

Department of Mechanical Engineering

DOCTOR OF PHILOSOPHY (96-hour) REQUIREMENTS

for students admitted fall 2019 or later

COMMITTEE REQUIREMENTS

1. General Requirements:

- a. Minimum of four (4) faculty on the committee, including the committee chair and co-chair, if applicable.
- b. All committee members must be on Graduate Committee Faculty through OGAPS. A list is available at <http://ogaps.tamu.edu/faculty-advisors/search>
- c. At least one member must be from outside the Department of Mechanical Engineering.

2. Committee Chair: may be tenure/tenure-track faculty in MEEN or joint/courtesy appointment to MEEN. Joint/courtesy appointment faculty chairs do **not** count as a non-MEEN committee member.

- a. **Joint/Courtesy Appointment Chairs** are required to fund student through GAR or a GAT position in the faculty member's home department.

3. Committee Co-chair: optional; student may choose to have a co-chair on their committee. This person can be from in or out of MEEN.

4. Committee Members:

- a. **If your chair is a MEEN faculty member**, you must have at least one (1) committee member from MEEN. At least one (1) committee member must be from outside of MEEN. The remaining one (1) committee member may be from in or out of MEEN.
- b. **If your chair is a joint/courtesy appointment**, you must have at least two (2) committee members from MEEN. The remaining one (1) committee member must be from outside of MEEN.

Note: If a MEEN faculty member has a joint/courtesy appointment in another department, they can count as your non-MEEN committee member.

COMMITTEE PLANNING

Faculty Name	Committee Role	Faculty Member's Department
	Chair	
	Co-chair ¹	
	Member 1	
	Member 2	
	Member 3 ²	

¹Optional

²Only required if student does not have a co-chair

CURRICULAR REQUIREMENTS

(for students admitted fall 2019 or later)

1. **Required Graduate Level Mathematics Credit:** 2 courses – total of 6 credit hours

Course Options	
MEEN 602: Modeling & Analysis of Mechanical Systems (preferred)	
Any graduate level MATH or STAT course	

2. **Core Courses:** 3 courses – total of 9 credit hours

Course Options	
MEEN 601: Advanced Product Design	MEEN 621: Fluid Mechanics
MEEN 603: Theory of Elasticity	MEEN 625: Mechanical Behavior of Materials
MEEN 608: Continuum Mechanics	MEEN 630: Intermediate Heat Transfer
MEEN 612: Mechanics of Robot Manipulators	MEEN 651: Control System Design
MEEN 613: Engineering Dynamics	MEEN 672: Introduction to Finite Element Method
MEEN 615: Advanced Engineering Thermodynamics	MEEN 683: Multidisciplinary System Analysis & Design Optimization
MEEN 617: Mechanical Vibrations	MEEN 688: Advanced Solid Mechanics

3. **Technical Elective Courses:** 6-9 courses – total of 18-27 credit hours

Course Options
Any graduate level MEEN course; may include course(s) from core course listing; maximum of 4 hours of MEEN 684 & 685 combined; minimum of two (2) graduate technical electives, excluding MEEN 684, must be in MEEN
Any graduate level course in the college of engineering or college of science, with research advisor approval*
May include up to one (1) undergraduate courses at the 400-level

*Courses with the ENGR prefix or outside of the colleges of engineering or science require prior approval from the MEEN Graduate Program Director

4. **Seminar:** 3 semesters of MEEN 681 – total of 3 credit hours

681: Seminar from other departments will not be accepted

5. **RESEARCH:** 51-60 credit hours of MEEN 691; number of research credits will depend on how many credit hours of technical electives the student chooses to take.

COURSE PLANNING

Course	Credit Hours	Semester	Degree Plan Requirement
			Mathematics
			Mathematics
			Core Course
			Core Course
			Core Course
			Technical Elective 1
			Technical Elective 2
			Technical Elective 3
			Technical Elective 4
			Technical Elective 5
			Technical Elective 6
			Technical Elective 7
			Technical Elective 8*
			Technical Elective 9*
MEEN 681	1		Seminar
MEEN 681	1		Seminar
MEEN 681	1		Seminar
MEEN 691			Research Hours (51-60)

*Optional depending on the number of research credits