

## PROGRAMME STRUCTURE

\*denotes core module

### Level 1 Semester 1

Code	Module Description	Credits
*HMIE 111	Engineering Drawing	4
*HCHE 111	Principles of Chemical Engineering	4
*HGEN 114	Engineering Mathematics I	4
HGEN116	Business Communication	4
*HCHE 112	Physical Chemistry	4
HGEN 115	Introduction to computers and computer applications	4
HGEN 127	Electricity and magnetism	4

### Level 1 Semester 2

HGEN 126	Introduction to Computer Programming	4
HCHE 123	Materials science	4
*HCHE 124	Corrosion Chemistry	4
*HCHE 125	Chemical Engineering Thermodynamics I	4
*HCHE 126	Workshop Practice	4
*HGEN 124	Engineering Mathematics II (Prerequisite HGEN114)	4

### Level 2 Semester 1

*HCHE 211	Engineering Management	4
HCHE 212	Transport phenomena	4
HCHE 214	Chemical Engineering Thermodynamics II (Prerequisite HCHE 125)	4
*HCHE 213	Organic Synthesis	4
HMIE 221	Principles of Electrical Engineering	4
HMIE 213	Mineral Processing 1	4
*HGEN 214	Engineering Mathematics III (Prerequisite HGEN 124)	4

### **Level 2 Semester 2**

*HCHE 221	Chemical Reaction Engineering I	4
*HCHE 222	Analytical Chemistry	4
HCHE 223	Fluid Flow	4
HCHE 224	Mass Transfer Processes	4
HCHE 225	Mechanics	4
HCHE 226	Strength of materials	4
HGEN 224	Engineering Mathematics IV	4
HMIE 212	Innovation	4

### **Level 3 Semester 1**

*HCHE 311	Separation Processes	4
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*HCHE 316	Process Synthesis	4
*HCHE 312	Chemical Reaction Engineering II (Prerequisite HCHE 221)	4
HCHE 313	Heat Transfer	4
*HCHE 314	Chemical Engineering Laboratory	4
HCHE 315	Biochemical Engineering	4

### **Level 3 Semester 2**

*HCHE321	Plant and Equipment design	4
*HCHE 322	Process control	4
*HCHE 324	Reactor design	4
HCHE 325	Particulate technology	4
*HCHE 326	Health and Safety in Industrial plants	4
HMIE 321	Mineral Processing II	4

### **Level 4 Semesters 1 and 2**

#### **Work Related Learning**

*HCHE 401	Work Related Learning Report	15
*HCHE 402	Academic Supervisor's Report	15
*HCHE 403	Employer's Assessment Report	10

### **Level 5 Semester 1**

*HCHE 511	Professional Ethics and Practice	4
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\*HCHE 512 Project Management 4

\*HCHE 513 Chemical Plant Design Project 8

\*HCHE 516 Information systems for Chemical Engineers 4

### **Level 5 Semester 2**

\*HCHE 522 Industrial Organization and Management 4

\*HCHE 524 Dissertation 8

HCHE 525 Environmental Pollution Control 4

\*HCHE 526 Environment management and risk assessment 4

### **ELECTIVE MODULES**

#### **Choose ONE elective module**

HCHE 528 Polymer Technology 4

HCHE 529 Purification Processes 4

HCHE 523 Fuels and Energy 4