

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: Graphic Communication Technology**

DEPARTMENTAL REQUIREMENTS (60 credits)

Technical Option

(36 credits)

Grade	Course No.	Title	Cr
	AENG 110	Communication & Information Systems	3
	AENG 241	Drafting Communications	3
	AENG 251	Print Media Systems (<i>prereq AENG 110 or ART 244 or COMM 221</i>)	3
	AENG 252	Web Publishing Systems (<i>prereq AENG 110</i>)	3
	AENG 344	Product Design (<i>prereq AENG 241</i>)	3
	AENG 351	Digital Imaging	3
	AENG 355	Contemporary Printing (<i>prereq AENG 251</i>)	3
	AENG 356	Desktop Publishing (<i>prereq ENGL 110</i>) [<i>Writing course</i>]	3
	AENG 357	Packaging & Specialty Printing (<i>prereq AENG 241 & 251; or ART 348</i>)	3
	AENG 455	Research & Development in Graphic Communication (<i>prereq AENG 355</i>)	3
	AENG 457	Print Production Mgmt & Cost Estimating (<i>prereq AENG 355 & MATH 130</i>)	3
	_____	Technical Elective: Select ONE from the following list: AENG 120, 130, 243, 342, 347, 498, 515; ART 133, 142, 240, 306; BUAD 231; COMM 206, 220	3

Technology Management Core

(15 credits)

Grade	Course No.	Title	Cr
	OSEH 120	Safety, Health & Environmental Issues	3
	AENG 492	Technical Entrepreneurship (<i>prereq AENG 130 or AENG 241; and BUAD 251; and junior or senior class status</i>)	3
	AENG 494	Total Quality Management (<i>prereq MATH 130; and senior class status</i>)	3
	BUAD 251	Principles of Management [W] (<i>prereq C- or higher in ECON 101 & ECON 102; and ENGL 110</i>); must earn a C- or higher as a prereq for MGMT 452	3
	MGMT 452	Prod & Oper Mgmt (<i>prereq: C- or higher in BUAD 251; and MATH 130; and MATH 151, 160 or 161</i>)	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
_____	1. _____	• AENG 392 Intro to Industrial Training [W] (<i>prereq ENGL 110</i>)	3
		• OSEH 221 Industrial Fire Prevention	3
_____	2. _____	• OSEH 320 Safety Engineering Principles (<i>prereq OSEH 120</i>)	3
		• OSEH 323 Human Factors in OSEH (<i>prereq OSEH 120</i>)	3
_____	3. _____	• OSEH 333 Intro to System Safety (<i>prereq OSEH 320 and MATH 130</i>)	3
		• BUAD 161 Intro to Financial Accounting (<i>prereq MATH 101 or 151</i>)	3
		• BUAD 352 Human Resource Mgmt (<i>prereq C- or higher in BUAD 251</i>)	3
		• 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	3

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:	
	1. _____	• CHEM 101 Chem! Better Things	3
		• CHEM 103 General, Organic, Biochem I	3
		• CHEM 104 General, Organic, Biochem II	3
	2. _____	• 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] (<i>NOTE: AENG 301, 302, or 303 [D] recommended</i>)	3

		UNIV 103 or Open Elective (<i>Open Elective cannot be a course from major dept</i>)	3
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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) AENG 356 completed (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