineering subjects in the examinations are basic to any undergraduate mechanical engineering program. The examinations concentrate on the concepts normally covered in the corresponding undergraduate courses. However, the student is expected to demonstrate an understanding of these concepts and use them beyond what is expected of undergraduates. The student may be required to demonstrate this understanding of the concepts by either discussion-type questions, definition, problems, or derivations. Thus, in answering the questions, the student should include explanations to demonstrate a depth of understanding.

In the solution of problems, the key factors include:

- 1.) Deciding on the appropriate theories or principles.
- 2.) Applying the principles correctly.
- 3.) Any assumption made in the solution process should be clearly stated so there is no question about the student's understanding of the limitation of the principle and/or the solution.

Some previous examinations are available on the ME website, <https://me.unm.edu/> click on Students then Graduate look at Helpful Links.

### **Committee- on-Studies (CoS):**

Students should discuss their research interests with several ME faculty members early once admitted to the UNM ME Ph.D. program. It is helpful (yet not required) if an agreement is reached with an ME faculty member to serve as a CoS Chair by the time the Qualifying Examination is taken. The Committee Chairperson must be a full-time, tenure-stream, UNM Mechanical Engineering faculty member.

The student's course work planning is done in consultation with the CoS Chair and may include make-up work at the undergraduate and graduate levels.

### **Student Committee:**

A student pursuing a Ph.D. in Engineering with a concentration in ME must form a committee in accordance with the Graduate Studies guidelines <https://grad.unm.edu/home/> then "Degree Roadmap and Guidelines". The student committee may be formed the same semester the student passes the Qualifying Examination. Approval for non-UNM faculty committee members must be obtained by working with the ME department academic advisor and is approved by UNM Graduate Studies office.

It is suggested that students submit a Committee-on Studies (CoS) form to their ME academic advisor for planning purposes located on the ME website. The recommended deadline for CoS is as follows:

- September 1<sup>st</sup> for spring Comprehensive Examination
- February 1<sup>st</sup> for summer Comprehensive Examination
- June 1<sup>st</sup> for the fall Comprehensive Examination

### **Changes to the Committee:**

Changes to the student committee require a memo from the ME Graduate Director explaining the reasons for the change. The memo is to be submitted to Graduate Studies.

### **Comprehensive Examination Procedures (a.k.a. Announcement of Exam 1):**

An Announcement of Examination form for the Ph.D. Comprehensive Examination must be approved by the ME Graduate Director and submitted to Graduate Studies at least 3 weeks to the scheduled date of the examination- see above. The doctoral comprehensive examination shall be given individually to the student by the Committee-on Studies (CoS), normally within 1 to 2 years after the student passes the Ph.D. Qualifying Examination.



A doctoral student must pass a comprehensive examination in the major field of study. This examination, which may be written oral or both, is not limited to the areas of the student's course work but evaluates the student's grasp of the field as a whole. The administration of this exam is governed by the following guidelines:

1. Students must have a cumulative grade point average of at least 3.0 at the time of their examinations.
2. Students must be enrolled in a minimum of one credit of graduate course work during the semester in which they take the doctoral comprehensive examination. Students may enroll in 699/dissertation hours to prepare for the comprehensive exam; however, those credits will only count towards dissertation hour requirements if taken within the same semester as the passed exam.
3. At least two weeks prior to the date of the examination, the major graduate unit must request approval from the Dean of Graduate Studies to hold the exam. It may not be conducted until the Dean of Graduate Studies approves the *Announcement of Examination Form* and it is returned to the unit.
4. To qualify to sit for a doctoral exam during the intersession, the student must be registered for the following semester.
6. Barring extraordinary circumstances, the graduate unit will notify the student of the results of the examination no later than two weeks after the date on which it was administered. Should such circumstances arise, the graduate unit will notify the student in writing of the reason for the delay and let him/her know when notification can be expected.
7. The results of the examination must be reported to the Dean of Graduate Studies on the "Report of Examination" form no later than two weeks after the date of the examination.
8. If a student fails the examination, the Committee on Studies may recommend a second examination, which must be administered within one calendar year from the date of the first examination. The comprehensive doctoral examination may be taken only twice. A second failure will result in the student's termination from the program.

The Chair of CoS shall ensure that the Report of Examination is signed by all committee members and submitted as per the UNM Graduate Studies procedures.

A student has 5 years to complete the Ph.D. degree from the date the Comprehensive Examination is passed. Only in case of extreme emergencies will the ME department and Graduate Studies approve an extension of time.

#### **Application for Candidacy:**

Prior to completing an Application for Candidacy, the student should consult with your committee chair, and the members of their committee should participate in designing your program of doctoral study.

Each doctoral student must submit an Application for Candidacy (AC) – to Graduate Studies - listing all the courses that apply to the degree. The student should use this website for complete details: <https://grad.unm.edu/home/> Click on "Degree Roadmap and Guidelines." The AC form

should be filed the term the student passes the comprehensive examination and no later than the last day of the term before the student intends to graduate.

Your Committee Chair must sign the section to verify that the student's language or skill requirement has been met. Read the information provided in the "Degree Roadmap and Guidelines."

**Notification of Intent to Graduate:**

The student must submit an *Intent to Graduate Form* to their ME "academic advisor." This form is located on the ME website <https://me.unm.edu/students/graduate/index.html> . The

deadlines for the <i>Intent to Graduate Form</i> are:	Fall Graduation	July 30 <sup>th</sup>
	Spring Graduation	November 30 <sup>th</sup>
	Summer Graduation	April 30 <sup>th</sup>

Failure to submit this form on time will delay your graduation. Students must be enrolled in a graduate course in the semester of graduation. If all other course work is completed 3 hours of ME 699 may be taken.

**Announcement of Exam (a.k.a. Announcement of Exam 2):**

No later than two weeks before the final examination is held the Announcement of Exam 2 is due. No later than November 1 for fall graduation, April 1 for spring graduation and July 1 for summer graduation, the student must submit an Announcement of Exam (AE2) to Graduate Studies to notify them of the date and time of the exam. More information about the Announcement of Exam 2 is on the Graduate Studies website. <https://grad.unm.edu/home/> then click on "Degree Roadmap and Guidelines."

**Evaluation of the Dissertation and Administration of the Examination:**

The dissertation shall be provided to the Committee-on Studies (CoS) at least 3 weeks prior to the scheduled dissertation defense which functions as the Doctoral Final Examination. The examination usually consists of a presentation of the research work by the student and an oral examination by the CoS.

The Report of Examination (RE) must be completed at the conclusion of the exam and signed by all committee members. The committee chair must make certain that each committee member completes the dissertation evaluation and the RE is submitted to Graduate Studies no later than the following dates: November 15 for fall graduation,

April 15 for spring graduation

July 1 for summer graduation

**Distinction on Dissertation Defense:**

Distinction may be awarded to recognize exemplary performance on a Ph.D. dissertation defense. The examining committee shall consider the written work as well as the oral presentation / examination. Outstanding performance in all aspects of the examination is required. A committee decision to propose that a student be passed with distinction must be unanimous. The dissertation recommended for "Distinction" has generated archival-quality publication(s). If the dissertation requires more than minor editorial corrections, distinction will not be considered. The student's transcript will include "Passed with Distinction."

### **Formatting and submitting the Ph.D. Dissertation:**

The doctoral candidate is responsible for preparing a dissertation in the proper format that is of high quality and free of grammatical and typing errors. Guidelines on dissertation format are detailed on the Graduate Studies website <https://grad.unm.edu/home/>. Click on “Degree Roadmap and Guidelines.” and should be carefully followed. Students are urged to carefully review and print current guidelines before defending their dissertations; they may also wish to attend the “Dissertation Formatting Workshop”, offered through Graduate Studies, or consult with the Graduate Studies manuscript reviewer.

#### **Format & Submit Dissertation:**

After passing the dissertation defense, doctoral students must electronically submit their dissertations within ninety (90) days or by the term graduation deadline, whichever comes first. If the manuscript is not submitted within that time, the student must schedule and complete a second final examination for the dissertation. In all cases the results of the dissertation defense must be submitted to Graduate Studies no later than two weeks after the announced date of the dissertation defense.

#### **Electronic Submission of the Thesis/Dissertation:**

The University of New Mexico encourages open access to all theses and dissertations produced for graduate degrees. Theses and dissertations (ETDs) submissions are uploaded to the LoboVault repository, a digital archive, where they are accessible for search and download through web search engines such as Google. The University of New Mexico has implemented an embargo restriction policy that enables students, with approval from their advisers and Graduate Studies, to delay public-wide access to their work in LoboVault. Before defending your thesis or dissertation, please consult with your committee chair and review the embargo restriction policy to determine whether or not you should release your work to open access or petition for an appropriate embargo option.

Please check the “Thesis/Dissertation webpage” on the Graduate Studies website <https://grad.unm.edu/home/>. Click on “Degree Roadmap and Guidelines.” for more information on thesis/dissertation policies and procedures.

Use the Graduate Studies’ Ph.D. checklist on this website

<https://grad.unm.edu/resources/graduate-students/gs-forms/documents/doctoralgraduationchecklist.pdf>

Also, “ME Graduate Curriculum (Ph.D.) Worksheet” see Addendum V

### **Obtaining a First Master’s Degree while in a Doctoral program (same field /major code)**

Students admitted directly to a Ph.D. without a master’s degree may earn a “*master’s degree en route to the Ph.D.*” (same major/subject code) by seeking approval from the doctoral program. The student must then follow the master’s degree requirements as outlined in the “Master’s Degree: General Requirements” section of the UNM catalog. With prior approval by the program-faculty and Graduate Studies, a doctoral comprehensive examination may serve as the master’s examination for students pursuing a master’s en route to the Ph.D. (same subject code). With prior approval by the program faculty and Graduate Studies, a doctoral qualifying examination may serve as the master’s examination provided that the committee composition fulfills the requirements for the master’s examination.

### **Dual Status (Concurrent Enrollment): Ph.D. and First or Second Master's (different field/major code)**

While pursuing a doctoral degree, a doctoral student may choose to pursue a master's degree in a field or discipline (major code) outside the doctoral field. Students wishing to pursue a doctoral degree and a master's degree in different fields concurrently must adhere to the following:

1. Students must have written permission from their doctoral program to pursue the master's degree.
2. Students must complete application materials and be formally admitted to the new master's program.
3. Students must adhere to the seven-year rule for completion of all requirements for the master's degree (see the "The Master's Degree: Time Limit for Completion of Degree" section of this catalog).
4. Students must adhere to the five-year rule for completion of the doctorate (see the "The Doctoral Degree: Time Limit for Completion of Degree" section of this catalog). No exceptions are made to the five-year limit for the doctoral degree to accommodate completion of the master's degree.
5. If the time needed for completion of the master's degree extends beyond the completion of the doctoral degree, the student must have a Program of Studies for the master's degree approved by the Dean of Graduate Studies before the doctoral degree is awarded.
6. A minimum of 18 credit hours of coursework for the doctoral degree (exclusive of dissertation credit hours) must be taken in post-master's (i.e., doctoral) status and cannot be used for any master's degree. Graduate units may impose additional requirements.

### **Guidelines for Petitioning the ME Graduate Director**

ME graduate students may submit a petition to the Director of Graduate Programs for an exception to Departmental (not University) policies and regulations as specified in the Graduate Policy Manual. It is best that the student discusses the situation with their faculty advisor first. Then either the faculty advisor and/or student email the ME Graduate Director. Any exceptions made must be finalized by the ME Graduate Director and communicated to the student's ME academic advisor to have the student's file documented.

## **ADDENDUM I**

### **UNM Mechanical Engineering Graduate Emergency Contact Form** (PLEASE PRINT)

#### **Student Information:**

Date of Birth: \_\_\_\_\_ UNM ID# \_\_\_\_\_

Program (circle one) : MSME or Ph.D.

<u>Last Name:</u>	<u>First Name:</u>	<u>Middle Initial:</u>
<u>Address:</u>	<u>City:</u>	<u>State:</u>
<u>Phone #:</u>	<u>Email:</u>	<u>Zip code</u>

#### **In Case of Emergency:**

##### **Contact 1:**

Name of "local" friend or relative: \_\_\_\_\_

Relationship: \_\_\_\_\_

Home Phone #: \_\_\_\_\_ Cell phone#: \_\_\_\_\_

##### **Contact 2:**

Name of "local" friend or relative: \_\_\_\_\_

Relationship: \_\_\_\_\_

Home Phone #: \_\_\_\_\_ Cell phone#: \_\_\_\_\_

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **ME Graduate Curriculum Plan I Worksheet**

<u>Math</u>	<u>Thermal Sciences</u>	<u>Solid Mechanics</u>	<u>Dynamics &amp; Controls</u>	<u>Hrs</u>
ME 500*	ME 520	ME 501*	ME 516	
ME 504	ME 530*	ME 512	ME 580	
ChNE 525		ME 540	ME 581	
Math/Stat** 500+			ME 596*	
3 hours	3 hours	3 hours	3 hours	<b>12</b>

**\*\* NOT: 500, 501, 503, 506, 507, 508, 542, 543 or 500**

<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>Hrs</u> <b>12</b>
<u>ME 599</u> Thesis Hrs 6 hours	<u>ME 591</u> 0 or 1	<u>ME 592</u> 0 or 1		7
			<b>TOTAL HOURS      31</b>	

Maximum 3 hours in ME 551 or ME 552 (Problems coursework) - discuss with faculty/academic advisor

### **ADDENDUM III**

#### **ME Graduate Curriculum Plan II Worksheet**

**ME Graduate Core Requirements** [select ONE from each area](#)

<u>Math</u>	<u>Thermal Sciences</u>	<u>Solid Mechanics</u>	<u>Dynamics &amp; Controls</u>	<u>Hrs</u>
ME 500*	ME 520	ME 501*	ME 516	
ME 504	ME 530*	ME 512	ME 580	
ChNE 525		ME 540	ME 581	
Math/Stat** 500+			ME 596*	
3 hours	3 hours	3 hours	3 hours	<b>12</b>

\* These also count for AOP (Space Systems)

\*\* **NOT:** 500, 501, 503, 506, 507, 508, 542, 543 or 500

**Remaining Coursework** [all are required](#)

<u>ME 500+</u>	<u>ME 500+</u>	<u>ME 500+</u>	<u>Hrs</u>	
3 hours	3 hours	3 hours		
<u>ME 500+</u>	<u>ME 500+</u>	<u>ME 500+</u>		
3 hours	3 hours	3 hours	>>>>>>>	<b>18</b>
<u>ME 559</u> Design Hours	<u>ME 591</u>	<u>ME 592</u>		
3 hours	0 or 1	0 or 1	>>>>>>>	<b>4</b>
			<b>TOTAL HOURS</b>	<b>34</b>

#### **Additional Requirements:**

Minimum 24 hours UNM Residency

Minimum 15 hours "Mechanical Engineering " coursework - including core requirements

Maximum 12 hours as "Shared Credit" or "non-degree"

Maximum 3 hours in ME 551 or ME 552 (Problems coursework) - discuss with faculty/academic advisor

[READ this manual especially the PLAN II section](#)

## ADDENDUM IV

**ME Graduate Curriculum  
Plan III Worksheet**

**ME Graduate Core Requirements** select ONE from each area

<u>Math</u>	<u>Thermal Sciences</u>	<u>Solid Mechanics</u>	<u>Dynamics &amp; Controls</u>	<u>Hrs</u>
ME 500*	ME 520	ME 501*	ME 516	
ME 504	ME 530*	ME 512	ME 580	
ChNE 525		ME 540	ME 581	
Math/Stat** 500+			ME 596*	
3 hours	3 hours	3 hours	3 hours	<b>12</b>

\* These also count for AOP (Space Systems)

**\*\* NOT: 500, 501, 503, 506, 507, 508, 542, 543 or 500**

**Remaining Coursework** all are required

<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>Hrs</u>
<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	>>>>>>	
<u>ME 591</u> 0 or 1	<u>ME 592</u> 0 or 1	-	>>>>>>	1
			TOTAL HOURS 34	

### Additional Requirements:

Minimum 24 hours UNM Residency

Minimum 15 hours "Mechanical Engineering " coursework - including core requirements

Maximum 12 hours as "Shared Credit" or "non-degree"

Maximum 3 hours in ME 551 or ME 552 (Problems coursework)-discuss with faculty/academic advisor

READ this manual especially the PLAN III section



## **ADDENDUM IV**

### ***ME Graduate Curriculum Ph.D. Worksheet***

#### **ME Graduate Core Requirements** [select ONE from each area](#)

<u>Math</u>	<u>Thermal Sciences</u>	<u>Solid Mechanics</u>	<u>Dynamics &amp; Controls</u>	<u>Hrs</u>
ME 500*	ME 520	ME 501*	ME 516	
ME 504	ME 530*	ME 512	ME 580	
ChNE 525		ME 540	ME 581	
Math/Stat** 500+			ME 596*	
3 hours	3 hours	3 hours	3 hours	<b>12</b>

\* These also count for AOP (Space Systems)

\*\* **NOT:** 500, 501, 503, 506, 507, 508 542, 543 or 500

#### **Remaining Coursework** [all are required](#)

<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>Hrs</u>
<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	
<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	
<u>ME 500+</u> 3 hours	<u>ME 500+</u> 3 hours	-	-	
				<b>42</b>
<u>ME 699 Dissertation Hrs</u> 18 hours	<u>ME 591/592</u> 0 or 1	<u>ME 591/592</u> 0 or 1	<u>ME 591/592</u> 0 or 1	
				<b>19</b>
<b>TOTAL HOURS</b>				<b>73</b>

#### **Additional Requirements:**

Pass Qualifying Exam

Pass Comprehensive Exam

Minimum 24 hours UNM Residency

Minimum 15 hours "ME " coursework - including core requirements

Maximum 12 hours as "Shared Credit" or "non-degree"

[READ this manual especially the Ph.D. section](#)