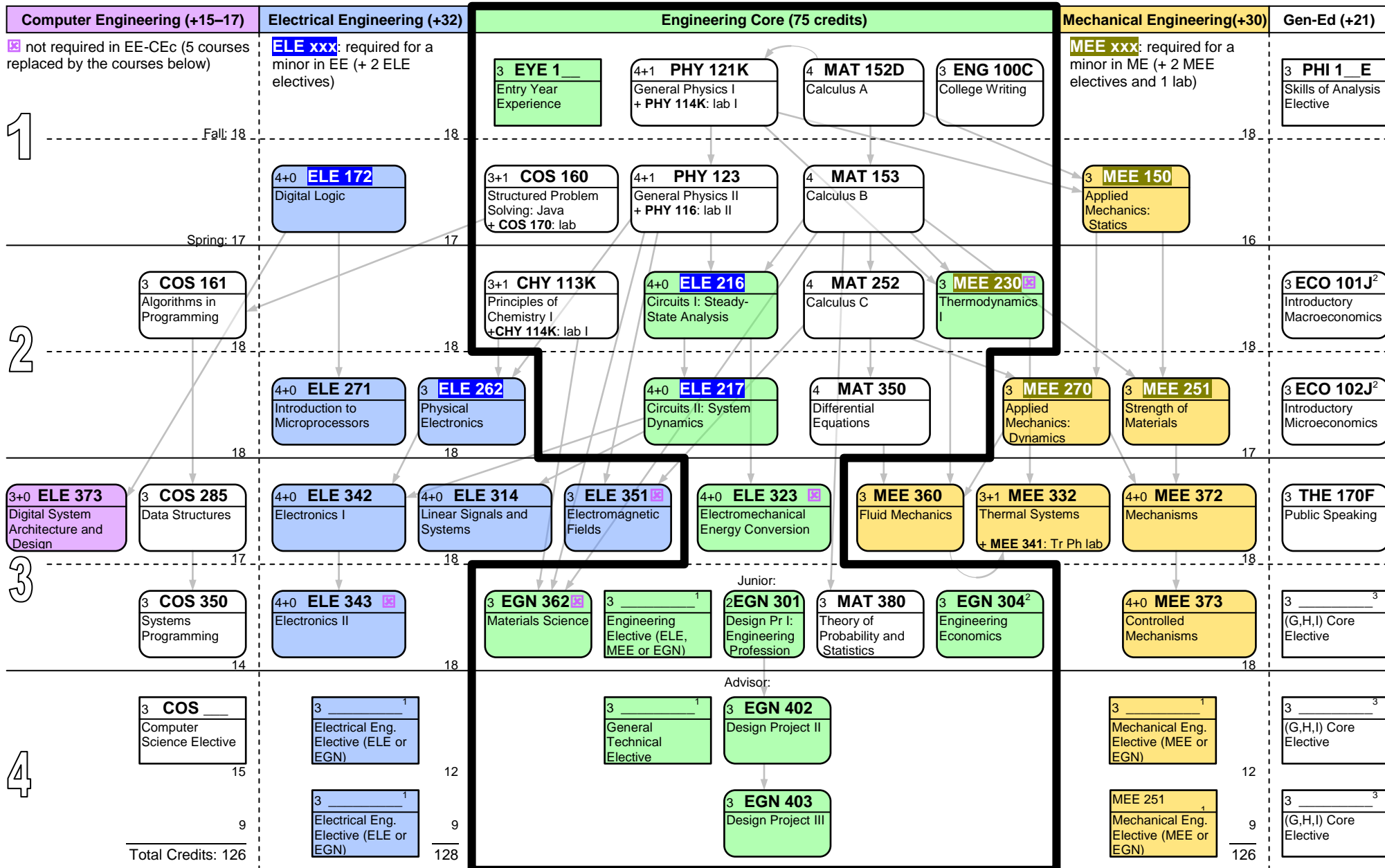


USM Engineering – 2009/2010 Curricula – Suggested Sequence – Approved 2/24/2009



Notes: ¹ Four technical electives are required, with at least 2 in the major and at least 3 in engineering. EGN courses count as native to either engineering major.

² Social sciences requirement: (ECO101J and ECO102J) or (EGN304 + any two J core courses)

³ (G,H,I) core group: 2 in the same letter or topically related

– One writing intensive course (W core) must be taken

USM Engineering – 2009/2010 Curricula – Technical Electives

Below are the possible combinations of courses to satisfy the technical elective requirements in each major. The student must pick one technical elective from each of the four columns in the respective major.

3 ELE ____	3 ELE ____	3 ELE ____	3 ELE ____
3 EGN ____	3 EGN ____	3 EGN ____	3 EGN ____
		3 MEE ____	3 MEE ____
Electrical Engineering major (including the Computer Engineering concentration)			3 _____ (outside engineering)

3 MEE ____	3 MEE ____	3 MEE ____	3 MEE ____
3 EGN ____	3 EGN ____	3 EGN ____	3 EGN ____
		3 ELE ____	3 ELE ____
Mechanical Engineering major			3 _____ (outside engineering)

Required 300-level courses in one major count as electives in another major. Below is a list of additional engineering courses offered as technical electives. Prerequisites are listed above each course. Within a major cluster, each row depicts a specific subject area. The list is updated as new areas and new courses within an area are developed. Electives are offered on a rotation basis and in response to student interest. Please contact the Engineering Department to inquire about currently scheduled offerings. Eligible technical electives outside engineering include but are not limited to advanced courses in Mathematics, Physics, Chemistry and Computer Science.

FLE 342 3 ELE 412 Power Electronics	ELE: Engineering courses that are distinctively electrical.		
FLE 172, FLE 342 3+0 ELE 442 Digital VLSI Circuits and Design	FLE 343 3+0 ELE 444 Analog Integrated Circuits and Design	FLE 343 3+0 ELE 445 Special Topics in CMOS Integrated Circuit Design	
FLE 262 3 ELE 363 Solid State Electronic Devices	FLE 342 3+0 ELE 464 Microelectronic Fabrication	FLE 342 3+0 ELE 467 Optoelectronics	FLE262, EGN362 3 ELE 468 Electronic Properties of Eng. Materials
FLE 271 3+0 ELE 371 Microprocessor Systems			
FLE314, MAT350 3 ELE 483 Communications Engineering	FLE314, COS160 3 ELE 486 Digital Signal Processing	FLE 314, COS160 3+0 ELE 489 Digital Image Processing	

EGN: Engineering courses that contain elements of both electrical and mechanical, or that are applicable to both.	
FLE217, COS160 3 EGN 417 Robot Modeling	FLE 217, COS160 3+0 EGN 418 Robot Intelligence
FLE 217 3 EGN 325 Control Systems	
FLE 323 3 EGN 446 MEMS	

MEE: Engineering courses that are distinctively mechanical.	
MEE360, MAT350 3 MEE 432 Heat Transfer	MEE332, MAT350 3 MEE 435 Advanced Thermal Systems
EGN 362 3 MEE 361 Physical Metallurgy	MEE 251 3 MEE 352 Anal. and Design of Composite Structures
FLE 217 3 MEE 374 Fundamentals of Mechanical Vibrations	