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Introduction

This student handbook is a summary of policies and procedures that MS and PhD candidates are expected to know and follow while pursuing a graduate degree in the Department of Mechanical Engineering.

However, it does not cover every conceivable situation. Students are encouraged to be proactive and discuss any potential problems, concerns, or special circumstances with their Graduate Committee Chair (Advisor), the Graduate Program Manager, or the Graduate Coordinator.

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Learning Outcomes for Master’s Program

MS Graduates from the Department of Mechanical Engineering will:

1. Develop an advanced understanding of the governing principles which serve as the basis for the practice of mechanical engineering and have the ability to apply these principles in the design and analysis of a system or process to meet specified needs.

2. Participate in the creation of new knowledge and/or will advance the state of the art in a specific sub-discipline of mechanical engineering through the completion of a thesis project. The thesis project may contain elements of design, experimentation, and analysis and will require innovation and creativity.

3. Develop technical writing and oral presentation skills.

4. Demonstrate a pattern of living consistent with high ethical and moral standards.
Learning Outcomes for Doctoral Program

Graduates from the PhD Program in Mechanical Engineering will develop themselves both spiritually and intellectually and demonstrate:

1. Subject Mastery: In depth understanding of a sub-discipline of mechanical engineering, combined with understanding of related subjects sufficient to practice as an influential mechanical engineer.

2. Independent Learning: The ability to independently study and learn new information that increases depth and breadth of technical knowledge.

3. Independent Research: The ability to plan, perform and assess research which creates new knowledge or advances the state-of-the art.

4. Communication: Persuasive technical writing and oral presentation skills evidenced by presentation and publication in peer-reviewed venues.

5. Perspective: An understanding of how their work technically and ethically affects their sponsor, sub-discipline, and society.

6. Influence: The ability to clearly guide, advise, teach and work with others in technical endeavors.

7. Impact: The desire, faith and persistence to seek out and solve meaningful technical and societal challenges.
MS Student Requirements

FIRST YEAR MS STUDENTS

In addition to completing the following requirements, first year students must also meet minimum registration requirements, receive biannual evaluations, and begin researching and writing their thesis as described in the Continuing MS Student section of this handbook.

NEW STUDENT ORIENTATION

At the beginning of Fall and Winter semesters, the Department of Mechanical Engineering offers an orientation to help new students familiarize themselves with graduate program requirements. Students are required to attend. If a student cannot attend, he/she should contact the graduate program manager.

MS PROGRAM OF STUDY

Submit Program of Study

It is important for students to submit a Program of Study during their first semester (ADV Form 3). Failure to submit a Program of Study during the first semester will result in an unfavorable biannual evaluation. In consultation with their graduate committee chair (advisor), students will identify a proper course of study that support their specific interests and lead to a timely graduation.

Registration for the student’s second semester should not occur until a Program of Study has been submitted. Registration for the second semester opens mid-semester during the student’s first semester. Failure to turn in a Program of Study during the student’s first semester will result in an unfavorable Biannual Evaluation.

Students may change their Program of Study courses or their graduate committee members by completing a Request for Program of Study Change (ADV Form 3b). This form may be submitted at any time during the MS degree program. All coursework must be approved by the student’s graduate committee and the graduate coordinator before the student takes a course.

Once the student has completed ADV Form 3 or ADV Form 3b and obtained graduate committee members’ signatures, he/she should turn in the form into the graduate program manager. The graduate program manager will review the form and obtain the graduate coordinator’s signature.
Program of Study Requirements

Graduate Committee Selection

The graduate committee chair (advisor) will be selected from the Department of Mechanical Engineering with the exception of students enrolled in Interdisciplinary Graduate Studies.

Two additional graduate committee members must be identified. Generally, these graduate committee members are BYU professors having graduate faculty status.

Students should work with their graduate committee chair in selecting other members of the graduate committee. Graduate committee members should have a background that will be helpful in contributing to or evaluating the student’s research. All graduate committee members will assist in advising the student concerning course work, degree requirements, and research.

On occasion, it may be desirable to include a professional who may not be on faculty at BYU, i.e., someone who has documented substantial and consequential research effort in a specific area. Such graduate committee members are approved through petition.

For additional information regarding Interdisciplinary Graduate Studies, see Policies and Procedures 2: Interdisciplinary Graduate Studies and Appendix A: Form 1-Checklist for Interdisciplinary Graduate Study.

Coursework

A total of 30 hours is required to complete the degree.

- 24 credit hours of coursework, 12 credit hours must be Mechanical Engineering coursework (See Policies and Procedures 5: Approved Courses for Program of Study).
- 6 credit hours of thesis research (ME EN 699R).

Students must have a 3.0 GPA on their program of study courses. In no instance is D credit accepted.

Transfer Credits

Courses may be transferred from another university under the following circumstances:

- It must be acceptable to the graduate committee during the first semester in the program;
It must be a graduate level number;
- It may be no more than 25% of the graduate program;
- It cannot be conferences, workshops, correspondence, home study, etc.
- It must be a B grade or better.

**Graduate Committee Signatures**

The Program of Study must be approved and signed by the student’s graduate committee before submitting it to the graduate program manager, who will then obtain final approval by the graduate coordinator. All coursework will be approved on the basis of how to best fulfill research needs, career goals, and to best maintain the integrity of the mechanical engineering program.

**SUBMIT THESIS PROSPECTUS**

The prospectus must be submitted by the end of the second semester. Failure to submit a prospectus by the end of the second semester will result in an unfavorable biannual evaluation. In addition, if the prospectus is not submitted on a timely basis funding may be temporarily withheld. A prospectus defense may be held at the request of the graduate committee. The purpose of the prospectus is the following:

- To define the scope of the thesis project.
- Establish the minimum requirements for completion of the thesis and helps prevent the student from undertaking an unrealistic project.
- When written early in the program, the prospectus provides focus that will help expedite completion of the thesis.

For a prospectus outline, see Policies and Procedures 8: Thesis/Dissertation Prospectus Outline. For an example title page and prospectus approval form, see Appendix A: Form 2-Prospectus Approval.

When the prospectus is complete, the student will turn in the following to the graduate program manager:

1. Prospectus title page: Students **SHOULD NOT** turn in their entire prospectus document.
2. Prospectus Approval Form: All graduate committee members must sign this form.

The student will be granted post-prospectus status and receive the accompanying pay-raise, if applicable.
ATTEND SEMINAR

The ME Department Graduate Seminar Series is held during fall and winter semesters only. All graduate students are required to attend 8 seminars from this series each semester for two semesters, ideally during the first year of their graduate program. A maximum of 2 seminars each semester may be substituted from:

- The Weidman Center Leadership Seminar Series
- The College Lecture Series
- Graduate Seminars within the Colleges of Engineering and Technology, Physical and Mathematical Science, and Life Sciences
- Mechanical Engineering MS or PhD candidate’s thesis or dissertation defense.

CONTINUING MS STUDENTS

MEET REGISTRATION REQUIREMENTS

Domestic Students

To maintain graduate student status, domestic students should:

1. Register for a minimum of 2 credit hours in the semester of their admission (fall or winter).
   - If a student is admitted to fall semester and receives approval to begin spring or summer term, they must take 2 credits in the term they begin.

2. Following the semester of admission, students must continue to register for a minimum of 2 credits per semester. Spring/summer terms are considered one semester. It is recommended that credit hours be split up: 1 credit for spring term and 1 credit for summer term.

3. Register for a minimum of six credit hours in an academic year. If a student fails to register for a minimum of six credit hours in an academic year, he/she will be dropped from their graduate program. NOTE: Credit hours will not count towards the six credit hour minimum if a student receives a D grade or withdraws.

4. Fulfill residency requirement. The student must be registered for a minimum of 6 credit hours for two consecutive semesters while living and conducting research in the general vicinity of the university, where the student has access to research facilities.
5. Complete all requirements within five years of enrollment in the program.

International Students

International students must register for 9 credit hours in the semester of their admission (fall or winter). Beginning spring/summer term is not recommended as graduate level coursework is not offered during these terms. However, if a student desires to begin spring/summer, he/she should discuss the option with their graduate committee chair (advisor) and the graduate program manager.

International students should continue to register for 9 credit hours each semester of enrollment. All credit hours must count towards the student’s Program of Study.

BIANNUAL EVALUATIONS

The progress of graduate students is evaluated twice each year (January and May). The student’s graduate committee chair rates each student as making satisfactory, marginal, or unsatisfactory progress. When determining this rating, the graduate committee chair may choose to consult with other members of the student’s graduate committee.

If a student receives a marginal or unsatisfactory rating and has not improved his or her performance in accordance with the actions outlined on a previous evaluation, by the time of the next evaluation, the University will terminate the student from his/her graduate program.

The graduate committee chair reports the student’s progress to the graduate program manager. Students whose progress is rated as marginal or unsatisfactory will receive notification to meet with the graduate program manager and sign the evaluation.

In addition, students whose progress is rated as marginal or unsatisfactory should meet with his/her graduate graduate committee chair to discuss the evaluation. The marginal or unsatisfactory evaluation given to a student will include:

- Specific tasks the student must complete in order to maintain or regain a satisfactory rating
- Clear deadlines established for each of the specified tasks
- A recommendation of faculty member(s) they can contact for more information or support

Marginal progress may include the following:

- Failure to submit a Program of Study and establish a graduate committee by the
end of first semester
- Failure to submit a prospectus by the end of second semester
- Poor performance in research or registering for thesis hours when little or no work has been performed
- Minimal contact with the graduate committee chair

Unsatisfactory progress may include the following:

- Failure to submit a Program of Study since prior evaluation
- Failure to submit a prospectus since prior evaluation
- Failure to resolve any problems or fulfill any requirements indicated in a previous marginal or unsatisfactory evaluation
- Minimal or no contact with the graduate committee chair
- Poor performance in research or registering for thesis hours when little or no work has been performed
- Program of Study GPA below 3.0 or Program of Study course grade below 2.0
- Unacceptable ethical or professional behavior

The biannual evaluation is used by the department to satisfy criteria for continuing funding. It is also used by the BYU Financial Aid Department to determine eligibility for financial aid.

Students who feel their rating is in error may file an academic grievance, see Policies and Procedures 7: Graduate Student Academic Grievance Policy.

COMPLETE RESEARCH AND WRITE THESIS

While researching and writing their thesis, students should distribute research credit hours (ME EN 699R) reasonably throughout the graduate program, concurrent with the research being conducted.

Students must follow university/college thesis guidelines when formatting their document. A template can be obtained on the ME webpage. It is the student’s responsibility to make sure the proper formatting guidelines have been followed. Students should plan on submitting their best draft of the thesis to their Graduate committee one month prior to their defense.

All work toward the thesis should be open for public review and publication. Any exceptions must have written approval from the department and college in advance of any work performed. It is possible to delay release of a thesis for up to one year for publication purposes. For patent purposes students may request the thesis be secured, using ADV Form 8e.
PhD Student Requirements

**FIRST YEAR PHD STUDENTS**

In addition to completing the following requirements, *first year students must also meet minimum registration requirements, receive biannual evaluations and begin researching and writing their dissertation* as described in the Continuing PhD Student section of this handbook.

**NEW STUDENT ORIENTATION**

At the beginning of the Fall and Winter semesters, the Department of Mechanical Engineering will offer an orientation for all new students. New Student Orientation will not count as a required seminar; however, new students are required to attend so that they can familiarize themselves with program requirements. If a student cannot attend the orientation, he/she should contact the graduate program manager.

**PHD PROGRAM OF STUDY**

**Submit Program of Study**

It is important for students to submit a Program of Study during their second semester (ADV Form 3). In consultation with their graduate committee chair (advisor), students should identify a proper course of study that will support their specific interests and lead to timely graduation.

Registration for the student’s third semester should not occur until a Program of Study has been submitted. Registration for the third semester typically opens mid-semester during the student’s second semester. Failure to turn in a Program of Study during the student’s second semester will result in an unfavorable Biannual Evaluation.

Students may change the Program of Study courses or the graduate committee members by completing a *Request for Program of Study Change (ADV Form 3b).*
form may be submitted at any time during the degree program; however, approval from the graduate committee and the graduate coordinator should be obtained prior to taking coursework not on the previously approved Program of Study.

**Note:** In order to graduate students must have a 3.0 GPA on their program of study courses. In no instance is a D credit accepted.

**Program of Study Requirements**

*Graduate committee Selection*

The graduate graduate committee chair (advisor) will be selected from the Department of Mechanical Engineering with the exception of students enrolled in Interdisciplinary Graduate Studies.

Four additional graduate committee members must be identified. Generally, these Graduate committee members are BYU professors having graduate faculty status.

Students should work with their graduate graduate committee chair in selecting other members of the graduate committee. Graduate committee members should have a background that will be helpful in contributing to or evaluating the student’s research. All graduate committee members will assist in advising the student concerning course work, degree requirements, and research.

On occasion it may be desirable to include a professional who may not be on faculty at BYU, i.e., someone who has documented substantial and consequential research effort in a specific area. Such graduate committee members are approved through petition.

*For additional information regarding Interdisciplinary Graduate Studies, see Policies and Procedures 2: Interdisciplinary Graduate Studies and Appendix A: Form 1-Checklist for Interdisciplinary Graduate Study.*

*Coursework*

*For students with an approved MS degree:*

A minimum of 36 credit hours is required to complete the degree.

- 18 credit hours of graduate-level coursework (500-level or above), 9 credits must be Mechanical Engineering coursework (*See Policies and Procedures 5: Approved Courses for Program of Study*).
- 18 credit hours of dissertation research (ME EN 699R).
For students with an approved BS degree:

A minimum of 54 credit hours is required to complete the degree.

- 36 credit hours of graduate-level coursework (500-level or above), 18 credits must be Mechanical Engineering coursework (See Policies and Procedures 5: Approved Courses for Program of Study).
- 18 credit hours of dissertation research (ME EN 699R).

Students must have a 3.0 GPA on their program of study courses. In no instance is D credit accepted.

Transfer Credits

Courses may be transferred from another university under the following circumstances:

- Must be acceptable to the graduate committee during the second semester in the program.
- Must be a graduate level number;
- Cannot exceed 6 credits;
- Cannot be conferences, workshops, correspondence, home study, etc.
- Must be a B grade or above.

Graduate committee Signatures

The Program of Study must be approved and signed by the graduate committee before submitting it to the graduate program manager, who will then obtain final approval by the graduate coordinator. All coursework will be approved on the basis of how to best fulfill research needs, career goals, and to maintain the integrity of the mechanical engineering program.

ATTEND SEMINAR

The ME Department Graduate Seminar Series is held during fall and winter semesters only. All graduate students are required to attend 8 seminars from this series each semester for two semesters, ideally during the first year of their graduate program. A maximum of 2 seminars each semester may be substituted from:

- The Weidman Center Leadership Seminar Series
- The College Lecture Series
- Graduate Seminars within the Colleges of Engineering and Technology, Physical and Mathematical Science, and Life Sciences
- Mechanical Engineering MS or PhD candidate’s thesis or dissertation defense
CONTINUING STUDENTS

MEET REGISTRATION REQUIREMENTS

Domestic Students

To maintain graduate student status, students should:

1. Register for a *minimum* of at least 2 credit hours in the semester of admission (Fall or Winter).
   a. If a student is admitted to the Fall semester and receives approval to begin spring or summer term, they must take 2 credit hours in the term they begin.

2. Following the semester of admission, students must continue to register for a *minimum* of 2 credit hours per semester. Spring/Summer terms are considered one semester. It is recommended that thesis credits (Me En 699R) be split up: 1 credit hour for spring term and 1 credit hour for summer term.

3. Register for a *minimum* of six credit hours in an academic year. If a student fails to register for a minimum of six credit hours in an academic year, he/she will be dropped from their graduate program. **NOTE:** Credit hours will not count towards the six credit hour minimum if a student receives a D grade or withdraws.

4. Distribute research credit hours (ME EN 699R) reasonably throughout the graduate program, concurrent with the research being conducted.

5. Fulfill residency requirement: at least two consecutive semesters of six or more credit hours of registration while living and conducting research in the general vicinity of the university, where the student has ready access to the research facilities.

6. Complete all requirements within eight years of enrollment in the program.
International Students

International students must register for 9 credit hours in the semester of admission (Fall or Winter) and continue to register for 9 credit hours each semester of enrollment. All credit hours must count towards the student’s Program of Study.

PhD QUALIFYING EXAMINATION

All PhD candidates are required to take qualifying examinations. The PhD qualifying examination consists of three written exams. Each exam is two hours and may be selected from any of the following subjects:

- Dynamics
- Material Science
- Solid Mechanics
- Thermodynamics
- Fluids
- Heat Transfer
- Design
- Mathematics
- Control Dynamics

For students with an approved MS, the examination must be taken no later than the second offering of the qualifier during their PhD program.

For students entering directly from the BS, the examination must be taken no later than the third offering of the qualifier during their PhD program.

Exams are offered during the last week of March and the last week of October each year. Students are notified one month beforehand of the exam dates, times, and location. In addition, there will be a qualifying exam “kickoff” meeting the semester prior to the exams. This meeting will be an orientation outlining qualifying exams. Exam topics and samples are available for study from the graduate program manager.

Exams may only be taken twice. There are three possible scores: pass, marginal fail, and fail. To remain in the PhD program, students must pass all exams.

Possible paths after first sitting:
- Pass all exams—student continues in program
- Failure of any exam—student retakes failed exams.

Possible paths after second sitting:
• Pass all retakes-student continues in program
• Failure of any retake-student is terminated from program
• Marginal fail of any retake-student takes an oral exam

Possible paths after oral exam:
• Pass-student continues in program
• Fail-student is terminated from program

DEFEND AND SUBMIT DISSERTATION PROSPECTUS

The Prospectus must be submitted within one year from the time qualifying exams are passed. Students are encouraged to complete this process within six months of passing the qualifying examination. Failure to submit a prospectus within one year from the time of qualifying exams will result in an unfavorable biannual evaluation. In addition, if the prospectus is not submitted on a timely basis funding may be temporarily withheld.

PhD students must have an oral defense of their prospectus with their assembled graduate committee. Subsequent to obtaining approval of the graduate committee, students must submit the prospectus approval page with signatures and the prospectus title page to the graduate program manager.

The purpose of the prospectus is the following:

• To define the scope of the dissertation project.
• Establish the minimum requirements for completion of the dissertation and helps prevent the student from undertaking an unrealistic project.
• When written early in the program, the prospectus provides focus that will help expedite completion of the dissertation. (See P&P 6 for an outline, title page, and approval page of the prospectus).

For a prospectus outline, see Policies and Procedures 8: Thesis/Dissertation Prospectus Outline. For an example title page and prospectus approval form, see Appendix A: Form 2-Prospectus Approval.

When the prospectus is complete, the student will turn in the prospectus approval page with all graduate committee signatures and the prospectus title page to the Graduate Program Manager. The student will be granted post-prospectus status and receive the accompanying pay raise, if applicable.
BIANNUAL EVALUATIONS

The progress of each graduate student will be evaluated twice each year, in January and May. The student’s graduate committee chair rates each student as making satisfactory, marginal, or unsatisfactory progress. When determining this rating, the graduate committee chair may choose to consult with other members of the student’s graduate committee.

If a student receives a marginal or unsatisfactory rating and has not improved his or her performance in accordance with the actions outlined on a previous evaluation, by the time of the next evaluation, the University will terminate the student from his/her graduate program.

The graduate committee chair reports the student’s progress to the graduate program manager. Students whose progress is rated as marginal or unsatisfactory will receive notification to meet with the graduate program manager and sign the evaluation.

In addition, students whose progress is rated as marginal or unsatisfactory should meet with his/her graduate committee chair to discuss the evaluation. The marginal or unsatisfactory evaluation given to a student will include:

- Specific tasks the student must complete in order to maintain or regain a satisfactory rating
- Clear deadlines established for each of the specified tasks
- A recommendation of faculty member(s) they can contact for more information or support

Marginal progress may include the following:

- Failure to submit a Program of Study and establish a graduate committee by the end of second semester
- Failure of initial round of qualifying exams
- Failure to submit a prospectus within one year from the time the qualifying exams were passed
- Poor performance in research or registering for thesis hours when little or no work has been performed
- Minimal contact with the graduate committee chair

Unsatisfactory progress may include the following:

- Failure to submit a Program of Study since prior evaluation
- Failure of secondary round of qualifying exams
- Failure to submit an approved prospectus since prior evaluation
- Failure to resolve any problems or fulfill any requirements indicated in a previous
marginal or unsatisfactory evaluation
- Minimal or no contact with the graduate committee chair
- Poor performance in research or registering for thesis hours when little or no work has been performed
- Program of Study GPA below 3.0 or Program of Study course grade below 2.0
- Unacceptable ethical or professional behavior

The biannual evaluation is used by the department to satisfy criteria for continuing funding. It is also used by the BYU Financial Aid Department to determine eligibility for financial aid.

_Students who feel their rating is in error may file an academic grievance, see Policies and Procedures 7: Graduate Student Academic Grievance Policy._

**COMPLETE RESEARCH AND WRITE DISSERTATION**

While researching and writing their dissertation, students should distribute research credit hours (ME EN 699R) reasonably throughout the graduate program, concurrent with the research being conducted.

Students must follow university/college dissertation guidelines when formatting their document. A template can be obtained on the [ME webpage](#). It is the student’s responsibility to make sure the proper formatting guidelines have been followed. _Students should plan on submitting their best draft of the dissertation to their Graduate committee one month prior to their defense._

All work toward the dissertation should be open for public review and publication. Any exceptions must have written approval from the department and college in advance of any work performed. It is possible to delay release of a thesis for up to one year for publication purposes. For patent purposes students may request the thesis be secured, using [ADV Form 8e](#).

_for thesis formatting guidelines, see Policies and Procedures 9._
Graduation

For specific university graduation deadlines, visit http://gradstudies.byu.edu/page/graduation

**APPLY FOR GRADUATION**

Students cannot schedule a thesis/dissertation defense until he/she has applied for graduation. Students must apply before the graduation application deadline. The application for graduation can be accessed online through MyBYU > School > Apply for Graduation. In order to apply students must have:

a. Have a current ecclesiastical endorsement. Endorsements must be renewed every academic year (Fall semester).
b. Completed all course work or are currently taking remaining classes.
c. Completed the Program of Study, Prospectus, and Seminar requirements.
d. Submitted a current ecclesiastical endorsement.
e. Received verbal permission from the graduate committee chair.

*After applying for graduation, students should meet with the graduate program manager to discuss next steps toward graduation.*

**SCHEDULE THESIS/DISSERTATION DEFENSE**

**DEPARTMENTAL SCHEDULING OF FINAL ORAL EXAMINATION**

*Students should plan on submitting their best draft of the dissertation to their Graduate committee chair one month prior to their defense.* Students should consult with their graduate committees to determine the time and date. For defense deadlines see http://gradstudies.byu.edu/page/graduation.

In order to schedule a defense, students must submit ADV Form 8c to the graduate program manager, no later than 2 weeks before the exam date. Before submitting ADV Form 8c, students will obtain signatures from their advisor, graduate committee members, and the graduate coordinator. These signatures certify that the student and the thesis/dissertation are ready for the oral exam.

Defending between semesters/terms is not permitted. PhD students cannot schedule a defense any earlier than one year from their prospectus defense. Once scheduled, the time and date cannot be changed.
DOUBLE-SIDED HARD COPY OF THESIS

Students need to provide the graduate program manager with a hard copy (double-sided) of the thesis/dissertation for a preliminary format review.

DEFEND THESIS/DISSERTATION

At the defense, members of the graduate committee will serve as the examining graduate committee. Spouses, parents, and friends are welcome to attend the oral examination; small children should not attend. Refreshments are neither required nor expected.

The examination always follows a set format:

- The student’s research is presented.
- The general audience is excused.
- Questions are asked by graduate committee members.
- The decision (pass, pass with qualifications, recess or fail) is announced.

The presentation should cover main points. For MS students the presentation should last about 30 minutes and for PhD students the presentation should last about 40 minutes. Consideration should be given to the following expectations:

1. A well thought-out, well-organized, cogent summary of the student’s work including:
   a. An explanation of how the current work relates to the student’s discipline
   b. The rationale behind the project in the context of available literature
   c. If the student has been part of a research team or lab, an explanation of how the student’s intellectual contribution to the project and a description of how the student’s work fits into the broader research conducted in this lab
   d. The questions or issues the current work was designed to address
   e. The way the design, method, and/or approach addressed those questions
   f. The analysis of data gathered
   g. The results, outcomes, final products, or performance

2. An interpretation of results, findings, contributions, insights, and conclusions and their significance. What does this work add to existing knowledge?

3. A discussion of implications the work suggests for future research or creative endeavor
4. A discussion of any applied or clinical implications suggested by the work

5. Thoughtful, well-founded responses to all questions the graduate committee members might ask

At the defense, the student will receive a checklist outlining his or her next steps. It is likely that the graduate committee will request revisions of the thesis/dissertation. Students should discuss the revisions with graduate committee members and do their best to comply with the requests.

Students should allow at least one full week following their defense to finish all remaining requirements before leaving campus.

**FINALIZE THESIS/DISSERTATION**

**SUBMIT REVISED THESIS/DISSERTATION**

After revisions to the thesis/dissertation have been approved by graduate committee members, students should give a hard copy of the thesis to the graduate program manager who will do a final review of formatting. After the review, the graduate program manager will give the student Approval for Submission of Dissertation, Thesis, or Selected Project (ADV Form 8d) in order for him/her to obtain the department approval signature from the graduate coordinator. **The deadline for the Department of Mechanical Engineering is 1 week and 1 day before the final University deadline.** For deadlines: [http://gradstudies.byu.edu/page/graduation](http://gradstudies.byu.edu/page/graduation).

**SUBMIT THESIS TO COLLEGE DEAN’S OFFICE**

Students must then submit a hard copy of their thesis/dissertation and Approval of Submission of Dissertation, Thesis, or Selected Project (ADV Form 8d) to the college administrative assistant in 240 EB who will check the format again and obtain the dean’s approval signature. **The college office will not be able to process these documents immediately; therefore, students must turn these items in 1 week before the final University deadline.** For deadlines: [http://gradstudies.byu.edu/page/graduation](http://gradstudies.byu.edu/page/graduation)
SUBMIT ETD

Once the College gives approval, submit the ETD for department and college approval. The ETD will be reviewed by the department graduate program and the college administrative assistant. At their defense, students will receive a final checklist for graduation which includes information regarding how to prepare an ETD. In addition, information regarding ETD preparation can also be found at http://etd.lib.byu.edu/start.html.

Note: All fonts must be embedded and all blank pages must be removed from the PDF of the thesis prior to submitting the ETD.

UPLOAD THESIS/DISSERTATION FOR BINDING

After receiving college approval, students are required to order 1 bound copy of their thesis/dissertation for their graduate committee chair. Students are responsible for the cost of this bound copy.

The designated colors are blue cover with gold lettering. Students may also order additional copies for their own use. All copies may be ordered through BYU Print and Mail Services. Students are responsible for payment of all copies. After their defense, students will receive a final checklist for graduation which includes information regarding how to prepare for and order bound copies of their theses/dissertations.

SUBMIT FINAL DOCUMENTATION TO OFFICE OF GRADUATE STUDIES

After final ETD approval, students must submit a copy of the title page of their thesis/dissertation and ADV Form 8d to the Office of Graduate Studies in the FPH.

SUBMIT ETD TO PROQUEST WEBSITE (PHD STUDENTS ONLY)

Doctoral students must submit their dissertation in PDF format using the Proquest ETD Administrator site to meet this requirement. This puts the student’s work into a national database of dissertations. For instructions, see ADV Form 13. This submission must be complete BEFORE submitting final documentation (see above) to the Office of Graduate Studies.
SUBMIT SURVEY OF EARNED DOCTORATES (PHD STUDENTS ONLY)

The Survey of Earned Doctorates is completed online. Doctoral students will register directly via the Web and instantaneously receive a PIN and password as well as the URL to the survey. With this information, the student can access and complete the entire survey online. For instructions, see ADV Form 14. This submission must be complete BEFORE submitting final documentation (see above) to the Office of Graduate Studies.

SUBMIT CHECK-OUT CLEARANCE

Before students permanently leave the BYU campus they must receive clearance from the ME Projects Lab and the Checkout Room.

SUBMIT EXIT SURVEY

Students are given a survey to complete. Comments are used to further strengthen the graduate program. These comments are kept confidential.

WALK FOR COMMENCEMENT AND CONVOCATION

Students wishing to walk during Commencement and Convocation can order their cap and gown through BYU Alumni. Students are permitted to walk early as long as they have scheduled their thesis/dissertation defense before the degree posting associated with graduation ceremonies. Or his/her advisor is confident that the student will complete his/her defense BEFORE the next degree posting. Students must submit the Permission to Walk Early (See Appendix A: Form-4) form to the Advisement Center in 242 CB. This form can be signed by the graduate program manager at the time of scheduling the defense or after the student’s advisor has spoken to the graduate program manager.

GRADUATE RECOGNITION LUNCHEON

Each April and August, in conjunction with University Commencement, the Department of Mechanical Engineering hosts a Graduate Recognition Luncheon. Graduates are invited to attend with one guest free of charge. In addition, graduates may invite other guests for a fee.
Policies and Procedures

P&P 1: PROVISIONAL ADMISSION TO MS/PHD PROGRAM

Students with a BS in programs other than Mechanical Engineering or from a non-ABET accredited program may be admitted provisionally and may need to take some of the following undergraduate courses during their first year. The applicant should work with the potential graduate graduate committee chair (advisor) to determine exactly which courses will be required. Please note that these courses are prerequisites and will NOT count toward the MS or PhD degrees.

Math 302, 303, and Stat 201 11 hours
CE EN 204 3 hours
ME EN 321 and 372 6 hours
ME EN 335 3 hours
ME EN 312 or 340 3 hours
ME EN 273 3 hours
ME EN 362 3 hours

P&P 2: INTERDISCIPLINARY GRADUATE STUDIES

Recognizing that there are exciting and emerging areas of research that cross traditional disciplinary boundaries, ME Department Faculty are interested in providing a pathway for interdisciplinary graduate study that may not coincide with the specific primary research interests of existing ME department faculty members, but yet still falls within the discipline of mechanical engineering.

The following guidelines are in place to enable interdisciplinary graduate study while helping students successfully meet ME degree requirements and facilitating program administration.

- Application for Interdisciplinary Graduate Study ideally occurs at the time of application to the ME Graduate Program, but must occur prior to completion of the student’s first semester of their graduate degree.
- All graduate graduate committee chairs of Mechanical Engineering students must meet the requirements for graduate faculty status in the Mechanical Engineering Department.
- Graduate committees with a chair whose faculty appointment is outside the ME Department must have a majority of the graduate committee who are ME Department faculty.
- Graduate committees with a chair whose faculty appointment is outside the ME Department must have a host department advisor who is an ME Department faculty member.
• ME Department-allocated funds are designated to support graduate students who have graduate committee chairs with faculty appointments in the ME Department.

• Interdisciplinary graduate study students will be limited to an approximate upper limit composition not exceeding 5% of the MS students and 5% of the PhD students in the ME Department.

• Graduate graduate committee chairs whose appointments are outside the ME Department can only advise up to one ME graduate student at any given time.

• An ME Department host advisor can only serve as host department advisor to one ME graduate student at any given time.

• The student must provide evidence that full funding support is available for the anticipated duration of the proposed graduate degree (minimum of 18 months for an MS student, minimum of 3 years for a PhD student).

• Interdisciplinary students must abide by all policies and procedures described in the ME Graduate Studies Student Handbooks (except as noted and approved on ADV Form 1).

**APPROVAL PROCEDURES**

• 2 Required Forms:
  - ADV Form 1: Request for Interdisciplinary Graduate Study
  - ME Department Checklist for Interdisciplinary Graduate Study (See Appendix A: Form 1-Checklist for Interdisciplinary Graduate Study)

• Host Department Advisor reviews both forms with the student

• ME Department Graduate Advisor Review

• ME Graduate Coordinator Review

• ME Department Chair Approval

• The following approvals needed for ADV Form 1 can only be obtained after ME Department Chair approval:
  - Dean, College of Engineering and Technology
  - Chair, Department of Graduate committee chair
  - Dean, College of Graduate committee chair

**P&P 3: FINANCIAL SUPPORT**

The Department of Mechanical Engineering offers several opportunities to help qualified students with the cost of their graduate education. The majority of full-time graduate students receive financial support during their studies. Most financial support is in the form of employment such as research assistants and teaching assistants. Fellowships based on academic potential and performance, are also available. Satisfactory progress in the program is required to maintain eligibility for funding support. Support is also contingent on availability of funds. With the exception of some teaching assistantships, most financial support is generally determined prior to beginning the graduate program.
FELLOWSHIPS

Department of Mechanical Engineering Research Fellowship

A limited number of research fellowships are awarded to highly competitive applicants, with priority given to PhD candidates. These fellowships are intended to supplement other support.

They are awarded based on academic potential as part of the admission process and no further action is required by the student to be considered for a research fellowship.

College PhD Fellowship-1st Year

A limited number of fellowships are awarded to highly qualified first-year PhD students. These fellowships are intended to supplement other support. They are awarded based on academic potential as part of the admission process and no further action is required by the student to be considered for PhD Fellowships.

Teaching Assistant (TA) Fellowship

A limited number of TA Fellowships are awarded to qualified students. Students are nominated by their graduate committee chair for a TA Fellowship, and selection is based on qualifications, performance, and department needs. TA fellowships are typically part-time positions, with approximately half the effort dedicated to performing teaching assistant duties for an assigned course, and the other half dedicated to research directed by the student’s graduate committee chair.

GRADUATE ASSISTANTSHIPS

Research Assistantship

Graduate research assistantships are offered by individual faculty to students they advise. Assistantships are based on student research ability, student research performance, and availability of funds. Research assistantships are supported by external research contracts or grants, administered by faculty. Students may check with individual faculty to determine availability of these opportunities.

Teachings Assistantship

Graduate teaching assistantships are offered by professors who have teaching assistant needs. The department gives first priority to graduate students for teaching assistantships; however, the professor teaching the class has final authority to hire the teaching assistant for the class. Assistantships are based on student teaching
ability and teaching performance. Students may check with individual faculty to determine availability of these opportunities.

TUITION SCHOLARSHIPS

Tuition scholarships are available to qualified graduate students based on student performance and availability of funds. The scholarships are awarded by individual faculty and students may check with their graduate committee chair to determine availability.

OTHER FUNDING OPPORTUNITIES

The BYU Office of National Scholarships, Fellowships, and Programs provides information and search resources to help students identify opportunities. Some fellowship applications are due before graduate school applications, so early planning is advised.

*Department of Energy Computational Science Graduate Fellowship* (DOECSGF) provides support to students pursuing doctoral degrees in fields of study that use high performance computing to solve complex science and engineering problems.

Further information about this fellowship can be found at: [http://nsfp.byu.edu/rms/department-energy-computational-science-graduate-fellowship-doe-csgf](http://nsfp.byu.edu/rms/department-energy-computational-science-graduate-fellowship-doe-csgf)

*NASA Space Technology Research Fellowship* (NSTRF) are awarded to students pursuing MS or PhD degrees who show significant potential to contribute to NASA’s goal of creating innovative new space technologies for our Nation’s science, exploration and economic future.

Further information about this fellowship can be found at: [http://nsfp.byu.edu/rms/nasa-space-technology-research-fellowship](http://nsfp.byu.edu/rms/nasa-space-technology-research-fellowship)

*National Defense Science and Engineering Graduate Fellowships* (NDSEG) are intended for students at or near the beginning of their graduate studies in science, technology, engineering and mathematics fields. Fellowships are awarded to applicants who intend to pursue a doctoral degree.

Further information about this fellowship can be found at: [http://nsfp.byu.edu/rms/national-defense-science-engineering-graduate-fellowship](http://nsfp.byu.edu/rms/national-defense-science-engineering-graduate-fellowship)
National Science Foundation’s Graduate Research Fellowship Program

(NSF GRFP) supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based MS and PhD degrees at accredited US institutions.

Further information about this fellowship can be found at:
http://nsfp.byu.edu/rms/national-science-foundation-graduate-research-fellowship

Nuclear Energy University Program

NEUP offers fellowships and scholarships intended for undergraduate and graduate students pursuing nuclear science and engineering degrees.

Further information about this program can be found at:
https://neup.inl.gov/SitePages/Fellowship%20Information.aspx

High Impact Doctoral Research Assistantship

The Graduate Studies office and the Graduate Student Society (GSS) offers the HIDRA scholarship. This award is designed to recruit non-BYU originating PhD graduate students, and is therefore restricted to applicants whose undergraduate education was obtained at other institutions. The applicant must agree to be supervised by a faculty member who has an active research program.

Further information about this scholarship can be found at:

Graduate Mentoring Assistantship

The Graduate Studies office and the Graduate Student Society (GSS) offers the GMA scholarship. This assistantship is a faculty-originated funding mechanism which gives graduate students an opportunity to mentor undergraduate students.

The goal of the GMA program is to enable students (both undergraduate and graduate) to participate in a scholarly project that is of extraordinary and potentially life-changing experiential significance that would not be possible without funding from Graduate Studies.

Further information about this scholarship can be found at:

Research Presentation Award

The Graduate Student Society (GSS) offers this award, and it is not directly affiliated with BYU Graduate Studies. Graduate students presenting original research at conferences or performing or displaying creative work are eligible to receive a RPA averaging $400. RPA’s are intended to enable graduate students to travel to
important conferences or events within their discipline in order to present their scholarly and creative work.

Further information about this award can be found at: http://gss.byu.edu/research-presentation-awards

LOANS

Graduate students who are U.S. citizens are eligible for Stafford loans. Information regarding eligibility requirements can be obtained from the Financial Aid Office, D-148.

Graduate students may request verification of their enrollment status as full-time or part-time students, for loans or other purposes, from the Records Office, B-150 ASB. Registration for 8.5 or more credits during a semester (4.5 during spring or summer) constitutes full-time enrollment; however, students who have: a) finished their coursework, b) are making satisfactory progress, c) are enrolled for at least two hours per semester, and d) are devoting 40 or more hours per week to fulfilling graduate degree requirements, can be certified as full-time students. This requires that a Petition for Graduate Full-Time Status (ADV Form 2a) be submitted to the Office of Graduate Studies.

P&P 4: UNIVERSITY POLICY REGARDING TEACHING AND RESEARCH ASSISTANTS

1. A teaching assistant is a representative of the department and university and is expected to be professional in appearance and in executing his or her duties.

2. When employed as a research assistant or a teaching assistant, continuing students must be registered for two or more hours during fall and winter semesters, and one or more hours during spring and summer terms. Newly admitted students must be registered for two credits in the first semester or term of admission.

3. Full-time graduate students who are U.S. citizens may work up to 28 hours a week during fall and winter semesters if the work is related to their Program of Study. They may work only 20 hours a week if the work is not related to their Program of Study. During spring and summer terms and holidays, graduate students who are U.S. citizens may work up to 40 hours per week provided the average hours per week during the ACA measurement period does not exceed 28 hours. For new part-time employees, the ACA measurement period is the first 12 months of employment. For continuing part-time employees, the
measurement period will begin with the first pay period on or after October 15\textsuperscript{th} of the current year, through the last pay period before October 14\textsuperscript{th} of the following year. Breaks in employment between 4 and 26 weeks will be credited with the average hours worked during the measurement period.

4. Federal regulations will not allow international students to work more than 20 hours per week during full-time school; however, they may work up to 40 hours during their breaks provided the average hours per week during the ACA measurement period does not exceed 28 hours. The first break does not occur until after two semesters of fulltime enrollment.

\textbf{Note}: In all cases the number of hours worked should be authorized by the graduate committee chair. Because of budget and time constraints the number of hours authorized is often significantly less than the maximum hours outlined above.

\section*{P&P 5: APPROVED COURSES FOR PROGRAM OF STUDY}

Students may view all graduate courses in the \textit{University Graduate Catalog}. In addition, students may view course offerings by semester in the \textit{Class Schedule}.

\textbf{APPROVED COURSES}

\begin{itemize}
\item Me En \hspace{1cm} any class 500 or higher
\item Ce En \hspace{1cm} any class 500 or higher
\item Ch En \hspace{1cm} any class 500 or higher
\item Chem \hspace{1cm} any class 500 or higher
\item CS \hspace{1cm} any class 500 or higher
\item Ec En \hspace{1cm} any class 500 or higher
\item Math \hspace{1cm} any class 500 or higher
\item Phscs \hspace{1cm} any class 500 or higher
\item Stat \hspace{1cm} any class 500 or higher
\item Bio 580 \hspace{1cm} Scanning Electron Microscopy
\item MBA 670 \hspace{1cm} Innovation and Entrepreneurship
\item IT 548 \hspace{1cm} Mechatronics
\item Mfg 531 \hspace{1cm} Advanced CAM Programming
\item Mfg 532 \hspace{1cm} Manufacturing Systems
\item Mfg 555 \hspace{1cm} Composite Materials and Processes
\item Mfg 672 \hspace{1cm} Design for Manufacturing
\item Mfg 574 \hspace{1cm} Advanced Tool Design
\item Mfg 580 \hspace{1cm} Manufacturing Simulation
\end{itemize}
SPECIAL TOPICS COURSE GUIDELINES

ME EN 595R – Special Topics in Mechanical Engineering

This is for courses that are taught at a graduate level and that may or may not receive a permanent number. Graduate and undergraduate students may enroll.

ME EN 695R – Special Problems for Master’s Students

This is for the rare case when MS students seek credit for approved mentored projects unrelated to their thesis research. This should be seldom used and should be carefully scrutinized by the graduate committee.

ME EN 795R – Selected Topics in Mechanical Engineering

This is for graduate courses not having a permanent number. Only graduate students may enroll.

IT 515R- Special Topics in Information Technology

This is for courses that are taught at a graduate level and that may or may not receive a permanent number. Graduate and undergraduate students may enroll.

400-LEVEL COURSES

Students seeking a master’s degree may not include more than 9 credits of 400-level courses on a Program of Study. PhD students may not include courses lower than 500 level on the Program of Study, unless the credits were hours earned while earning a master’s degree.

PREREQUISITE COURSES

Courses outlined as part of a provisional admission should be listed on the Program of Study and should be taken during the first year. However, these courses will not count towards credit hours needed for graduation.

SENIOR CREDIT COURSES

Students seeking a master’s degree may apply credit taken during the senior year at BYU toward the degree, but in no instance can this credit apply to both a baccalaureate and a graduate degree. Senior credit combined cannot exceed 10 credits in a graduate program. Thoroughly qualified undergraduates who are willing and able to meet graduate level standards may enroll in graduate 500-level courses.
UNAPPROVED COURSES

Audit courses, online courses, and/or independent study courses are not accepted. If a course is not on the approved list, the student may take the course without it counting towards a Program of Study. However, the student may request course approval from his/her graduate committee and then submit a petition to the graduate program manager for review by the department graduate committee. The petition should include:

- Program of Study form filled out and signed by the student’s graduate committee.
- A clear explanation of how the contents of the course are directly related to the student’s graduate thesis/dissertation topic.
- A clear explanation of the syllabus of the course, and why the student feels that the content is sufficiently rigorous to qualify for inclusion in a mechanical engineering program of study.
- A short (2-3 paragraph) endorsement from the student’s graduate graduate committee chair confirming his/her opinion of the items above.

P&P 6: JOINT MS/MBA PROGRAM

The Mechanical Engineering Department and the Marriott School of Management offer a joint program leading to a master of science (MS) degree in mechanical engineering and a master of business administration (MBA) degree. The program provides advanced training in Mechanical Engineering along with management skills of the MBA program. The degrees are received simultaneously, and conferred separately by the two departments. Students must apply to both the mechanical engineering MS program and the MBA program, meeting the requirements of each department and specifying their intention to participate in the joint program in each statement of intent.

The program generally takes about three years to complete; however, some students prefer a four-year program (2 years for each degree) to provide adequate time for the MS thesis research and to increase possibilities of research funding. Students wanting to finish in three years find it beneficial to start the MS program during spring term. Specific requirements are the same as those listed for the Mechanical Engineering MS degree, with the following guidelines:

- Of the 30 credits required for the MS, 6 credits are for the thesis, and 24 credits are for approved coursework. Half the coursework must be in ME.
- MBA 670, Innovation and Entrepreneurship, is required and can be counted on the ME Program of Study. An additional 9 credits from the ME Program of Study can be listed on the MBA Program of Study.
Some credits from the ME Program of Study must be taken concurrently with the MBA program in order to meet university requirements; otherwise, the 12 credits will not count toward both degrees.

**PROGRAM OF STUDY SCHEDULE**

<table>
<thead>
<tr>
<th>Winter Semester Admission</th>
<th>Fall Semester Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Winter</strong></td>
<td><strong>Spring/Summer</strong></td>
</tr>
<tr>
<td>MS Thesis Research (1 hour)</td>
<td>MS Thesis Research (2 hours)</td>
</tr>
<tr>
<td>MS Coursework (6 hours)</td>
<td></td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring/Summer</strong></td>
</tr>
<tr>
<td>MS Thesis Research (1 hour)</td>
<td>MS Thesis Research (2 hours)</td>
</tr>
<tr>
<td>MS Coursework (6 hours)</td>
<td>MS Thesis Defense</td>
</tr>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Winter</strong></td>
<td><strong>Fall</strong></td>
</tr>
<tr>
<td>MS Coursework (6 hours)</td>
<td>MBA Core</td>
</tr>
<tr>
<td><strong>Spring/Summer</strong></td>
<td><strong>Winter</strong></td>
</tr>
<tr>
<td>MS Thesis Research (2 hours)</td>
<td>MBA Core; MBA 670</td>
</tr>
<tr>
<td>MS Thesis Defense</td>
<td></td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring/Summer</strong></td>
</tr>
<tr>
<td>MBA Core</td>
<td>MBA Internship</td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Winter</strong></td>
<td><strong>Fall and Winter</strong></td>
</tr>
<tr>
<td>MBA Core; MBA 670</td>
<td>MBA Core; MBA Electives</td>
</tr>
<tr>
<td></td>
<td>MS Coursework (9 hours)</td>
</tr>
<tr>
<td><strong>Spring/Summer</strong></td>
<td>MBA Internship</td>
</tr>
<tr>
<td>MBA Internship</td>
<td></td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td>MBA Core; MBA Electives</td>
</tr>
<tr>
<td>MS Coursework (3 hours)</td>
<td></td>
</tr>
</tbody>
</table>
RECOMMENDATIONS

- The Graduate committee chair is selected during the admission process. Most financial assistance is related to the thesis work and is administered by individual professors.
- It is strongly recommended that the thesis be completed and defended before beginning the MBA Core classes. It is difficult to stop the research and start it again later.
- Starting during Spring or Summer Term allows time to begin the thesis research early. To begin research Spring or Summer term, students should apply for Fall Semester. Students may also apply for Winter semester if graduated.

P&P 7: GRADUATE STUDENT ACADEMIC GRIEVANCE POLICY

Despite the well-meaning efforts of students and faculty, there may be occasions when a graduate student feels his/her work has been unfairly or inadequately evaluated. Usually such differences can be amicably resolved on an informal basis between the student and the faculty member involved. If, for any reason, the faculty member is not available or the student believes that the grievance will not be dealt with fairly or will create the possibility of retribution, the student may direct the grievance to the department chair.

Please contact the graduate program manager for the complete Grievance Policy.

P&P 8: THESIS/DISSERTATION PROSPECTUS PROCEDURES

OUTLINE

The prospectus should follow the general outline described below. For MS students there is a five-page limit for the body of the prospectus (problem statement through the anticipated contributions sections). For PhD students there is a fifteen-page limit for the body of the prospectus (problem statement through the anticipated contributions section). An example outline is below.

- Title page
- Signature page
- Problem Statement
  - Provide an overview of the problem.
  - Finish with an objective statement.
  - Address the question: What work is being done?
- **Background**
  - Briefly review the most relevant literature.
  - Provide motivation for the proposed thesis topic.
  - Address the questions: What have others done? Why is it important? What are the challenges?
- **Research objectives**
  - Briefly list the objectives. The reader should be able to make this list based on the background section.
- **Proposed Research**
  - Describe the technical approach.
  - Describe the scope of the project and note any delimitations if necessary.
  - Describe the equipment and facilities required to complete the project.
  - Describe any collaborative efforts.
- **Anticipated Contributions**
  - Describe any publications, (including publication venues) patents, or other scholarly products that are anticipated to result from the proposed project.
- **References**

#### P&P 9: FORMATTING GUIDELINES FOR THESIS/DISSERTATION

A template containing the following formatting can be obtained from the graduate advisor.

**FONT**

- Times New Roman 12 pt. consistency throughout text. 10 or 11 pt. is allowed for tables and figures.

**MARGINS**

Preliminary Pages (Title page, Abstract page(s), Acknowledgment page)

- 1 inch on all sides

Table of Contents, List of Figures, List of Tables, Body Pages,

- 1 inch on all sides

Chapter title pages, Reference title page, Appendix title pages

- 2 inches at top
- 1 inch at bottom and sides
PRINTING

Document should be printed double-sided for the bound copy

Note: Title page, Abstract page, Acknowledgment page, Table of Contents, List of Figures, List of Tables, Chapter title pages, References and Appendices must begin on the front side of a page.

PAGE NUMBERS

- Page numbers are centered at the bottom of the page.
- Counting begins with the Title page; however, back pages are not counted until the Table of Contents.
- Page numbers do not appear on the page until the Table of Contents (iv).
- Use Roman Numerals (i, ii, iii ...) for the Table of Contents and the pages thereafter until Chapter 1.
- Use Arabic numbers (1, 2, 3 ...) beginning with Chapter 1.
- Be sure numbers appear on ALL pages once numbering begins.

SPACING

- Double-space text of body and acknowledgements.
- Single-space abstract, references, captions, quotes, chapter titles, headings, and subheadings.
- Table of Contents, List of Figures, and List of Tables can be single-spaced or double spaced.
- Double-space four times before chapter titles (72 pts).
- Double-space three times after chapter titles (48 pts).
- Double-space twice before subheadings (24 pts).
- Double-space once after subheadings (0 pts).
- Double-space once between two subheadings (0 pts).
- Double-space twice before and after figures (24 pts).
- Double-space twice before and after tables (24 pts).
- Double-space once before and after equations (0 pts).
- Do not leave a single line of text, a single-line equation, or a subheading alone on the top (widow) or bottom (orphan) of a page.
- Do not leave more than about 5 lines of white space remaining on a page unless it’s the end of a chapter.
FIGURES

- Figures are normally diagrams, graphs, maps, or charts.
- Center figures on the page.
- Center captions below the figure. If two lines are needed, the caption should be left justified at margin.
- A figure should be placed after the paragraph of reference. If it will not fit on the same page, continue the text and place the figure at the top of the next page.

TABLES

- Tables contain numerical or statistical information.
- Center tables on the page.
- Center captions above the table, not to exceed the width of the table. If more than one line is needed, center the lines in an inverted pyramid, example:

  Table 6.3 Comparison of roll rotation plots when node was displaced, and an X-direction off-axis force was applied.

- If placed in the landscape position, the top of the table should be on the left side of the page, with the caption above the table. The page number is placed underneath the table.

■ P&P 9: COPY MACHINE POLICY

The ME department copy machine is not to be used for personal use nor should it be used to copy theses/dissertations. The copy machine may be used for RA and TA duties; however, students should not use the copy machine themselves. The secretaries will handle students’ requests.

■ P&P 10: BYU HONOR CODE

Complete information concerning the Honor Code at Brigham Young University can be found at: http://honorcode.byu.edu. All who represent BYU are to maintain the highest standards of honor, integrity, morality, and consideration of others in personal behavior. As a matter of personal commitment, faculty, administration, staff, and students of BYU seek to demonstrate in daily living on and off campus, those moral virtues encompassed in the gospel of Jesus Christ. BYU students should seek to be
totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including but not limited to plagiarism, fabrication or falsification, cheating or other academic misconduct.

PLAGIARISM

Intentional plagiarism is a form of intellectual theft that violates widely recognized principles of academic integrity as well as the Honor Code. Such plagiarism may subject the student to disciplinary action administered through the university Honor Code Office. Intentional plagiarism is the deliberate act of representing the words, ideas, or data of another without providing proper attribution to the author through quotation, reference, or footnote.

Inadvertent plagiarism usually results from an ignorant failure to follow established rules for documenting sources or from simply being insufficiently careful in research and writing. Although not a violation of the Honor Code, inadvertent plagiarism can result in academic sanctions being imposed by an instructor. Students who are in doubt as to whether they are providing proper attribution have the responsibility to consult with their instructor and obtain guidance.

Examples of plagiarism include:

Direct Plagiarism—verbatim copying of an original source without acknowledging the source.

Paraphrased Plagiarism—paraphrasing, without acknowledgment, of ideas from a source that the reader might mistake for your own.

Plagiarism Mosaic—borrowing of words, ideas, or data from an original source and blending this original material with one’s own without acknowledging the source.

Insufficient Acknowledgment—partial or incomplete attribution of words, ideas, or data from an original source

Plagiarism may occur with respect to unpublished as well as published material. Acts of copying another student’s work and submitting it as one’s own individual work without proper attribution is a serious form of plagiarism.

FABRICATION OR FALSIFICATION

Fabrication or falsification is a form of dishonesty where a student invents or distorts the origin or content of information used as authority. Examples include:
1. Citing a source that does not exist.

2. Attributing to a source ideas and information that are not included in the source.

3. Citing a source for a proposition that it does not support.

4. Citing a source in a bibliography when the source was neither consulted nor cited in the body of the paper.

5. Intentionally distorting the meaning or applicability of data.

6. Inventing data or statistical results to support conclusions.

**CHEATING**

Cheating is a form of dishonesty wherein a student attempts to give the appearance of knowledge or skill that the student has not obtained. Examples include:

1. Copying from another person’s work during an examination or while completing an assignment.

2. Allowing someone to copy from you during an examination or while completing an assignment.

3. Using unauthorized materials during an examination or while completing an assignment.

4. Collaborating on an examination or assignment without authorization.

5. Taking an examination or completing an assignment for another person or permitting another person to take an examination or to complete an assignment for you.

**OTHER ACADEMIC MISCONDUCT**

Academic misconduct includes other academically dishonest, deceitful, or inappropriate acts that are intentionally committed.

Examples of such acts include but are not limited to:

1. Inappropriately providing or receiving information or academic work so as to gain unfair advantage over others.

2. Planning with another to commit any act of academic dishonesty.
3. Attempting to gain an unfair academic advantage for oneself or another by bribery or by any act of offering, giving, receiving, or soliciting anything of value to another for such purpose.

4. Changing or altering grades or other official educational records.

5. Obtaining or providing an un-administered test or answers to an un-administered test.

6. Breaking and entering into a building or office for the purpose of obtaining an unauthorized test.

7. Continuing work on an examination or assignment after the allocated time has elapsed.

8. Submitting the same work for more than one class without disclosure and approval.

■ P&P 11: DISCRIMINATION AND/OR HARASSMENT

Brigham Young University does not allow unlawful discrimination based on race, gender, color, national origin, religion, age, veteran status, or disability in the academic or employment setting. This includes unlawful sexual harassment, which is a violation of university standards as well as state and federal laws and may be considered grounds for discipline. Persons who believe they have been unlawfully discriminated against or unlawfully sexually harassed should contact:

Equal Opportunity Office
D-282 ASB
Provo, UT 84602-1220
801/422-5895
Appendix A: Resources

REQUIRED STATEMENT OF INTENT CONTENT

Considerable latitude is granted in the content and organization of the Statement of Intent. However, the following information is expected to be included:

☐ The purpose of pursuing a graduate degree in mechanical engineering at Brigham Young University. This may include why the student has decided to pursue a graduate degree in mechanical engineering and how it fits into his/her career goals. Consideration may be given as to why the student is applying to study at Brigham Young University.

☐ The intended area of study within mechanical engineering. This may be as broad or as narrow as is applicable to the student’s current status. For example, if the student has already committed to complete research with a particular professor, that should be stated. If he/she is interested in a particular sub discipline (e.g. thermal science, design, materials, etc.), that should stated also. On the other hand, if the student is still exploring various fields, he/she may list several areas that are of the most interest. The information provided in the Statement of Intent does not commit the student to a particular research area but helps guide the application to potential research advisors.

☐ If applicable, any intent to apply for the joint MS/MBA. Students applying for the Joint MS/MBA program must mention this in the Statement of Intent. Other than this required statement, the remainder of the Statement of Intent should focus on the MS portion of the dual program.

Other information may also be applicable, including the following:

- Description of special preparation, abilities, or motivation that will contribute to success in graduate studies. This may include prior experiences that have prepared the student for graduate study and career. Examples include prior research experience, publications, patents, and related employment.

- Special considerations that are not addressed elsewhere in the application. If there were special circumstance that explain problems or inconsistencies in the student’s records, they may be included.

- Other information the applicant feels may be helpful in making admissions decisions. Students should be careful to provide information that is relevant to the application process. Evaluators prefer shorter, focused Statements of Intent over those that are too long.
# FORM 1: CHECKLIST FOR INTERDISCIPLINARY GRADUATE STUDY

**Student Responsibilities**

- Complete the “Request for Interdisciplinary Graduate Study” (ADV Form 1)
- Specifically identify the “purpose of the proposed interdisciplinary study” as requested on the form, including a justification as to why the proposed research is best accomplished as an interdisciplinary study, rather than as a traditional graduate study program in the ME Department.
- Specifically identify the “study requirements and curriculum” as requested on ADV Form 1, including a “persuasive justification” for any changes from the ME Department’s regular Program of Study requirements.
- Specifically identify a professor in the ME Department who will serve as the host department advisor. This professor will serve on the graduate committee and will help ensure compliance with ME Department policies and standards.
- Ensure that a majority of the graduate committee are faculty members in the BYU Department of Mechanical Engineering.
- Ensure that the student, graduate committee chair, and the host department advisor sign the Mechanical Engineering Checklist for Interdisciplinary Graduate Study (below).
- Discuss the request with the ME Department Graduate Advisor to ensure that ADV Form 1 is completed correctly and that the ME Department maximum participation rate as noted above has not already been met.

**Graduate committee chair Responsibilities**

- Provide a current CV. A faculty member serving as the graduate committee chair of a BYU Mechanical Engineering graduate student must meet the graduate faculty standards of the ME Department.
- In consultation with the host department advisor, develop an advisement plan that allows for adequate supervision of the mechanical engineering components of the proposed interdisciplinary research.
- Ensure that all ME Department procedures for graduate study, as outlined in the ME Graduate Studies Student Handbooks (except as noted and approved on ADV Form 1) are met.
- In consultation with the host department advisor, complete the ME Department biannual evaluations of student progress.

**Host Department Advisor Responsibilities**

- In consultation with the proposed graduate graduate committee chair, develop an advisement plan that allows for adequate supervision of the mechanical engineering components of the proposed interdisciplinary research.
☐ Submit form ADV Form 1, this checklist, and the advisement plan to the ME Department graduate advisor, along with a verbal recommendation regarding the application.

☐ Ensure that all ME Department procedures for graduate study, as outlined in the ME Graduate Studies Student Handbooks (except as noted and approved on ADV Form 1) are met.

☐ Ensure that the thesis work meets ME Department standards for graduate work.

☐ In consultation with the student’s graduate committee chair, complete the ME Department biannual evaluations of student progress.

**Signatures**

I understand that I am responsible for abiding by all policies and procedures for graduate study in the Department of Mechanical Engineering, as outlined in the ME Graduate Studies Student Handbooks except as noted and approved on ADV Form 1: Request for Interdisciplinary Graduate Study.

__________________________________________________________________________

Student Signature ___________________________ Date __________

__________________________________________________________________________

Student’s Graduate Graduate committee chair Signature ___________________________ Date __________

__________________________________________________________________________

Host Department Advisor Signature ___________________________ Date __________
FORM 2: PROSPECTUS APPROVAL

PROSPECTUS APPROVAL

Prospectus submitted by:

_________________________  ___________________________
Student                      Date

This prospectus has been approved by each member of the Graduate committee:

_________________________  ___________________________
Graduate committee chair      Date

_________________________  ___________________________
Graduate committee Member     Date

_________________________  ___________________________
Graduate committee Member     Date
FORM 3: STUDENT TIMELINE

☐ Choose a graduate committee chair during the application process
☐ Submit program of study prior to second registration
☐ Submit thesis prospectus by end of second semester
☐ Complete all provisions during first year (if admitted provisionally)
☐ Fulfill seminar attendance requirement during first year
☐ Complete all courses on program of study prior to applying for graduation
☐ Apply for graduation in semester of defense by university deadline
☐ Meet with graduate advisor after applying for graduation
☐ Submit best draft of thesis to graduate committee chair one month prior to defense
☐ Submit defense draft to all graduate committee members at least several days prior to scheduling defense
☐ Schedule oral exam at least two weeks prior to exam and by university deadline
☐ Review thesis format with graduate advisor prior to oral exam
☐ Pass oral exam
☐ Obtain department and college approval of thesis by university deadlines
☐ Submit PDF of thesis to Print and Services
☐ Submit EDT
☐ Submit ADV Form 8d to the Office of Graduate Studies by university deadline
☐ Submit request to secure thesis, ADV Form 8e, to the Graduate Studies Office (if applicable)
☐ Submit Check-out Clearance
☐ Submit Exit Survey
☐ Update address on My BYU for receipt of diploma
☐ Convocation and Luncheon
**FORM 4: PETITION TO WALK IN CONVOCATION**

For Master and PHD students

A PhD or Master’s candidate may walk in the College convocation upon meeting the following requirements and with approval from their major department and the college advisement center.

Students who apply for graduation and complete all graduation requirements at the end of the Spring Term may petition to walk in the commencement and convocation ceremonies held in April of that same year; however, their names will not be printed on the list of April graduates, but will rather be listed with the August graduates. Students who apply for graduation and complete all requirements in December may petition to early walk in the August graduation; however, their names will be listed in April graduation of the following year.

<table>
<thead>
<tr>
<th>Print name as you want it read at graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
</tr>
<tr>
<td>BYU Student ID</td>
</tr>
<tr>
<td>* Degree you are receiving PhD MS *Thesis Project</td>
</tr>
<tr>
<td>* Desired walk through date Diploma Date</td>
</tr>
<tr>
<td>* Cap and Gown: Student is responsible for contacting alumni for cap and gown rental:</td>
</tr>
<tr>
<td><a href="http://alumni.byu.edu/benefits/caps-and-gowns">http://alumni.byu.edu/benefits/caps-and-gowns</a> – information</td>
</tr>
<tr>
<td><a href="https://www.youtube.com/watch?v=3HRdhm37u10&amp;feature=youtu.be">https://www.youtube.com/watch?v=3HRdhm37u10&amp;feature=youtu.be</a> – how to wear video</td>
</tr>
</tbody>
</table>

**If PhD Candidate, please complete following**—

- Graduate committee chair Name: ______________________________
- Graduate committee chair email: ______________________________
- Dissertation Title (no acronyms): ______________________________
- Hometown: ______________________________
- Future Plans (employment if known, including city/state): ______________________________

I have applied for graduation and I understand that my name will not appear in the official University Commencement or Convocation program until I officially graduate. It is my responsibility to arrange for cap and gown. I have read and understand the above policy and I am planning to complete my graduation requirements as stated above.

| Student Signature | Date |
| Signature of Department Chair or Graduate Secretary | Date |
| College Advisement Center Approval | Date |