LEVEL 5 DIPLOMA IN CHEMICAL PROCESS TECHNOLOGY

Program Description

The Level 5 Diploma in Chemical Technology program prepares learners for careers in the chemical, petrochemical and process engineering sectors. The program provides learners with the knowledge, skills and competencies required for a successful career in chemical engineering and related sectors. It stresses the use of technology, information resources and engineering tools. The program equips learners with industrially recognized skills and competencies.

Program Learning Outcomes

Upon successful completion of this program, the graduates will be able to:

1. Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve process plant related problems appropriate to the Chemical Engineering Technology.
2. Demonstrate the ability to operate and maintain industrial processes and equipment while assisting with the engineering design of systems, components, or processes appropriate to the Chemical Engineering Technology.
3. Apply written, oral, and graphical communication in well-defined technical and non#technical environments while using pertinent technical literature.
4. Interpret the results of standard tests, measurements, and experiments.
5. Demonstrate commitment to professional, ethical, and social responsibilities and adherence to health and safety practices.
6. Develop self-management skills in order to function effectively as a member of a technical team.

Occupation and Industry Sector

Requirements

Completion Requirements

Students seeking the Level 5 Diploma in Chemical Technology qualification must successfully complete all mandatory core courses worth 90 credits.

Code	Title	Credit Hours
Chemical Technology Mandatory Core Courses		
Required Credits : 90		
CMT 101	Demonstrate knowledge of process safety fundamentals	3
CMT 203	Explore chemical reactors	3
CMT 208	Manage Unit Operations in the Process Industry	4
CMT 209	Reflect on Workplace Experiences and Outcomes	3
CMT 230	Perform practical training and support in chemical, refinery and process industries	4
CMT 100	Discover Fundamental chemistry	4
CMT 102	Interpret process instrumentation diagrams	2
CMT 104	Develop Chemical Laboratory Skills	3
CMT 105	Operate Analytical Instruments for Sample Analysis	4
CMT 200	Show the Operation of Heat Exchangers	3
CMT 202	Operate Physical Separation Equipment in a Production Process	4
CMT 204	Explore Petroleum Production	3
CMT 205	Manage Process Utilities	3
CMT 206	Use process control systems	4
CMT 207	Discover Fuels and Combustion Systems	4
MCT 111	Select instruments and sensors for measurement	3
MCT 211	Explore knowledge and skills of pumps and compressors	2
CMT 103	Recognise pipes and valves	2
ECT 211	Develop leadership skills in work environment	2
GED 100	Develop English language skills	3
HSE 100	Explore Health, Safety and Environment at Workplace	2
MAT 100	Apply geometry and trigonometry and solve algebraic equations	4
MCT 100	Perform basic machining	4
MCT 102	Discover Fluid Mechanics	2
MCT 110	Interpret and Prepare Technical Drawings	3
MCT 124	Explore heat transfer and thermodynamics	4
MCT 200	Interpret and document technical information	2
MCT 220	Produce CAD technical drawings	2
MCT 214	Explore 3D printing technologies in engineering	2
MCT 216	Develop knowledge of work organization and management	2

Description	Data
Total Required Credits	90
Program Code	DPCHT
Major Code	CHT

Ideal Study Plan

Recommended Sequence of Study
Level 5 Diploma in Chemical Technology

Year 1

Semester 1		Credit Hours
MAT 100	Apply geometry and trigonometry and solve algebraic equations	4
GED 100	Develop English language skills	3
MCT 110	Interpret and Prepare Technical Drawings	3
MCT 100	Perform basic machining	4
HSE 100	Explore Health, Safety and Environment at Workplace	2
CMT 100	Discover Fundamental chemistry	4
	Credit Hours	**20**
Semester 2		
CMT 101	Demonstrate knowledge of process safety fundamentals	3
MCT 124	Explore heat transfer and thermodynamics	4
CMT 102	Interpret process instrumentation diagrams	2
MCT 102	Discover Fluid Mechanics	2
CMT 103	Recognise pipes and valves	2

CMT 105	Operate Analytical Instruments for Sample Analysis	4
CMT 104	Develop Chemical Laboratory Skills	3
	Credit Hours	**20**
Year 2		
Semester 3		
CMT 200	Show the Operation of Heat Exchangers	3
MCT 211	Explore knowledge and skills of pumps and compressors	2
MCT 111	Select instruments and sensors for measurement	3
MCT 200	Interpret and document technical information	2
ECT 211	Develop leadership skills in work environment	2
MCT 220	Produce CAD technical drawings	2
MCT 214	Explore 3D printing technologies in engineering	2
CMT 202	Operate Physical Separation Equipment in a Production Process	4
CMT 203	Explore chemical reactors	3
	Credit Hours	**23**
Semester 4		
CMT 204	Explore Petroleum Production	3
CMT 205	Manage Process Utilities	3
CMT 206	Use process control systems	4
CMT 208	Manage Unit Operations in the Process Industry	4
MCT 216	Develop knowledge of work organization and management	2
CMT 207	Discover Fuels and Combustion Systems	4
CMT 209	Reflect on Workplace Experiences and Outcomes	3
CMT 230	Perform practical training and support in chemical, refinery and process industries	4
	Credit Hours	**27**
	Total Credit Hours	**90**