Revised 2/26/2013

Accelerated BS + MS Materials Science and Engineering Curriculum Flow Chart
AY 2013-2014 155 Credits Required - 152 Credits shown

• This is a recommended curriculum, and actual completion of the MS degree in 5 years is not guaranteed. It is the student's responsibilty to meet with their advisor on a regular basis to monitor satisfactory progress towards both BS and MS degrees. Students who vary from this schedule might experience time conflicts with required courses.

• This is a recommended curriculum, not an official list of degree requirements. Adjustments may be required due to curriculum changes.

	Year 1	Year 2	Year 3	Year 4	Year 5
Fall	MA1160 Calculus I (4) CH1150 U. Chemistry I (3) CH1151 U. Chemistry I Lab (1) PH1100 Intro. Physics Lab I (1) ENG1101 Engineering Analysis and Problem Solving (3) UN1015 Composition (3) **15 credits semester total**	MA3160 Multivable Calculus (4) CH1160 U. Chemistry II (3) CH1161 U. Chemistry II Lab (1) PH2200 Univ. Physics II E&M (3) MY2100 Intro Matls Sci & Engr (3) Social/Behavioral List (3) **17 credits semester total**	MY3100 Matls Processing I (4) MY3200 Matls Character. I (4) MY3701 Semiconductors (2) PH2020 Intro Scientific Prog. and Error Analysis (1) HASS Gen Ed (3) HASS Gen Ed (3) **17 credits semester total**	MY4920 Sr. Design Project I (2) MY4600 Intro Polymer Engr. (3) MY4300 Mech. Behavior Matls (3) Approved Electives (3) HASS Gen Ed (3) Senior Rule Approved Elective (3)** **17 credits semester total**	MY5100 Thermodynamics and Kinetics I (3) MY Grad Elective (3)*** MY5990 MS Thesis Research (3) **9 credits semester total**
Spring	MA2160 Calculus II (4) PH2100 U. Physics I Mechanics (3) PH1200 Intro. Physics Lab II (1) ENG1102 Engineering Modeling and Design (3) UN1025 Global Issues (3) **14 credits semester total**	MA2321 Elem. Linear Algebra (2) and MA3521 Brief Diff. Eq (2) PH2400 Modern Physics (3) ENG2120 Statics-Strength Matls (4) MY2110 Intro to Materials Science and Engineering II (3) Humanities/Arts List (3) **17 credits semester total**	MY4940 Design of Experiments (2) MY3110 Matls Processing II (4) MY3210 Matls Character. II (4) MY3300 Design of Microstructure (3) EC3400 Econ. Decision Anal. (3) **16 credits semester total**	MY4930 Sr. Design Proj. II (2) MY4800 Matls Select. & Design (3) Approved Electives (6)* Free Elective (4)*** HASS Gen Ed (3) **18 credits semester total**	MY5110 Thermodynamics and Kinetics II (3) MY5260 Crystallography and Diffraction (3) MY5990 MS Thesis Research (3) **9 credits semester total**
Su				MY5990 MS Thesis Research (3) **3 credits semester total**	

Approved Electives are courses in Science, Engineering or Mathematics at 3000 level or higher (except CM4610, ENT). Those noted with an asterisk (*) can be double counted to both BS and MS. Senior Rule Approved Electives indicated by a double asterisk (**) are reserved for graduate credit and cannot be applied to BS degree. ***Students with 4 or more AP credits or students who take summer courses may add an additional "Senior Rule" course in the 4th year in place of the free elective, and the Grad Elective shown in year 5 will not be needed.

Physical Education (3 credits) are not included in the flowsheet and must be added by the student.

General Education Distribution Courses are from the HASS (Humanities, Arts, and Socal Sciences) list. At least 6 credits must be at 3000 level or higher. EC3400 is required in the MSE curriculum and does not count as a HASS requirement.

Prerequisites Most courses have prerequisites. Please see the MSE academic advisor or the University Catalog at **https://www.banweb.mtu.edu/pls/owa/stu_ctg_utils.p_online_all_courses_ug** for course descriptions and prerequisites.