Which of the above courses satisfies the advanced mathematics/computing/computational modeling requirement? ___________ (f)
Notes:

(a) ENGRD 2610 or 2620 is required for affiliation. The other is taken in the Field Program as either MSE 2610 or MSE 2620. If both were taken as ENGRD or MSE courses, you can petition the engineering college to change the course listing.

(b) Electronic Circuits (PHYS 3360 or A&EP 3630) may, by petition, substitute for Senior Laboratory MSE 4030.

(c) Senior Thesis (MSE 4050 and 4060 full year) may be taken instead of MSE 4030, and is encouraged for students planning to continue to graduate school.

(d) MSE 3070, MSE 4070/5070 combined with MSE 4030 or MSE 4050/4060 fulfills the upper level technical writing requirement.

(e) At least two of the Materials Applications Electives, and the Outside Technical Elective, must be non-MSE course numbers.

(f) One elective (any category including Other Courses) must be a course involving advanced mathematics or statistics, computing, or computational/mathematical modeling. Mathematical courses meeting this requirement generally have MATH 2930/2940 (or equivalent) as a prerequisite. Examples of accepted courses include ENGRD 2110, 2410, 3210, 3220; A&EP 4380; CEE 3710; ECE 3100; MS&E 5720, 5730; M&AE 4170, 4700; OR&IE 4760; T&AM 3100, 3110.

(g) Liberal electives must cover at least 3 categories (CA, HA, LA, KCM, SBA, FL and CE) with no more than one from CE. Categories may be determined by consulting the list(s) at www.engineering.cornell.edu/apps/liberalstudies/index.html.

(h) For advanced placement, department exam, or transfer enter AP, DE or TR as both semester and grade. These must show on your official transcript to be valid.

(i) Students taking MSE 5070 may apply the additional credit toward the materials application elective (by petition), outside technical elective (by petition), advisor approved elective, or as credits toward graduation with honors. Petitions to accept the extra MSE credits as equivalent to a non-MSE course may also be approved.

(j) The two materials electives must be taken from the following courses:
   - MS&E 4100 "Physical Metallurgy and Applications"
   - MS&E 4610 "Biomedical Materials and Their Applications"
   - MS&E 5210 "Properties of Solid Polymers"
   - MS&E 5310 "Introduction to Ceramics"
   - MS&E 5430 "Thin Film Materials Science"
   - MS&E 5550 “Introduction to Composite Materials”

(k) 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 4900 and non-MSE) may be used as advisor approved electives only.

(l) Project team courses, and unstructured research or special project courses, can only be used as advisor approved electives.

(m) Advisor approved electives include any course that the student and advisor agree serves to further the student’s educational and professional career goals. This normally includes all science and engineering courses (including a second ENGR course taken in the first year). It also includes further exploration of liberal electives (language, music, history, art, etc.), business electives including entrepreneurship, project teams, and research involvement. Students should talk with their advisor to ensure electives are appropriate and should ideally complete the advisor approved elective form to document the discussion.