

## B.S. in Nanoscale Engineering Semester-by-Semester Major Academic Pathway (MAP)

Year	Fall	Credits	Spring	Credits
<b>1</b>	NENG/TENH 114 and 115 – Chem Principles of Nano Sci/Eng I <sup>1</sup>	3,1	NENG/NSCI 116 and 117 – Chem Principles of Nano Sci/Eng II <sup>1</sup>	3,1
	AMAT 112 or TMAT 118 – Calculus I	4	AMAT 113 or TMAT 119 – Calculus II	4
	NENG/NSCI 103– Economic Impacts of Nanotechnology <sup>3</sup>	3	NENG/NSCI 102/Z – Societal Impacts of Nanotechnology <sup>2,3</sup>	3
	NENG/NSCI 126 and 127 – Phys Principles of Nano Sci/Eng I <sup>1</sup>	3,1	NENG/NSCI 128 and 129 – Phys Principles of Nano Sci/Eng II <sup>1</sup>	3,1
			GE	3
		<b>15</b>		
<b>2</b>	AMAT 214 or TMAT 218 – Calculus of Several Variables	3	AMAT 311 – Differential Equations	3
	NENG/TENH 140 and 141 Phys Principles of Nano Sci / Eng <sup>1</sup>	3,1	NENG/TENH 202 – Intro to Computer Programming for Engineers	3
	NENG /TENH 203 – Nanoengineering Electronics	3	NENG/TENH 201 – Nanoengineering Design	3
	GE	3	GE	3
	GE/Elective	3	GE/Elective	3
		<b>16</b>		
<b>3</b>	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 4xx – Concentration Elective	3
	NENG 303 – Mechanics of Nanomaterials	3	NENG 390X – Capstone Research I: Intro. and Literature Review <sup>4</sup>	3
	GE	3	GE	3
	GE/Elective	3	GE/Elective	3
		<b>15</b>		
<b>4</b>	NENG 405 – Micro and Nano Mat. Processing Technology	4	NENG 407 – Thin Film and Nanomaterials Characterization	4
	NENG 406 – Fundamentals of Nanoelectronics	4	NENG 408 – Industrial Nanomanufacturing	3
	NENG 4xx – Concentration Elective	3	NENG 4xx – Concentration Elective	3
	NENG/NSCI 4xx – Topical Elective	3	NENG/NSCI 4xx – Topical Elective	3
	NENG 490 or 491 – Capstone Research II: Team Research and Project Review	3	NENG 492W or 493W – Capstone Research III: Team Research and Final Report	3
	NENG 498 – Seminar	1		
		<b>18</b>		
		<b>18</b>		

<sup>1</sup> May be applied towards GE natural science requirement	<sup>2</sup> Satisfies GE writing requirement
<sup>3</sup> Satisfies GE social science requirement	<sup>4</sup> Satisfies GE information literacy requirement