

**Table 2b.**  
**NEW B.S. Degree in Chemical Engineering Science**

COURSE	TITLE	LT	LB	CR	COURSE	TITLE	LT	LB	CR
<b>First Year (Preparatory)</b>									
ENGL 001	Preparatory English I	15	5	8	ENGL 002	Preparatory English II	15	5	8
MATH 001	Preparatory Mathematics I	3	1	4	MATH 002	Preparatory Math II	3	1	4
PYP 001	Prep. Physical Sciences	2	0	2	PYP 002	Prep. Computer Sciences	0	2	1
PYP 003	University Study Skills	0	2	1	ME 003	Prep. Eng. Technology	0	2	1
PE 001	Preparatory Physical Educ I	0	2	1	PE 002	Preparatory Phys Educ II	0	2	1
		<b>20</b>	<b>10</b>	<b>16</b>			<b>18</b>	<b>12</b>	<b>15</b>

**Total credits required in Preparatory Program: 31**

**Second Year (Freshman)**

MATH 101	Calculus I	4	0	4	MATH 102	Calculus II	4	0	4
CHEM 101	General Chemistry I	3	4	4	CHEM 102	General Chemistry II	3	4	4
PHYS 101	General Physics I	3	3	4	PHYS 102	General Physics II	3	3	4
ENGL 101	An Intro to Academic Disc	3	0	3	ENGL 102	Introduction to Report Wr	3	0	3
ICS 103	Computer Programming in C	2	3	3	IAS 101	Practical Grammar	2	0	2
PE 101	Physical Education I	0	2	1	PE 102	Physical Education II	0	2	1
		<b>15</b>	<b>12</b>	<b>19</b>			<b>15</b>	<b>9</b>	<b>18</b>

**Third Year (Sophomore)**

CHE 201	Principles of Chem. Engg. I	3	2	3	CHE 202	Principles of Chem. Engg. II	2	2	2
CHEM 201	Organic Chemistry I	3	4	4	CHE 204	Transport Phenomena I	3	0	3
MATH 201	Calculus III	3	0	3	BIOL 233	Principles of Biology	2	3	3
ENGL 214	Academic & Professional C	3	0	3	MATH 202	Elementary Diff. Eq.	3	0	3
IAS 111	Belief and its Consequences	2	0	2	ME 205	Materials Science	2	3	3
		<b>14</b>	<b>6</b>	<b>15</b>	IAS 201	Writing For Prof. Needs	2	0	2
							<b>14</b>	<b>8</b>	<b>16</b>

**Fourth Year (Junior)**

CHE 300	Transport Phenomena II	3	0	3	CHE 306	Stagewise Separations	3	0	3
CHE 303	Chem. Engg. Thermo.	3	0	3	CHE 309	Chem. Engg Lab I	0	6	2
CHE 304	Transport Phenomena III	3	0	3	CHEM 323	Analytical Chemistry	2	4	3
CHEM 311	Physical Chemistry I	3	4	4	STAT 319	Probability & Stats. for Engrs.	2	3	3
CISE 301	Numerical Methods	3	0	3	IAS 301	Oral Communication Skills	2	0	2
IAS 212	Professional Ethics	2	0	2	GS XXX	General Studies Elective I	3	0	3
		<b>17</b>	<b>4</b>	<b>18</b>			<b>12</b>	<b>13</b>	<b>16</b>

**Summer Session**

CHE 399 Summer Training (0-0-0)

**Fifth Year (Senior)**

CHE 401	Process Dynamics and Control	3	0	3	CHE 495	Integrated Design Course	1	6	3
CHE 402	Kinetics & Reactor Design	3	0	3	CHE 409	Chem. Engg. Lab II	0	6	2
CHE 425	Process Design and Economics	3	0	3	CHE 4XX	Chem Engg Elective II	3	0	3
CHE 4XX	Chem. Eng. Elective I	3	0	3	XE XXX	Technical Elective II	3	0	3
XE XXX	Technical Elective I	3	0	3	GS XXX	General Studies Elective II	3	0	3
IAS 322	Human Rights in Islam	2	0	2			<b>10</b>	<b>12</b>	<b>14</b>
		<b>17</b>	<b>0</b>	<b>17</b>					

**Total credits required for degree program: 133**