THE UNIVERSITY OF ALABAMA Student Name Fall 2019 Curriculum for Mechanical Engineering **CWID** 126 Semester Hours 63 30 **Sophomore Year Junior Year** 126 Freshman Year **Senior Year** 15 Credit Hours 15 Credit Hours 16 Credit Hours 16 Credit Hours 18 Credit Hours 15 Credit Hours 16 Credit Hours 15 Credit Hours MTE 271 **AEM 250** ME 383 ME 490 ME 489 Approved Mechanics of Modern General Mechanical Mechanical Engineering Science Materials I Manufacturing Chemistry I Engineering Engineering Materials I Elective **Practices** Lab Included Design I Design II **AEM 251** & Projects Lab & Projects Lab Mechanics of Students must be Materials Lab ME 350 within 33 hours PH 105 PH 106 of graduation General Physics Static Machine **General Physics** Mechanical **MATH 238** with Calculus II Components with Calculus I Engineering Lab Included Lab Included **Applied** Lab Included **ME 450** Elective Differential MATH 125 4 HU/L/FA **Dynamic Machine** Equations I Elective Components ME 360 Calculus I Control and Technical Instrumentation Elective **ME 460** Components MATH 227 **4** MATH 126 Any M.E. elective Lab Included **Energy Systems: ECE 320** or 300-400 level Calculus II Calculus III Analysis and Engineering, **Fundamentals** Writing Core Measurement Math, or Science of Electrical Course **ME 121** Lab Included course by Engineering advanced Introduction to Writing Core petition. Mechanical Course AEM 264 8 Engineering **AEM 201** 8 € ME 372 ME 349 **ENGR 103 Dynamics** Statics All 4 courses below are required, and must Engineering Dvnamic Engineering include one 2-course In-Depth Study series. **Analysis** Systems Foundations Computer Computer HI/SB HI/SB HI/SB Core Course Core Course **ENGR 161 AEM 311** Elective Elective Elective Small-Scale Fluid Mechanics Engineering ME 309 Mechanical Graphics **Heat Transfer** Engineering HU/L/FA HU/L/FA **6** Elective **ME 215** ME 305 Elective Elective **EN 101** EN 102 Thermodynamics Thermodynamics English English Composition II Composition I Completed Course is in your DegreeWorks Natural Science Freshman Credit Hours Composition ★ Prerequisites not shown Engineering Credit you anticipate receiving credit or transferring. Color Required Shape Prerequisite Social and Elective Mathematics Key: Course Behavioral Key: Courses you can take this fall semester. Corequisite Sciences Humanities

POLICY ON ME ELECTIVES

Each student may select any two ME electives to satisfy the requirements of ME elective courses. The technical elective requirement may be satisfied with an additional ME Electives or a 300-400 level engineering, math, or science course by formal petition.

POLICY ON HUMANITIES AND SOCIAL SCIENCES

Students must satisfy the College of Engineering Core curriculum requirements. These include nine semester hours of humanities (HU), literature (L), and arts (FA) courses. Nine semester hours are also required in history (HI) and social and behavioral sciences (SB). Six of these 18 semester hours must be from a single discipline (Depth Study). There is no mandatory requirement of literature, fine arts, or foreign language in mechanical engineering.

ENGINEERING REGISTRATION AS A PROFESSIONAL ENGINEER

Engineering is a profession requiring state registration to become a "Professional Engineer." The first step towards becoming registered is passing the Fundamentals of Engineering Exam. Students are strongly encouraged to pass the Fundamentals of Engineering Exam before they graduate.

BSME CORE PREREQUISITES

BSME Course	Prerequisites
CH 101	MATH 115+ (co-req.)
PH 105	MATH 125
PH 106	MATH 126, PH 105
MATH 125	MATH 113 or MATH 115 or Placement
MATH 126	MATH 125
MATH 227	MATH 126
MATH 238	MATH 126
ENGR 103	MATH 125+ (co-req.)
ENGR 161	MATH 112+
AEM 201	ENGR 103, MATH 125, PH 105
AEM 250	AEM 201, MATH 126
AEM 251	AEM 250 (co-req.)
AEM 264	AEM 201, MATH 126
AEM 311	AEM 201, MATH 227
ECE 320	MATH 238, PH 106
MTE 271	CH 101/100 including lab, MATH 125
ME 121	MATH 112+ (co-req.)
ME 215	MATH 126
ME 305	MATH 227 (co-req.), ME 215
ME 309	AEM 311, MATH 238, ME 215
ME 349	MATH 238
ME 350	AEM 250, AEM 251, ENGR 161 or 171
ME 360	AEM 250, ECE 320
ME 372	AEM 264, ECE 320, MATH 238, ME 349
ME 383	AEM 250, ENGR 161 or 171, MTE 271
ME 450	AEM 264, ME 350
ME 460	ME 309, ME 360
ME 489	ME 305, ME 309, ME 350
ME 490	ME 489

APPROVED MATH/SCIENCE ELECTIVE COURSES

Science Electives	Prerequisites
AY 101 and 102	None required
AY 203 and 204	None required
BSC 108	None required
BSC 109	None required
BSC 114 and 115	None required
BSC 118	CH 101 or CH 100 or CH 117 (co-req.)
CH 102	CH 101
CH 118	CH 117
GEO 101, 102, or 105	None required
GY 101, 102, or 207	None required
PH 253 and 255	PH 106

MECHANICAL ENGINEERING ELECTIVE COURSES

ME Electives	Prerequisites
ME 308	ME 305
ME 364	AEM 264
ME 377	MATH 238, PH 106
ME 406	ME 305
ME 407	ME 305 and ME 309
ME 416	ME 305, ME 309, & Either ECE 320 or ECE 225
ME 417	ME 305
ME 418	ME 305
ME 421	GES 225
ME 430	GES 225 or GES 400/500 or ME 349 AND approval
ME/AEM 470	ME 372, ME 349, AEM 250
ME 471	MATH 238, PH 106, & Either ECE 320 or ECE 225
ME 475	ME 372, ME 349
ME 483	ME 383
ME 485	AEM 250 and ENGR 161, DR 125, or DR 133
ME 491	Varies
ME/AEM 500:599	Varies
AEM 313	AEM 311, AEM 264, MATH 238 (co-req.)
AEM 341	AEM 249, AEM 250
AEM 360	AEM 311, MATH 238
AEM 368	AEM 249, AEM 264, AEM 311, MATH 237 and 238
AEM 413	AEM 311, ME 215
AEM 415	Instructor Approval
AEM 416	AEM 264, AEM 311, MATH 238
AEM 446	AEM 250
AEM 453	AEM 250
AEM 455	MATH 238, PH 105
AEM 469	AEM 264, MATH 238
AEM 474	AEM 250, AEM 264, MATH 237, MATH 238
AEM 481	ME 215, ME 349, MATH 238
AEM 484	PH 105, PH 106
GES 400/500	MATH 126

APPROVED TECHNICAL ELECTIVES (pre-req. varies)

College of Engineering	College of Arts & Sciences	
AEM 452, 470, 471, 500:599	Astronomy (AY) 421, 433, 450	
CHE 412, 418, 440, 445, 480	Biological Sciences (BSC) 300, 303,	
CE 331, 320, 378	310, 314, 315, 320, 325, 340, 360,	
ECE 326, 340, 350, 380	371, 373, 376, 380, 385, 393, 412	
GES 400, 410, 473, 500	Chemistry (CH) 231, 232	
All ME elective courses	Geography (GY) 450, 470	
(Note: one course cannot	MATH 237, 301, 343, 355, 371,	
serve as both an ME and	382, 410, 420, 421, 441, 470, 485,	
Tech elective)	486	
MTE 412, 439, 450, 455, 487	Physics (PH) 301, 302, 331, 411,	
	434, 471, 488	
CBH 301, 302, 451, 452 or RRS 300:499		

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