



17. Structure of the Curriculum

a) Duration of the Program	Year: 4 years	Term: 8 terms
b) Admission Requirements	The applicants must have HSC or equivalent degree. Other terms and conditions are set or revised periodically by the appropriate authority	
c) Total Available Credit	162	
d) Total Minimum Credit Requirement to Complete the Program	157	
e) Total Class Weeks in a Term	14	
f) Minimum CGPA Requirements for Graduation	2.20	
g) Maximum Academic Years of Completion	6 Years (12 Terms)	
h) Area-wise Credit Distribution		

Area	Course Type	Number of Courses	Credits	Total Credits
Core/Compulsory Courses	Theory	43	100	132
	Sessional	32	26	
	Sessional*	2	0	
	Capstone Courses **	5	6	
General Education (GED) Courses***	Theory	11	25	30
	Sessional	5	5	
Optional/Elective Courses	Theory	0	0	0
	Sessional	0	0	
Total		98	162	162

*Co-Curricular and Extra-Curricular Activities (Non-credit course)

**Project, internship etc. courses

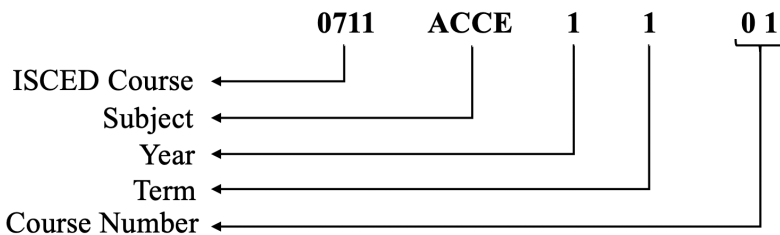
***18.5% from GED courses

i) Course Designation and Numbering System

Each Course is designated by: (a) a four-digit International Standard Classification of Education (ISCED) code, (b) a two to four-letters- word identifying the Subject, and (c) a four-digit number referring to the academic year, term and nature of the course with the following criteria:

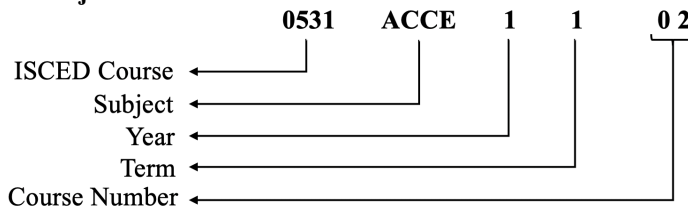
- The first four digits indicate the International Standard Classification of Education (ISCED) code for each field of study. For example, 0711 for Chemical Engineering, 0521 for Environmental Sciences, 0531 for Chemistry, etc.
- The fifth digit (the first digit after the letters) corresponds to the year the students take the course.
- The sixth digit (the second digit after the letters) corresponds to the term in which the students take the course.
- The seventh and eighth digits (the third and fourth digits after the letters) will define a course with the odd number indicating a theoretical course and the even number a sessional, dissertation, and Viva voce.
- An example of the courses designation system is as follows:

Theoretical Course



ISCED = International Standard Classification of Education Code, 0711 = Chemical Engineering, ACCE = Applied Chemistry and Chemical Engineering, 1 = Year, 1 = Term, 01 = Theory

Sessional Course/Thesis/Project/Viva voce



ISCED = International Standard Classification of Education, 0531 = Chemistry, ACCE = Applied Chemistry and Chemical Engineering, 1 = Year, 1 = Term, 02= Sessional/Thesis/ Project/ Viva voce



j) Course Types

The courses included in the undergraduate curriculum are divided into several groups as follows:

- i. **Core Courses:** A number of courses will be offered as Core courses which are mandatory for awarding a Degree.
- ii. **General Education Courses:** Interdisciplinary courses, beyond the Department/program, that provides a well-rounded learning experience to the students of an academic program.
- iii. **Capstone Courses:** Thesis/Project/ Internship/Portfolio/etc. (as applicable for the Department/academic program).

18. Year/Term-wise Distribution of Courses

Year I Term I		
Course Code	Course Title	Credits
0711 ACCE 1101	Chemical Technology I	3
0531 ACCE 1102	Inorganic Qualitative Analysis Sessional	1
0711 ACCE 1103	Introduction to Chemical Engineering	3
0531 ACCE 1104	Viva Voce	1
0531 ACCE 1105	Inorganic Chemistry I	2
0531 ACCE 1107	Physical Chemistry I	2
0531 ACCE 1109	Organic Chemistry I	2
0611 CSTE 1101	Computer Fundamentals	3
0611 CSTE 1102	Computer Fundamentals Sessional	2
0533 PHYS 1101	Optics and Properties of Matter	2
Total		21

Year I Term II		
Course Code	Course Title	Credits
0722 ACCE 1201	Chemical Technology II	2
0531 ACCE 1202	Organic Qualitative Analysis Sessional	1
0711 ACCE 1203	Material and Energy Balance	2
0531 ACCE 1204	Acidimetry and Alkalimetry Sessional	0.5
0531 ACCE 1205	Inorganic Chemistry II	2
0531 ACCE 1206	Oxidation-Reduction Titrations Sessional	1
0531 ACCE 1207	Physical Chemistry II	2
0531 ACCE 1208	Viva Voce	0.5
0531 ACCE 1209	Organic Chemistry II	2
0531 ACCE 1211	Analytical Chemistry	2
0541 MATH 1201	Differential and Integral Calculus	3
0533 PHYS 1201	Electricity and Magnetism	2
0533 PHYS 1202	Physics Sessional	1
Total		21



OBE Curriculum of ACCE

Year II Term I		
Course Code	Course Title	Credits
0722 ACCE 2101	Chemical Technology III	3
0531 ACCE 2102	Precipitation and Complexometric Titrations Sessional	1
0711 ACCE 2103	Fluid Mechanics	2
0531 ACCE 2104	Physical Chemistry Sessional	1
0531 ACCE 2105	Inorganic Chemistry III	2
0711 ACCE 2106	Engineering Drawing and Modeling Sessional	1
0531 ACCE 2107	Physical Chemistry III	2
0711 ACCE 2108	Fluid Mechanics Sessional	1
0531 ACCE 2109	Organic Chemistry III	2
0711 ACCE 2110	Industrial Training I	0.5
0711 ACCE 2111	Chemical Engineering Thermodynamics	3
0531 ACCE 2112	Viva Voce	0.5
0541 MATH 2101	Linear Algebra and Numerical Analysis	3
Total		22

Year II Term II		
Course Code	Course Title	Credits
0711 ACCE 2201	Fertilizer and Agrochemical Technology	2
0531 ACCE 2202	Conductometric and Potentiometric Titrations Sessional	1
0711 ACCE 2203	Heat Transfer	2
0531 ACCE 2204	Synthesis and Analysis of Inorganic Compounds Sessional	1
0531 ACCE 2205	Basic Electrochemistry	2
0711 ACCE 2206	Chemical Reaction Engineering Sessional	1
0711 ACCE 2207	Chemical Reaction Engineering	3
0711 ACCE 2208	Industrial Training II	0.5
0711 ACCE 2210	Viva Voce	0.5
0611 CSTE 2202	Computer Programming Sessional for Chemical Engineers	1
0714 EEE 2201	Electronics and Instrumentation	2
0311 ECO 2201	Industrial Economics	2
0541 MATH 2201	Ordinary and Differential Equation	2
Total		20



Year III Term I		
Course Code	Course Title	Credits
0711 ACCE 3101	Fuel Technology	2
0722 ACCE 3102	Manufacturing of Industrial Products Sessional	1
0711 ACCE 3103	Mass Transfer I	2
0531 ACCE 3104	Chromatographic Analysis Sessional	1
0531 ACCE 3105	Chromatographic Analysis	2
0722 ACCE 3106	Analysis of Industrial Products Sessional	1
0531 ACCE 3107	Applied Electrochemistry	2
0711 ACCE 3108	Heat Transfer Sessional	1
0711 ACCE 3109	Corrosion Engineering	3
0531 ACCE 3110	Viva Voce	0.5
0413 MGMT 3101	Industrial Management	2
0531 RM 3102	Research Methodology Sessional I	0.5
0542 STAT 3101	Statistics	2
Total		20

Year III Term II		
Course Code	Course Title	Credits
0723 ACCE 3201	Polymer Science and Technology	3
0531 ACCE 3202	Analysis of Water Sessional	1
0711 ACCE 3203	Mass Transfer II	2
0711 ACCE 3204	Material Science Sessional	1
0531 ACCE 3205	Instrumental Methods of Analysis I	2
0711 ACCE 3206	Mass Transfer Sessional I	0.5
0711 ACCE 3207	Metallurgy	3
0711 ACCE 3208	Industrial Training III	0.5
0916 ACCE 3209	Pharmaceutical Chemistry	2
0531 ACCE 3210	Project I	1
0711 ACCE 3211	Material Science and Engineering	2
0711 ACCE 3212	Viva Voce	0.5
0313 PSY 3201	Industrial Psychology and Ethics	2
0531 RM 3202	Research Methodology Sessional II	0.5
0031 COCU 3202	Co-curricular and Extra-Curricular Activities I	0
Total		21



OBE Curriculum of ACCE

Year IV Term I		
Course Code	Course Title	Credits
0722 ACCE 4101	Chemical Technology IV	2
0916 ACCE 4102	Pharmaceutical Sessional	0.5
0711 ACCE 4103	Mass Transfer III	3
0711 ACCE 4104	Mass Transfer Sessional II	1
0531 ACCE 4105	Instrumental Methods of Analysis II	3
0711 ACCE 4106	Internship on Process Unit Operations and Process Control Techniques	2
0521 ACCE 4107	Environmental Chemistry	2
0711 ACCE 4108	Project II	1
0916 ACCE 4109	Pharmaceutical Quality Assurance and Pharmaceutics	2
0711 ACCE 4110	Viva Voce	0.5
0711 ACCE 4111	Process Control and Process Safety	2
Total		19

Year IV Term II		
Course Code	Course Title	Credits
0722 ACCE 4201	Surface Coating Technology	3
0711 ACCE 4202	Chemical Engineering Simulation Software Sessional	1
0711 ACCE 4203	Process Design	3
0711 ACCE 4204	Internship at Industry	1
0916 ACCE 4205	Pharmaceutical Technology	2
0531 ACCE 4206	Project III	1
0712 ACCE 4207	Chemical Hazard and Environmental Waste Management	3
0711 ACCE 4208	Viva Voce	1
0711 ACCE 4209	Petroleum and Mining Engineering	3
0031 COCU 4202	Co-curricular and Extra-Curricular Activities II	0
Total		18