

## Study Plan for Program Major (Petrochemical and Polymer Engineering)

Year	First Trimester	Credit	Second Trimester	Credit	Third Trimester	Credit
FRESHMAN	SCI02 1111 Fundamental Chemistry I	4	SCI03 1002 Calculus II	4	SCI03 1005 Calculus III	4
	SCI02 1112 Fundamental Chemistry Lab. I	1	SCI05 1001 Physics I	4	SCI05 1002 Physics II	4
	SCI02 1105 Calculus I	4	SCI05 1191 Physics Lab. I	1	SCI05 1192 Physics Lab. II	1
	IST20 1001 Digital Literacy	2	IST20 1003 Life Skills	3	IST20 1004 Citizenship and Global Citizens	3
	IST20 1002 Use of Application Programs for Learning	1	IST30 1102 English for Communication II	3	ENG31 1000 Engineering Materials I	2
	IST30 1101 English for Communication I	3	ENG85 1020 Computer Programming I	1	ENG35 1010 Engineering Workshop Skills	1
	ENG85 1010 Engineering Graphics I	2				
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>15</b>
SOPHOMORE	SCI02 1105 Organic Chemistry	3	ENG83 2004 Electrical Engineering	2	IST20 2002 Man, Economy and Development	3
	SCI02 1106 Organic Chemistry Laboratory	1	ENG83 2005 Electrical Engineering Lab	1	ENG83 2001 Principle of Polymerization I	4
	IST30 1103 English for Academic Purposes	3	ENG83 2006 Petrochemical and Pol. Eng. Thermo	4	ENG83 2002 Polymerization and Characterization Lab.	1
	ENG85 2030 Engineering Statics	3	ENG83 2111 Principles of Chemical Eng.	4	ENG83 2003 Experimental Design and Data Analysis	3
	ENG83 1001 Engineering Materials II	2	General Education Elective (1)	2	ENG83 2007 Computer Programming for Petrochemical and Polymer Engineers	2
	ENG83 2110 Petrochemical and Polymer Technology	3	General Education Elective (2)	2	ENG83 2008 Unit Operation I	4
	ENG85 2140 Engineering Graphics II	2				
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>17</b>
JUNIOR	IST30 1104 English for Specific Purposes	3	IST20 2001 Man, Society and Environment	3	ENG33 0403 Industrial Quality Control	4
	ENG33 0404 Engineering Economy	4	ENG83 3115 Polymer Rheology and Processing	4	ENG83 3119 Unit Operations II	4
	ENG83 3112 Structure and Properties of Polymers	4	ENG83 3116 Polymer Processing Laboratory	1	ENG83 3120 Unit Operations Laboratory	1
	ENG83 3113 Polymer Properties Testing Laboratory	1	ENG83 3117 Polymer Characterization	3	ENG83 3121 Polymer Additives	3
	ENG83 3114 Chemical Reaction Engineering	4	ENG83 3118 Catalysis	3	Technical Elective (2)	3
	Free Elective (1)	2	ENG83 4395 Pre-cooperative Education	1	Technical Elective (3)	3
			Technical Elective (1)	3		
	<b>Total</b>	<b>18</b>	<b>Total</b>	<b>18</b>	<b>Total</b>	<b>18</b>
SENIOR	IST30 1105 English for Careers	3	ENG83 4396 Cooperative Education I	8	Free Electives (2)	3
	ENG83 4122 Engineering Safety	2			Free Electives (3)	3
	ENG83 4123 Pollution Control for Petrochemical Industry	2			General Education Elective (4)	2
	ENG83 4124 Seminar	1				
	ENG83 4125 Petrochemical and Polymer Engineering Project	3				
	Technical Elective (4)	3				
	General Education Elective (3)	2				
	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>8</b>	<b>Total</b>	<b>8</b>

Total 183 Credits

## Study Plan for Program Major-Minor (Petrochemical and Polymer Engineering- Entrepreneur)

Year	First Trimester	Credit	Second Trimester	Credit	Third Trimester	Credit
FRESHMAN	SCI02 1111 Fundamental Chemistry I	4	SCI03 1002 Calculus II	4	SCI031005 Calculus III	4
	SCI02 1112 Fundamental Chemistry Lab. I	1	SCI05 1001 Physics I	4	SCI05 1002 Physics II	4
	SCI02 1105 Calculus I	4	SCI05 1191 Physics Lab. I	1	SCI05 1192 Physics Lab. II	1
	IST20 1001 Digital Literacy	2	IST20 1003 Life Skills	3	IST20 1004 Citizenship and Global Citizens	3
	IST20 1002 Use of Application Programs for Learning	1	IST30 1102 English for Communication II	3	ENG31 1000 Engineering Materials I	2
	IST30 1101 English for Communication I	3	ENG85 1020 Computer Programming I	1	ENG35 1010 Engineering Workshop Skills	1
	ENG85 1010 Engineering Graphics I	2				
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>15</b>
SOPHOMORE	SCI02 1105 Organic Chemistry	3	ENG83 2004 Electrical Engineering	2	IST20 2002 Man, Economy and Development	3
	SCI02 1106 Organic Chemistry Laboratory	1	ENG83 2005 Electrical Engineering Lab	1	ENG83 2001 Principle of Polymerization I	4
	IST30 1103 English for Academic Purposes	3	ENG83 2006 Petrochemical and Pol. Eng. Thermo	4	ENG83 2002 Polymerization and Characterization Lab.	1
	ENG85 2030 Engineering Statics	3	ENG83 2111 Principles of Chemical Eng	4	ENG83 2003 Experimental Design and Data Analysis	3
	ENG83 1001 Engineering Materials II	2	General Education Elective (1)	2	ENG83 2007 Computer Programming for Petrochemical and Polymer Engineers	2
	ENG83 2110 Petrochemical and Polymer Technology	3	General Education Elective (2)	2	ENG83 2008 Unit Operation I	4
	ENG85 2140 Engineering Graphics II	2				
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>17</b>
JUNIOR	IST30 1104 English for Specific Purposes	3	IST20 2001 Man, Society and Environment	3	ENG33 0403 Industrial Quality Control	4
	ENG33 0404 Engineering Economy	4	ENG83 3115 Polymer Rheology and Processing	4	ENG83 3119 Unit Operations II	4
	ENG83 3112 Structure and Properties of Polymers	4	ENG83 3116 Polymer Processing Laboratory	1	ENG83 3120 Unit Operations Laboratory	1
	ENG83 3113 Polymer Properties Testing Laboratory	1	ENG83 3117 Polymer Characterization	3	ENG83 3121 Polymer Additives	3
	ENG83 3114 Chemical Reaction Engineering	4	ENG83 3118 Catalysis	3	IST50 2403 Business Plan and Financing	3
	IST50 2401 Entrepreneurship and New Venture Creation	3	IST50 2402 Go-to-Market Strategies for Innovative Product and Service	2	Entrepreneurship Elective (2)	2
	Free Elective (1)	2	Entrepreneurship Elective (1)	2	Technical Elective (1)	3
	<b>Total</b>	<b>21</b>	<b>Total</b>	<b>18</b>	<b>Total</b>	<b>20</b>
SENIOR	IST30 1105 English for Careers	3	IST50 4413 Enterprise Cooperative Education or	8	Free Electives (2)	3
	ENG83 4122 Engineering Safety	2	IST50 4414 Enterprise Incubation		Free Electives (3)	3
	ENG83 4123 Pollution Control for Petrochemical Industry	2			Technical Elective (3)	3
	ENG83 4124 Seminar	1			Technical Elective (4)	3
	ENG83 4125 Petrochemical and Polymer Engineering Project	3			General Education Elective (4)	2
	IST50 3412 Pre-Enterprise Cooperative Education or Pre-Enterprise Incubation	1				
	Technical Elective (2)	3				
General Education Elective (4)	2					
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>8</b>	<b>Total</b>	<b>14</b>

Total 195 Credits