Materials Science and Engineering
Doctor of Philosophy

(Ph.D. entering with B.S.)

TEXAS A&M UNIVERSITY
Department of Materials Science and Engineering

Required Background "Leveling" Courses[1]	Offering	Credits	Taken
MSEN 601 – Fundamental Materials Science and Engineering	Fall/Spring	3	
MSEN 603 – Fundamentals of Soft and Biomaterials	Fall	3	
Seminar Requirement *(Maximum 3 Credits)*			
MSEN 681 – Seminar	Fall/Spring	3	
MSEN Core Courses *(9 Credits)*			
1. MSEN 602 – Physics of Materials	Spring	3	
2. MSEN 620 – Kinetic Processes	Spring	3	
3. MSEN 640 – Thermodynamics	Fall	3	
Math Requirement *(choose one, 3-4 credits)*			
MATH 601-604, STAT 601, STAT 630, PHYS 615, PHYS 616	All Semesters		
MSEN Electives[2] *(Minimum of 9 credits or 3 graduate MSEN courses)*			
5. MSEN	All Sem.		
6. MSEN	All Sem.		
7. MSEN	All Sem.		
Free Electives[3] *(Minimum of 9 credits, any engineering or science 400 level course or above)*			
8.	All Sem.	3	
9.	All Sem.	3	
10.	All Sem.	3	
"Extra" Courses[4] *(optional not required)*			
	All Sem.		
	All Sem.		
	All Sem.		
Research credit[4]			
MSEN 691- Research *(taken under faculty advisor's name)*	All Sem.	57 –67	
Degree Plan must equal 96 hours — Total:			0

Committee

Minimum 4 members consisting of 2 full-time core/joint MSEN faculty and 1 outside member *(who may be non-affiliated or affiliated MSEN faculty*).

Chair: _____ Co-chair or Member: _____

Member: _____ Outside Member: _____

Notes:

1. Required Background "Leveling" Courses are MSEN 601, MSEN 603. Any student who does not have a B.S. degree in Materials Science and Engineering must take these two courses— they will be counted as Free Electives. Any student who does have a B.S. degree in Materials Science & Engineering is not required to take those courses— they are automatically waived.
2. MSEN Electives are graduate-level Materials Science & Engineering courses frequently referred to as technical electives.
3. Free Electives are any 400 level or above engineering and science course. The Background Leveling Courses (MSEN 601 & 603) can be used to fulfill this requirement— (see note 1).
4. Remaining credit hours to fulfill the minimum credit hour requirement (96 cr) may be taken from other courses, including Internship (MSEN 684), Directed Studies (MSEN 685), and Research (MSEN 691), subject to Departmental rules.
    - MSEN 681 (Seminar) does not count as MSEN Elective or Free Electives— maximum 3 credits.
    - MSEN 684 (Internship) does not count as MSEN Elective or Free Electives.
    - MSEN 691 (Research) does not count as MSEN Elective or Free Electives.
    - MSEN 685 (Directed Studies) may be used as MSEN Elective or Free Elective— maximum 6 credits.
    - The maximum number of credit hours considered for transfer credit is 12 cr as per University Rules.

** Courses for which transfer credits are sought must have been completed with a grade of "B" or greater and cannot have been used to earn a previous degree— must have instructor, graduate director, chair, committee, and Graduate Professional School approval.*

Doctoral Requirments:

1. You must maintain satisfactory academic progress by completing MSEN academic degree milestones to avoid probation:
    - By end of 1st Semester— Finding a Faculty Advisor/Supervisor
    - After 3rd Semester— Qualifying Exams
    - During 4th Semester— Establish a Dissertation/Thesis Committee
    - Before 5th Semester— Degree Plan Submission (before completing 36 credits)
    - By end of 6th Semester— Preliminary Exam
    - By end of 6th Semester— Research Proposal
    - Oral Defense— Dissertation/Thesis Submission (average completion 5 years)
2. You must maintain an overall, semester, and degree plan grade point average of 3.0 or higher for all of the classes that you take at Texas A&M University.
3. You must perform your assigned duties and research satisfactorily.

*Degree plans must be submitted electronically at **ogsdpss.tamu.edu** during your fourth semester of registration or you may be blocked from further registration. You must establish a committee before submitting a degree plan.*