

**PROGRAM CHECKLIST: BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING**  
(applicable to students admitted starting First Semester of A.Y. 2014-2015)

Subject	No. of Units	Prerequisites	Class Hrs.	Lab Hrs.	Course Title
<b>1st Year 1st Sem</b>					
Math 17	5		5	0	Algebra & Trigonometry
Chem 16	5	Coreq Math 17/Math 11 or equiv	3	6	General Chemistry I
Eng 10	3		3	0	
Philo 1	3		3	0	
GE (MST)	3		3	0	
PE	(2)				
	<b>19</b>				
<b>1st Year 2nd Sem</b>					
Math 53	5	Math 17	5	0	Elementary Analysis I (Analytic Geometry, Calculus I)
Chem 17	5	Chem 16; Math 17/Math 14	3	6	General Chemistry II
Physics 71	4	Coreq Math 53	4	0	Elementary Physics I (Mechanics of particles, rigid bodies, and fluids)
Physics 71.1	1	to be taken with Physics 71	0	2	Elementary Physics I Laboratory
ChE 100	1	Chem 16	1	0	Introduction to the Chemical Engineering Profession
Comm 3	3		3	0	
PE	(2)				
	<b>19</b>				
<b>2nd Year 1st Sem</b>					
Math 54	5	Math 53	5	0	Elementary Analysis II (Calculus II)
Chem 28	3	Chem 17; Coreq Chem 28.1	3	0	Quantitative Inorganic Analysis
Chem 28.1	2	to be taken with Chem 28	0	6	Quantitative Inorganic Analysis Laboratory
Physics 72	4	Physics 71	4	0	Elementary Physics II (Electricity and Magnetism; Optics)
Physics 72.1	1	Physics 71.1; Coreq Physics 72	0	2	Elementary Physics II Laboratory
ChE 26	3	Math 53	2	3	Fundamentals of Programming for Chemical Engineers
PE	(2)				
NSTP	(3)				
	<b>18</b>				
<b>2nd Year 2nd Sem</b>					
Math 55	3	Math 54	3	0	Elementary Analysis III (Calculus III)
Chem 31	3	Chem 16; Coreq Chem 31.1	3	0	Elementary Organic Chemistry
Chem 31.1	2	to be taken with Chem 31	0	6	Elementary Organic Chemistry Laboratory
Physics 73	4	Physics 72	4	0	Elementary Physics III (Thermal Physics; Relativity; Quantum Mech.)
Physics 73.1	1	Physics 72.1; Coreq Physics 73	0	2	Elementary Physics III Laboratory
ChE 101	4	Chem 17, Math 53, ChE 100	3	3	Fundamentals of Chemical Engineering
PE	(2)				
NSTP	(3)				
	<b>17</b>				
<b>3rd Year 1st Sem</b>					
ChE 122	3	Math 55, ChE 101	3	0	Chemical Engineering Thermodynamics I
ES 1	2		0	6	Engineering Drawing
ES 11	3	Physics 71, Math 54	3	0	Statics of Rigid Bodies
ChE 106	3	ChE 26, Math 55, ChE 101	2	3	Mathematical Methods in Chemical Engineering
MatE 10	3	Physics 72	3	0	Engineering Materials
IE 3	3	3rd year standing	3	0	Introduction to Industrial Engineering
	<b>17</b>				
<b>3rd Year 2nd Sem</b>					
ChE 131	3	ChE 106	3	0	Transport Processes
ChE 123	3	ChE 106, ChE 122	3	0	Chemical Engineering Thermodynamics II
ChE 125	3	ChE 106, ChE 122, Chem 31	3	0	Chemical Reaction Engineering I
ES 12	3	ES 11	3	0	Dynamics of Rigid Bodies
EEE 1	4	Physics 72, ChE 106	3	3	Essentials of Electrical Engineering I
Kas 1	3		3	0	
	<b>19</b>				
<b>4th Year 1st Sem</b>					
Chem 154	3	ChE 123	3	0	Physical Chemistry II
ChE 132	3	ChE 106, ChE 123	3	0	Stagewise Operations
ChE 133	3	ChE 131	2	3	Heat & Mass Transfer Equipment Design
ChE 134	3	ChE 131	2	3	Momentum Transfer & Materials Handling Equipment Design
ES 13	3	ES 11	3	0	Mechanics of Deformable Bodies I
Fil 40	3		3	0	
	<b>18</b>				
<b>4th Year 2nd Sem</b>					
ChE 124	2	Chem 154, Chem 28, Chem 28.1, Chem 31	0	6	Chemical Engineering Thermodynamics Laboratory
ChE 126	3	ChE 125, ChE 131	3	0	Chemical Reaction Engineering II
ChE 135	2	ChE 133, ChE 134, ChE 125	0	6	Process Engineering Laboratory
ChE 140	3	ChE 125, ChE 132, ChE 133, ChE 134	2	3	Chemical Process Industries
ChE 150	3	Chem 31, ChE 125, ChE 134	3	0	Environmental Process Engineering
GE (AH)	3		3	0	
GE (MST)	3		3	0	
	<b>19</b>				
<b>5th Year 1st Sem</b>					
ChE 141	3	ChE 140	2	3	Plant Economics and Process Development
ChE 143	2	ChE 135, ChE 124	1	3	Chemical Engineering Research I
ChE 190	1	ChE 140	0	3	Plant Visit and Seminar
ChE 182	3	ChE 125, ChE 133, ChE 134	2	3	Chemical Process Dynamics and Control
Elective 1*	3		3	0	(Consult the list of qualified electives for the major tracks)
PI 100	3	senior standing	3	0	The Life and Works of Jose Rizal
GE (SSP)	3		3	0	
	<b>18</b>				
<b>5th Year 2nd Sem</b>					
ChE 142	3	ChE 141, ChE 150	1	6	Chemical Engineering Plant Design
ChE 144	2	ChE 143	0	6	Chemical Engineering Research II
Elective 2*	3		3	0	(Consult the list of qualified electives for the major tracks)
STS	3		3	0	
GE (AH)	3		3	0	
GE (SSP)	3		3	0	
GE (SSP)	3		3	0	
	<b>20</b>				
<b>Total No. of Units</b>	<b>184</b>				

\* Qualified Electives: ChE 153 (Industrial Pollution Control), ChE 171 (Introduction to Biochemical Engineering), ChE 174 (Biochemical Engineering Laboratory), ChE 197 (Special Topics), ChE 198 (Special Problems), EgyE 101 (Introduction to Energy Engineering)

NOTES: 1. RGEP courses in the MST domain must NOT be Physics 10, Chemistry 1 or Mathematics 2

2. As a requirement for graduation, all students are required to take the one (1) year NSTP in one of the ff. components: (a) Military Training Service (ROTC) - may be taken during the first year; (b) Civic Welfare Training Service (CWTS); (c) Literacy Training Service (LTS).