

Mohawk Valley Community College Engineering Science				SUNY Polytechnic Institute Nanoscale Engineering				
Course #	Course Title	SUNY Gen Ed	Credits Granted	Course #	Equivalent Course Title	SUNY Gen Ed	Credits Accepted	
CF 100	College Foundation Seminar		1	FYS 101	First Year Seminar		1	
CH141	General Chemistry 1	X	4	NENG 114/115	Chemical Principles of Nanoscale Science & Engineering I and Lab	X	4	
CI140	Computer Programming for Engineers and Scientists		3	NENG 202	Computer Programming		3	
EN101	English 1: Composition	X	3	ENG 101	English Composition	X	3	
ES151	Introduction to Engineering		2	NENG 101	Intro to Nanotechnology		2	
MA151	Calculus 1	X	4	MAT 151	Calculus I	X	4	
	Physical Education		5		Recreation Elective		5	
BM101	Core GE Social Science Elective (See "A" below)	X	3	SOS xxx	General Education-Social Science	X		
EN102	English 2: Ideas & Values in Literature	X	3	ENG 110	Intro to Literature	X	3	
ES175	Engineering Science Design		3	NENG 201	Engineering Design		3	
MA152	Calculus 2	X	4	MAT 152	Calculus II	X	4	
PH261	Engineering Physics 1	X	4	NENG 126/127	Physical Principles of Nanoscale Science & Engineering I and Lab	X	4	
	Physical Education		5		Recreation Elective		5	
ES271	Engineering Statics		3	ESC 210	Engineering Mechanics-Statics—Design & Skills		3	
ES291	Electrical Circuits 1		4	NENG 203	Circuits		4	
MA253	Calculus 3	X	4	MAT 253	Calculus III	X	4	
PH262	Engineering Physics 2	X	4	NENG 128/129	Physical Principles of Nanoscale Science & Engineering II and Lab	X	4	
PY101	Social Science Elective (See "A" below)	X	3	PSY 100	Introduction to Psychology	X	3	
	Physical Education		5		Recreation Elective		5	
MA260	Differential Equations		3	MAT 260	Ordinary differential equations & series solutions		3	
ES261	Mechanics of Materials		3	ESC 230	Mechanics of Materials—Design & Skills		3	
ES272	Engineering Dynamics		3	ESC 240	Engineering Mechanics-Dynamics-Design & Skills		3	
	Restricted Elective (See "B" below)	X	4	NENG 116/117	Chemical Principle of Nanoscale Science & Engineering II and Lab	X	4	
	Physical Education		5	Or NENG 140/141	Physical Principles of Nanoscale Science & Engineering III & Lab			
				NENG 301	Thermodynamics & Kinetics of Nanomaterials 3 NENG 304 – Fluid Mechanics and Transport Processes		3	
				NENG 302	Elec., Opt. and Mag. Props. of Nanomaterials		3	
				NENG 303	Mechanics of Nanomaterials		3	
					Gen Ed Elective		3 or 4	
					Unrestricted Elective or NNSE 397		3 or 4	
				NENG 304	Fluid Mechanics and Transport Processes		3	
				NENG 4XX	Concentration Elective		3	
				NENG 390	Capstone Research I: Intro. and Literature Review		3	
					Gen Ed or NENG 4XX Concentration		3 or 4	
				MAT 280	Linear Algebra		4	
				NENG 405	Micro and Nano Mat. Processing Technology		4	
				NENG 406	Fundamentals of Nanoelectronics		4	
				NENG 4XX	Concentration Elective		3	
				NENG 4XX	Concentration Elective		3	
				NENG 490/491	Capstone Research II: Team Research and Project Review		3	
				NENG 407	Thin Film and Nanomaterials Characterization		4	
				NENG 408	Industrial Nanomanufacturing		3	
				NENG 4XX	Concentration Elective		3	
				NENG 4XX	Concentration Elective		3	
				NENG 492/293	Capstone Research III: Team Research and Final Report		3	
			Total Credits Eligible for Transfer				67	
							Total Transfer Credits Applied to Program	64
							Total Credits Required after Transfer	56
							Total Credits Required for Degree	120

A.) Core GE Social Science Elective (choose two, one of which must be a bolded course): **AN 101, BM 101, PS 101, PY 101, SO 101, HI 101**

B.) Restricted Elective (choose one): CH 142 & PH 265.
SUNY Poly recommends to take **BOTH** courses, although the degree only allows room for one.