

ENGINEERING PHYSICS (EE) 2022-2023

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
MATH 1131Q – Calculus I	4	MATH 1132Q – Calculus II	4
CHEM 1127Q – General Chemistry I	4	CHEM 1128Q – General Chemistry II	4
PHYS 1501Q ¹ – Physics for Engineers I	4	PHYS 1502Q ¹ – Physics for Engineers II	4
ENGL 1010 or ENGL 1011 – Acad. Writing	4	Arts and Humanities Course ²	3
ENGR 1000 – Orientation to Engineering	<u>1</u>	CSE 1010 – Intro. To Computing for Engr.	<u>3</u>
	17		18

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
MATH 2110Q – Multivariable Calculus	4	MATH 2410Q – Differential Equations	3
PHYS 3101 – Mechanics I	3	ECE 2001 – Electric Circuits	4
PHYS 2501W ³ – Lab. in Electricity, Magnetism, & Mechanics	3	PHYS 2300 – Quantum Physics	3
CSE 2301 – Logic Design	4	STAT 3345Q – Probability Models Engineers	3
	<u>14</u>	PHIL 1104 – Philosophy and Social Ethics	<u>3</u>
			16

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
ECE 3201 – Elec. Circuit Design & Analysis	4	ECE 3111 – Systems Analysis	3
ECE 3101 – Signals and Systems	3	PHYS 3202 – Electricity and Magnetism II	3
PHYS 3201 – Electricity & Magnetism I	3	ECE 4111 – Communication Systems or ECE 4112 – Digital Comm. and Networks	3
MATH 2210Q – Linear Algebra	3	Social Sciences course ²	3
MATH 3410 – Diff. Eqns. for Appl.	<u>3</u>	Diversity and Multiculturalism course ²	<u>3</u>
	16		15

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
ECE 4901 – ECE Design I	2	ECE 4902 – ECE Design II	3
ECE 3223 – Optical Engineering	3	ECE 3225 – Optical Engineering Laboratory or PHYS 4150 – Optics	3
PHYS 3300 – Statistical/Thermal Physics	3	ECE 4211 – Micro/Optoelectronic Devices	3
PHYS 3401 – Intro. Quantum Mechanics ⁴	3	Diversity and Multiculturalism course ²	3
Social Sciences course ²	3	Elective	3
Elective	<u>3</u>		<u>15</u>
	17		

¹ Either the two-semester sequence of PHYS 1401Q-1402Q or the three-semester sequence of PHYS 1201Q-1202Q followed by PHYS 1230 or 1530 may be taken instead to satisfy this requirement. However, only eight credits of PHYS 1201-1202-1230/1530 can be used toward the required 126 credits for the Engineering degree.

² The courses from content areas one (Arts and Humanities) and two (Social Sciences) must be from four different departments. One course from either content area one (Arts and Humanities) or content area two (Social Sciences) may also be used to fulfill one of the requirements from content area four (Diversity and Multiculturalism). One course from content area four must be an international course.

³ **One additional W course must be taken**, typically as one of the content area courses.

⁴ Quantum mechanics for Engineers offered by the ECE department can be substituted.