

B.S. CHEMICAL ENGINEERING* (Major in Sugar Technology)
(RGEF INCLUDED)
 EFFECTIVE ACADEMIC YEAR 2011-2012

FIRST YEAR

FIRST SEMESTER		UNIT	SECOND SEMESTER		UNIT
GE	(<i>Social Science and Philosophy</i>)	3	SUTC 185	Sugar Laws and Economics	2
CHEM 16	General Chemistry I	3	CHEM 17	General Chemistry II	3
CHEM 16.1	General Chemistry I Laboratory	2	CHEM 17.1	General Chemistry II Laboratory	2
ENG 1(AH)	<i>College English</i>	3	ENG 2(AH)	<i>College Writing in English</i>	3
MATH 17	Algebra and Trigonometry	5	MATH 36	Mathematical Analysis I	5
PI 10	<i>The Life and Works of Jose Rizal</i>	3	PHYS 3	<i>General Physics I</i>	3
P.E. 1	Foundations of Physical Fitness	(2)	MCB 1	General Microbiology	3
		19	P.E. 2	Sports	(2)
					21

SECOND YEAR

FIRST SEMESTER		UNIT	SECOND SEMESTER		UNIT
CHEM 32	Quantitative Inorganic Analysis	3	ChE 31	Introduction to Chemical Engineering	3
CHEM 32.1	Quantitative Inorganic Analysis Laboratory	2	CHEM 111	Physical Chemistry I	3
CHEM 40	Basic Organic Chemistry	3	ENSC 11	<i>Statics of Rigid Bodies</i>	3
CHEM 40.1	Basic Organic Chemistry Laboratory	1	MATH 38	Mathematical Analysis III	3
MATH 37	Mathematics Analysis II	5	GE	(<i>Social Science and Philosophy</i>)	3
PHYS 13	<i>General Physics II</i>	3	ENSC 10a	Engineering Graphics I	2
SPCM1(AH)	<i>Speech Communication</i>	3	NASC 5(MST)	<i>Environmental Biology</i>	3
P.E. 2	Sports	(2)	P.E. 2/3	Sports/Advanced Course	(2)
NSTP 1*	First Year Basic Course	(3)	NSTP 2*	First Year Basic Course	(3)
		21			19

THIRD YEAR

FIRST SEMESTER		UNIT	SECOND SEMESTER		UNIT
ChE 32	Industrial Stoichiometry	3	ChE 41	Chemical Process Industries	3
CHEM 111.1	Physical Chemistry I Lab.	2	ChE 142	Chemical Engineering Thermodynamics I	3
CHEM 112	Physical Chemistry II	3	ChE 149	Transport Phenomena	3
CHEM 160	Introductory Biochemistry	3	ChE 147	Applications of Fluid Dynamics in Chemical Engineering	3
EE 1	Basic Electrical Engineering	3	ENSC 13	Strength of Materials	3
ENSC 21	Mathematical Methods in Engineering	3	ChE 152	Separation Processes	3
ENSC 12	<i>Dynamics of Rigid Bodies</i>	3	ENSC 26	Computer Application in Engineering	3
		20			21

FOURTH YEAR

FIRST SEMESTER		UNIT	SECOND SEMESTER		UNIT
ChE 143	Chemical Engineering Thermodynamics II	3	GE	(<i>Arts and Humanities</i>)	3
ChE 145	Chemical Reaction Engineering	3	STAT 1	Elementary Statistics	3
ChE 153	Transfer Operations I	3	GE	(<i>Mathematics, Science & Technology</i>)	3
ChE 154	Transfer Operations II	3	ChE 192	Chemical Process Equipment Design	3
SUTC 148	Sugar Analysis & Factory Operations Control	3	SUTC 154	Field & Factory Operations and Processes	5
GE	(<i>Arts and Humanities</i>)	3	SUTC 181	Waste Management in the Sugar Industry	3
GE	(<i>Social Science and Philosophy</i>)	3			
		21			20

SUMMER

SUTC 200** or	Thesis or	3
SUTC 200a	Practicum	4
		3 or 4

FIFTH YEAR

FIRST SEMESTER		UNIT	SECOND SEMESTER		UNIT
ENG. 10	Writing of Scientific Paper	3	SUTC 193	Sugar Process Engineering and Plant Design	3
GE	(<i>Mathematics, Science & Technology</i>)	3	ENSC 10b	Engineering Graphics II	2
GE	(<i>Social Science and Philosophy</i>)	3	ChE 156	Unit Operations Laboratory II	2
SUTC 170	Instrumentation and Process Control Application to Sugar Industries	3	ChE 185	Chemical Engineering Laws, Ethics and Contracts	2
SUTC 171	Sugarcane By-Products Utilization and Surochemistry	3			9
ChE 155	Unit Operations Lab. I	2			
SUTC 200** or	Thesis or	3			
SUTC 200a	Practicum	2			
		19-20			

TOTAL UNITS = 194

* - May be substituted with CS or Literacy course

** - Maybe taken as early as the summer before the fifth year

***The student should enroll a 3-unit GE course on Philippine studies in any domain (AH/SSP/MST).**