

Millersville University
Dept. of Applied Engineering, Safety & Technology

120 credits minimum – updated Spring 2020
(rev FA21_AENG)

**Bachelor of Science (B.S.)
Applied Engineering & Technology Management (AETM)
Concentration: General Technology**

DEPARTMENTAL REQUIREMENTS (60 credits)

Technical Option (36 credits)

Grade	Course No.	Title	Cr
	AENG 110	Communication & Information Systems	3
	AENG 120	Energy & Power Systems	3
	AENG 130	Production Materials & Processes	3
	AENG 241	Drafting Communications	3
	AENG ____	Select ONE of AENG 251 or 252 • AENG 251 Print Media Systems (prereq AENG 110) • AENG 252 Web Publishing Systems (prereq AENG 110)	3
	AENG 261	Electronic Systems	3
	AENG 271	Processing Nonmetallic Materials (prereq AENG 130)	3
	AENG 281	Metallic Materials & Production Methods (prereq AENG 130)	3
	AENG ____	Select ONE of AENG 325 or 326 • AENG 325 Power Conversion & Control (prereq AENG 120 or 261) • AENG 326 Fluid Power (prereq AENG 120 or 325)	3
____	1. _____ 2. _____ 3. _____	Select THREE 300-level or above AENG lab courses Select from: AENG 325, 326*, 331, 332, 342, 344*, 345, 346, 347, 348, 351, 355, 356*, 357, 364, 375, 376, 382, 425*, 427*, 435, 446, 448, 455*, 466*, 467*, 498*, 515, 525, 535	9
<input type="checkbox"/>	√ when R&D is completed	* Research & Development. One AENG course must include an R&D component. Select from AENG 326, 344, 356, 425, 427, 455, 466, 467, 498	x

Technology Management Core (15 credits)

Grade	Course No.	Title	Cr
	OSEH 120	Safety, Health & Environmental Issues	3
	AENG 492	Technical Entrepreneurship (prereq AENG 130 or AENG 241; and BUAD 251; and junior or senior class status)	3
	AENG 494	Total Quality Management (prereq MATH 130; and senior class status)	3
	BUAD 251	Principles of Management [W] (prereq C- or higher in ECON 101 & ECON 102; and ENGL 110); must earn a C- or higher as a prereq for MGMT 452	3
	MGMT 452	Prod & Oper Mgmt (prereq: C- or higher in BUAD 251; and MATH 130; and MATH 151, 160 or 161)	3

Electives Courses in Technology Management (9 credits)

Grade	Course No.	Title	Cr
		Select THREE courses from the following list.	
		• AENG 300 Internship (maximum of 6 credits internship may be counted for the degree)	3
		• AENG 400 Internship (may be counted for the degree)	3
		• AENG 392 Intro to Industrial Training [W] (prereq ENGL 110)	3
____	1. _____	• OSEH 221 Industrial Fire Prevention	3
		• OSEH 320 Safety Engineering Principles (prereq OSEH 120)	3
____	2. _____	• OSEH 323 Human Factors in OSEH (prereq OSEH 120)	3
		• OSEH 333 Intro to System Safety (prereq OSEH 320 and MATH 130)	3
____	3. _____	• BUAD 161 Intro to Financial Accounting (prereq MATH 101 or 151)	3
		• BUAD 352 Human Resource Mgmt (prereq C- or higher in BUAD 251)	3

Prereqs are subject to change; consult the MU Web Schedule before registering to verify prereq requirements

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		• MGMT 353 Labor-Mgmt Relations (<i>prereq C- or higher in BUAD 251</i>)	3
		• MGMT 357 International Mgmt (<i>prereq C- or higher in BUAD 251</i>)	3
		• PSYC 329 Industrial/Org Psyc (<i>prereq ENGL 110, PSYC 100</i>) [W]	3
		• SOCY 318 Sociology of Complex Organizations	

REQUIRED RELATED COURSES (19-21 credits)

Required Related – Math (*Fulfills the Gen Ed Math Requirement plus one course in G2*)

Grade	Course No.	Title	Cr
	MATH 130	Elements of Statistics (<i>prereq: See Web Schedule or Undergrad Catalog</i>)	3
	MATH ____	Select ONE from: • MATH 151 Calc for Mgmt, Life (<i>prereq C- or higher in MATH 101 or MPT 151</i>) • MATH 160 Precalculus (<i>prereq C- or higher in MATH 101 or MPT 160</i>) • MATH 161 Calculus I (<i>prereq C- or higher in MATH 160 or MPT 161</i>)	4 4 4

Required Related – Science (*Fulfills two G2 courses*)

Grade	Course No.	Title	Cr
		Select TWO from:	
		• CHEM 101 Chem! Better Things	3
		• CHEM 103 General, Organic, Biochem I	3
		• CHEM 104 General, Organic, Biochem II	3
		• PHYS 103 Elements of Physics } <i>Can receive credit for either</i>	4
		• PHYS 104 Applied Physics } <i>PHYS 103 or 104, but not for both</i>	4
		• PHYS 131 Physics I	4
		• PHYS 132 Physics II	4

Must complete one science course with a lab component

Required Related – Economics (*Fulfills two G3 courses*)

Grade	Course No.	Title	Cr
	ECON 101	Macroeconomics	3
	ECON 102	Microeconomics	3

GENERAL EDUCATION REQUIREMENTS (48 credits)

Note: 18 credits of Gen Ed are fulfilled by Required Related Courses

G1 – HUMANITIES & FINE ARTS [*ART, COMM/THEATRE, ENGL, FOREIGN LANG/HUMN, MUSI, PHIL*] (9 credits)

Grade	Course No.	Title	Cr
			3
			3
			3

Maximum of two courses from the same dept; all three courses could be from

G2 – SCIENCE & MATH — *These credits are fulfilled by Required Related Math & Science* (9 credits)

G3 – SOCIAL SCIENCES [*AFAM, ANTH, BUAD, GEOG, GOVT, HIST, INTL, PSYC, SOCY, SOWK/GERT, WSTU*] (9 credits)

Grade	Course No.	Title	Cr
x	x	<i>fulfilled by ECON 101</i>	3
x	x	<i>fulfilled by ECON 102</i>	3
x	x	<i>fulfilled by BUAD 251</i>	3

Additional General Education Requirements (18 credits)

Grade	Course No.	Title	Cr
	COMM 100	Fundamentals of Speech (<i>minimum of "C-" required</i>)	3
	ENGL 110	English Composition (<i>minimum of "C-" required</i>)	3
x	x	Math course (<i>fulfilled by Required Related Math</i>)	3
	WELL 175	Wellness	3

		Perspectives [P] (NOTE: AENG 301, 302, or 303 [D] recommended)	3
		UNIV 103 or Open Elective (Open Elective cannot be a course from major dept)	3

Advanced Writing (AW) Course (3 credits)

Grade	Course No.	Title	Cr
	ENGL ____	Select <u>ONE</u> from: • ENGL 312 Technical Writing • ENGL 318 Web Writing • ENGL 316 Business Writing • ENGL 319 Science Writing	3

GENERAL EDUCATION REQUIREMENTS CHECKLIST:

Three G1, G2, or G3 courses at **200-LEVEL OR HIGHER:** (1) _____ (2) _____ (3) *BUAD 251* *completed*

Three **WRITING [W]** courses (does not include ENGL 312/316): (1) _____ (2) _____ (3) *BUAD 251* *completed*

One **CULTURAL DIVERSITY [D]** course: NOTE: AENG 303 is a [D] (1) _____

FREE ELECTIVES (9-11 credits) – needed to bring overall total to 120 credits; depends on credit value of science & math courses selected

____ _____ ____ cr _____ _____ ____ cr
 _____ _____ ____ cr _____ _____ ____ cr