

**Materials Science & Engineering Graduation Checklist** (Class of 2021 and thereafter). See Instructions/Notes on pg. 2

Name: \_\_\_\_\_ NetID: \_\_\_\_\_ Advisor: \_\_\_\_\_

Course <b>Common Curriculum</b>	Notes/footnotes	Credits	AP, DE, or TS	Semester										Grade(h)	
				1	2	3	4	5	6	7	8	9	10		
Math 1910		4													
Math 1920		4													
Math 2930		4													
Math 2940		4													
Chem 2090		4													
Physics 1112		4													
Physics 2213		4													
CS 1110/1112/1113		4													
Freshman Writing Seminar 1	footnote (d)	3													
Freshman Writing Seminar 2	footnote (d)	3													
Phys Ed: 1 sem _____ 2 sem _____															

**Engr Distribution**

EngrI/D	intro to .....	3													
EngrD 2610/2620 (a)	footnote (a)	3													
EngrD	footnote (b)														

**Liberal Studies Distribution (6 courses/  
18 credits minimum)**

	Category														

**Advisor Approved Electives**

	footnote (j)														
	footnote (j)														

**Major Curriculum**

ENGRC 3111		1													
MSE 2060		3													
MSE 2620 or 2610	footnote (a)	3													
MSE 3010	footnote (c)	3													
MSE 3030		4													
MSE 3040		3													
MSE 3050		4													
MSE 3070		2													
MSE 3110		2													
MSE 3120		2													
MSE 4020		3													
MSE 4030/4050	footnotes (d, e)	4/3													
MSE 4060 (continuation of Senior Thesis)		3													
MSE 4070/5070	footnotes (d, f)	¾													
Materials Elective – MSE _____	footnote (g)	3													
Materials Elective – MSE _____	footnote (g)	3													
Materials App. Elective – MSE _____	footnote (g, j)	3													
Materials App. Elective _____	footnote (g, j)	3													
Materials App. Elective _____	footnote (g, j)	3													
Outside Technical Elective _____	footnote (g)	3													
MSE Honors Course 1:	4000+ level	4													
MSE Honors Course 2:	4000+ level	3													

Which of the above courses satisfies the advanced mathematics/computing/computational modeling requirement? \_\_\_\_\_ (i)  
Overall GPA: \_\_\_\_\_ Advisor Signature \_\_\_\_\_

## INSTRUCTIONS:

Please put a check in the semester each course was taken and include the grade received in the last column.

If credit for any course was given for AP (Advanced Placement), DE (Department Exam), or TS (Transfer Credit) please place a check in the column marked "AP, DE, or TS".

## FOOTNOTES:

- a) ENGRD 2610 or 2620 satisfies the Major entry requirement, as well as one ENGRD requirement. Students still need to complete MSE 2610 or 2620 (whichever one not taken for ENGRD) as a major program requirement.
- b) In addition to Major requirements, a course involving significant computational or mathematical modeling or advanced mathematics is required. This requirement is typically fulfilled by one of the Engineering Distribution, Advisor-approved electives, Materials-Application-related Electives, or non-MSE Technical Elective courses. Courses satisfying this requirement will generally have MATH 2930, MATH 2940, or equivalent courses as a pre- or co-requisite. A partial list of courses meeting this requirement is available in the MSE office and online at [www.mse.cornell.edu](http://www.mse.cornell.edu).
- c) MSE 3010 is the required substitute for PHYS 2214 in the Engineering Common Curriculum for any student who has affiliated with MSE. MSE 3010 is not required before affiliation and is typically taken in the 5th semester after MSE 2620 or PHYS 2214, which are the recommended pre-requisites. If taken, PHYS 2214 meets no Common Curriculum requirements within MSE but can be used to satisfy the MSE requirement of a non-MSE Technical Elective. MSE majors cannot use course numbers cross-listed with MSE 3010 to satisfy any elective requirements for the Common Curriculum or for MSE.
- d) In addition to the first-year writing seminars, a technical writing course must be taken as an engineering distribution, liberal studies, Advisor-approved elective, or Major course. MSE 3070, MSE 3111, and MSE 4070 or 5070 combined with MSE 4030 or MSE 4050/4060 fulfill the upper level technical writing requirement.
- e) Research-oriented students may replace MSE 4030 (senior lab) with MSE 4050 and 4060 (senior thesis).
- f) In the fall, students may substitute MSE 5070 for MSE 4070.
- g) The Major program includes nine (9) credits of elective courses outside the Major and nine (9) credits of elective courses within the Major; these courses can be taken anytime during the Junior or Senior year. The nine (9) elective credits outside the Major are satisfied by three (3) credits of the non-MSE Technical Elective and by six (6) credits of Materials Application-related non-MSE Electives. The non-MSE Technical Elective must be an upper level (2000+) technical course and may be selected from engineering or other colleges subject to advisor approval. PHYS 2214 will automatically be accepted as the non-MSE Technical Elective. The nine (9) credits within the Major are satisfied by six (6) credits of Materials-related Electives in MSE and three (3) credits of a Materials Application-related MSE elective. A list of approved materials-related electives and a partial list of approved materials application-related electives are available in the MSE office and online at [www.mse.cornell.edu](http://www.mse.cornell.edu). Students are required to take Materials Applications Electives courses from at least two different categories.
- h) Good academic standing in Materials Science and Engineering is satisfied by these criteria: a) semester GPA > 2.0; b) a cumulative GPA > 2.3; c) at most one grade as low as C- in the major required courses, materials electives, materials application electives, and the outside technical elective, regardless of whether these courses were taken before or after affiliation.
- i) The course used to satisfy the advanced mathematics/computing/computational modeling requirement does not have to be one listed in the checklist.
- j) One semester of research involvement (MSE 2910, 2920, 3910, 3920, 4910 or 4920) may be used as an application elective. Other research involvement courses (MSE 1920, MSE 2900, 3900, 4900 and non-MSE) may be used as advisor approved electives only.