

Name: _____

PSU ID: _____

Dual Degree Program Courses for Engineering Majors***The Pennsylvania State University****Dual Degree Institution: Millersville University of PA**

PSU Course	Credits	Course Title	PSU Majors	Dual Degree Inst. Course	Credits	Grade
BIOL 141, 142	3, 1	Physiology and Lab	BIO E, elective for E SC, I E, M E	BIOL 254	4	
CAS 100	3	Effective Speech	ALL	COMM 100	3	
CHEM 110	3	Chemical Principles I	ALL	CHEM 111	4	
CHEM 111	1	Experimental Chemistry I	ALL except AERSP, M E	CHEM 111	4	
CHEM 112	3	Chemical Principles II	BIOE, CH E, elective for E SC, I E, M E, ALL EMS except MNG E	CHEM 112	4	
CHEM 113	1	Experimental Chemistry II	BIOE, CH E, MATSE	CHEM 112	4	
CHEM 210	3	Organic Chemistry I	BIOE, CH E, MATSE(PLMSE), ENENG	CHEM 231	4	
CHEM 212, 213	3, 2	Organic Chemistry II and Lab	BIOE, CH E, MATSE(PLMSE)	CHEM 232	4	
CMPEN 270	4	Introduction to Digital Systems & Lab	CMPEN, E E, I E	No Equivalent		
CMPSC 121, 122	3, 3	Intermediate Programming	CMPEN	CSCI 161/162	4/4	
CMPSC 200/201	3	Computer Programming for Engineers	ALL except B E, CH E, CMPEN	No Equivalent		
E E 210	4	Circuits and Devices	BIOE(EE option), CMPEN, E E, E SC	No Equivalent		
E MCH 211	3	Statics	ALL except CH E, CMPEN, MATSE (PLMSE), and ENENG	No Equivalent		
E MCH 212	3	Dynamics	ALL except CH E, CMPEN, E E, MATSE (PLMSE) and ENENG	No Equivalent		
E MCH 213	3	Strength of Materials	ALL except CH E, CMPEN, E E, ENVSE, MATSE (PLMSE) and ENENG	No Equivalent		
ECON 002 or 004	3	Intro. Microecon. or Macroecon. Analysis and Policy (GS)	ALL	ECON 102 or 101	3	
EDSGN 100	3	Introduction to Engineering Design	ALL except CMPEN, ENVSE, MATSE, PNG E and ENENG	N/A		
ENGL 015	3	Rhetoric and Composition	ALL	ENGL 110	3	
ENGL 202C	3	Effective Writing: Technical Writing		ENGL 312	3	
GEOSC 001	3	Physical Geology	C E, PNG E, ENVSE, MNG E	ESCI 221	4	

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MATH 140	4	Calculus and Analytic Geometry I	ALL	MATH 161/163	4/5		
MATH 141	4	Calculus and Analytic Geometry II		MATH 211	4		
MATH 220	2	Matrices	ALL except B E, CH E, PNG E, ENENG	MATH 322	4		
MATH 230	4	Calculus and Vector Analysis	ALL except C E, ENVSE, MNG E	MATH 311	4		
MATH 251	4	Ordinary and Partial Differential Equations	ALL	MATH 365/467	3/3		
M E 201/300	3	Introduction to Thermal Science/ Engineering Thermodynamics I	ALL except CH E, CMPEN, E E, E SC, MNG E and ENENG	No Equivalent			
PHYS 211	4	General Physics (Mechanics)	ALL	PHYS 231	5		
PHYS 212	4	General Physics (Electricity and Magnetism)		PHYS 232	5		
PHYS 213	2	Fluids & Thermodynamics	AERSP, E E, E SC, PNG E, MNG E	PHYS 334	4		
PHYS 214	2	Waves & Quantum Physics	ALL except B E, C E, I E, ENVSE, PNG E, MNG E, and ENENG	PHYS 233	3		
STAT 401/ 418	3	Experimental Methods/ Probability	C E, CMPEN, E E	MATH 335	3		
General Education Electives			ALL				
Arts Electives (GA)	6	e.g. Architecture, Art History, Integrative Arts, Landscape Architecture, Music, Theatre Arts					
Health (GHA)	3	Health Education and Exercise and Sport Activities		WELL 175	3		
Humanities Electives (GH)	6	e.g. American Studies, Classics, History, Humanities, Multi-Ethnic Studies, Philosophy, Religious Studies					
Social & Behavioral Science Elective (GS)	3	e.g. Anthropology, Human Development, Political Science, Psychology, Sociology	PNGE, MNG E, and ENENG require an ethics elective				

*** College of Engineering (EN) Majors:**

AERSP	Aerospace Engineering	E E	Electrical Engineering
B E	Biological Engineering	E SC	Engineering Science
BIOE	Bioengineering	I E	Industrial Engineering
CH E	Chemical Engineering	M E	Mechanical Engineering
C E	Civil Engineering	NUC E	Nuclear Engineering
CMPEN	Computer Engineering		

***College of Earth and Mineral Sciences (EMS) Majors:**

ENENG	Energy Engineering
ENVSE	Environmental Systems Engineering
MATSE	Material Science and Engineering
(PLMSE)	Polymer Science and Engineering
	Option of MATSE
MNG E	Mining Engineering
PNG E	Petroleum and Natural Gas Engineering