

ENGINEERING CONTENT

REQUIRED FOR ALL STUDENTS

ENGR	DESIGN
ENGR1125 ISIM	ENGR1200 DESNAT
ENGR 2110 POE	ENGR2250 UOCD
2 semesters ENGR4190 SCOPE OR	DESIGN DEPTH One of : ENGR3210 SUST DES
	ENGR3220 USER EXP DSN
2 semesters ENGR4290 ADE Capstone	ENGR3250 IPD
	ENGR3260 DM
	ENGR3270 REAL PROD REAL MKT
	ENGR3710 SYSTEMS
	ENGR3290 ADE

TOTAL ENGR CREDITS ≥ 46

*XXXX indicates a course covered in QEA I&II.

REQUIRED ENGR COURSES FOR EACH MAJOR

ME	ECE	ENGINEERING (E)				
		E: BIO	E: C	E: D	E: ROBO	E: SELF
ENGR2320 MECH SOLIDS	*ENGR2410 SIGSYS	12 CREDITS OF COURSEWORK APPROPRIATE TO BIO-ENGINEERING	ENGR2510 SOFTDES	8 CREDITS APPROVED ADVANCED DESIGN COURSES; 4 CREDITS MAY BE DESIGN RS	4 CR COURSE-WORK IN SOFTWARE	APPROVED PLAN OF STUDY FILED WITH THE ENGINEERING PROGRAM GROUP
*ENGR2340 DYNAMICS	ENGR2420 CIRCUITS		ENGR3520 FOCS			
ENGR2350 THERMO	ENGR2510 SOFTDES		ENGR3525 SOFTSYS OR APPROV. SUB	12 CREDITS APPROVED COURSEWORK	4 CR COURSE-WORK IN MECH ENGR	
ENGR3310 TRANSPORT PHENO-MENA	ENGR3410 COMPARCH		8 ADDTL CREDITS IN COMPUTING		ENGR3392 INTEG ROBO SYS	
ENGR3230 MECH DESIGN	ENGR3415 DSP OR ENGR3420 ANA&DIG			2 CR INDEP STUDY ON PORTFOLIO CREATION (OPTIONAL)	ENGR3390 FUN ROBO OR ENGR3590 COMP ROBO	
ADDITIONAL COURSE APPROVED BY ME PROGRAM GROUP (see catalog)	ADDT'L COURSE APPROVED BY ECE PROGRAM GROUP (see catalog)		4 ADDL RELATED CREDITS			

MTH3120 or MTH3150 or MTH3170 (PDEs or Num Meth & Sci Comp) or Nonlinear Dynamics & Chaos	MTH2110 Discrete Math	MTH3120 or MTH3170	MTH2110 Discrete Math	MTH2110 or MTH3120 or MTH3170 (Discrete Math or PDEs or Nonlinear Dynamics & Chaos)
		4 CR ADV BIO (see catalog)		
		4 CR E: Bio Elective (see catalog)		

MATH/SCIENCE

REQUIRED FOR ALL STUDENTS

MTH1111 MODSIM	SCI1111 MODSIM
*MTH 2210 LIN I	BIOLOGY
*MTH 2220 LIN II	CHEM/MATSCI
PROBSTAT	*PHYSICS FOUNDATION

SEE NEXT PAGE FOR LIST OF COURSES THAT CAN SATISFY THE PROBSTAT & SCIENCE REQUIREMENTS

REQUIRED MATH AND SCIENCE COURSES FOR EACH MAJOR

TOTAL MTH/SCI CREDITS ≥ 30
AT LEAST 10 MUST BE MTH

AHS/E!

REQUIRED FOR ALL STUDENTS

AHS FOUNDATION	AHSE 1515 PRODS& MKTS
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AHS CONCENTRATION

12 credits of AHS coursework
-OR-
8 credits of AHS + AHSE3190 Prepstone + AHSE4190 Capstone
-- OR --
Entrepreneurship Concentration
12 credit sequence of E! courses—at least 4 must come from either or combination of Iterate &/or Launch (see catalog for detailed options)

TOTAL AHS CREDITS ≥ 12
TOTAL OF AHS +E! ≥ 28

INTEGRATED COURSES

QEA I & QEA II (16 TOTAL CREDITS) (8 MTH, 4 SCI, 4 ENGR distributed totals)

Content Covered:
MTH2210 LIN I
MTH2220 LIN II
PHYSICS FOUNDATION
ENGR2410 SIG SYS
ENGR2340 DYNAMICS

INTEGRATED SCIENCES

(4 CREDITS AHSE PLUS 4 CREDITS SCI)
SIX MICROBES
CHEMISTRY IN CONTEXT
PARADIGMS, PREDICTIONS & JOULES
THE STUFF OF HISTORY

THE INTERSECTION OF ART, BIOLOGY AND TECHNOLOGY

(4 AHSE CREDITS PLUS 4 BIO CREDITS)

SUSTAINABILITY

SUST2201 INTRO TO SUST. (4 CR)
SUST3301 SUST. SYNTHESIS (4 CR)

ENGR3110 ELECANISMS

(4 ENGR CREDITS)

The OLIN SELF STUDY (OSS) 4 credits

TOTAL CREDITS NEEDED FOR GRADUATION:

120

SATISFIES PROBSTAT REQUIREMENT	SATISFIES BIO REQUIREMENT	SATISFIES CHEM/MATSCI REQUIREMENT	SATISFIES PHYSICS REQUIREMENT
MTH2130 PROBSTAT	SCI1210 PRINCIPLES OF MODERN BIO W/ LAB	SCI1310 INTRO TO CHEMISTRY W/LAB	SCI1121 ELECTRICITY AND MAGNETISM
MTH2131/ENGR3531 DATA SCIENCE	SCI 1220 HUMAN GENETICS AND GENOMICS W/LAB	SCI1399 SPECIAL TOPICS IN CHEMISTRY	SCI1130 MECHANICS
MTH2132/SCI2032 BAYESIAN INFERENCE AND REASONING	SCI1230 THINK LIKE A BIOLOGIST W/LAB	SCI1410 OR SCI1410A MATERIALS SCIENCE & SOLID STATE CHEMISTRY W/LAB	SCI1199 FOUNDATION TOPIC IN PHYSICS
MTH2133 COMPUTATIONAL BAYESIAN STATISTICS	SCI1240 DESIGNING BETTER DRUGS W/LAB		SCI2130 QUANTUM PHYSICS (WITH INSTRUCTOR PERMISSION)
MTH2134/ENGR2134 REGIONAL ANALYSIS IN DEVELOPMENT	SCI1250 SIX MICROBES THAT CHANGED THE WORLD W/LAB		SCI2220 BIOMECHANICS
DESIGNATED ALTERNATIVE	AN ADVANCED BIOLOGY COURSE IF STUDENT RECEIVED A SCORE OF 5 ON AP BIO EXAM	FUTURE "ENVIRONMENTAL ANALYSIS/ENGINEERING"	SCI3120 SOLID STATE PHYSICS (WITH INSTRUCTOR PERMISSION)
			SCI3130 ADVANCED CLASSICAL MECHANICS (WITH INSTRUCTOR PERMISSION)

Special Topics courses (numbered XX99) that meet specific degree and/or program requirements are so noted in the [Semester Course Offerings List](#). Questions about a particular course should be directed to the instructor on record or the Registrar's