Curriculum

COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
General Education Requirements: 24 Credit Hours					
ARL 101(A)	Communication Skills in Arabic I	ENG 200	English II	FWS 205	UAE and GCC Society
ISL 100	Islamic Culture	FWS 310	Fundamentals of Innovation and Entrepreneurship	FWS 305	Technical Communications for the work place
MTT 102	Calculus I	STT 100	General Statistics		
Degree Requirements: 39 Credit Hours					
MTT 200	Calculus II	MTT 201	Calculus III	MTT 204	Introduction to Linear Algebra
MTT 205	Differential Equations	PHY 102	Physics and Engineering Applications I	PHY 102 L	Physics and Engineering Applications I Lab
PHY 201	Physics and Engineering Applications II	PHY 201 L	Physics and Engineering Applications II Lab	CHE 205	General Chemistry I
CHE 201L	Chemistry Lab	CME 200	Introduction to Chemical Engineering	CSC 201	Structured Programming
COE 202	Engineering Ethics, Law and Economy	COE 102	Introductory Big Data Analytics	COE 101	Introductory Artificial Intelligence
Major Requirements: 58 Credit Hours					
CHE 206	General Chemistry II	CHE 206L	General Chemistry II Lab	CHE 305	Organic Chemistry
CHE 330	Physical Chemistry	MEC 300	Materials Science	CME 210	Principles of Chemical Engineering
CME 220	Chemical Engineering Thermodynamics I	CME 300	Chemical Engineering Thermodynamics II	CME 301	Mass Transfer
CME 305	Modeling and Simulation in Chemical Engineering (With Embedded Lab)	CME 212	Fluid Mechanics for Chemical Engineers	CME 320	Chemical Engineering Laboratory I
CME 321	Process Dynamics and Control	CME 331	Chemical Reaction Engineering	CME 341	Heat Transfer
CME 400	Separation Processes	CME 430	Chemical Engineering Laboratory II	CME 450	Process Design
CME 398	Internship I	CME 399	Internship II	CME 455	Industrial Software for Chemical Engineers
CME 498	Capstone Design Project I	CME 499	Capstone Design Project II		
Major and Open Electives: 15 Credit Hours					
ME1	Major Elective I	ME2	Major Elective II	ME 3	Major Elective III
OE1	Open Elective I	OE 2	Open Elective II		
Chemical Engineering Electives / Themes* *A student in BSc. in ChME program will satisfy the 15 cr. hrs of Electives in 2 ways: 3 courses (9 credit hours) from the Major Elective courses and 2 Open Elective courses (6 credit hours) OR 5 courses (15 credit hours) from the Major Elective courses.					
Gas Processing and Petrochemicals					
CME 460	Natural Gas Processing	CME 461	Petroleum Refining Processes	CME 462	Chemical Process Industries
CME 463	Corrosion Engineering	CME 464	Chemical Process Safety	CME 465	Process Heat Transfer
Polymer Materials					
CME 470	Introduction to Polymer Science and Engineering	CME 472	Polymer Properties, Testing and Characterization	CME 471	Polymer Chemistry and Reaction Engineering
CME 473	Polymer Processing and Material Design				
Water Treatment					
CME 480	Physical and Chemical Processes for Water and Wastewater treatment	CME 481	Desalination Technologies	CME 482	Sludge Treatment
CME 483	Industrial Wastewater Treatment	CME 484	Industrial Water Pollution & Control		
Biotechnology					
CME 490	Chemical Engineering Biology	CME 491	Biochemical Engineering	CME 492	Biochemical Treatment
CME 493	Biofuels Technology				

BACHELOR OF SCIENCE IN

CHEMICAL ENGINEERING

جامعة أبوظبي
Abu Dhabi University
College of Engineering

ABET Engineering Accreditation Commission

Program Overview

B.Sc in Chemical Engineering

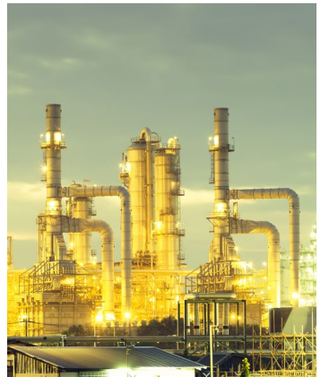
Chemical engineering (ChE) is the branch of engineering that deals with the conversion of raw materials to useful products by applying the principles of science and engineering. It involves the design, operation, and maintenance of facilities ranging from refineries, petrochemical, pharmaceutical plants, and nuclear-waste processing plants, to food and materials processing facilities.

Graduates of the program will be able to

- Design, analyze, and test wide-ranging solutions for state-of-the-art chemical engineering systems and processes
- Evaluate all aspects of modern chemical engineering systems
- Apply modern practical techniques to areas of chemical engineering technology
- Diagnose problems and develop a variety of solutions
- Apply hands-on experience and ideas in a variety of real-life situations
- Integrate professional responsibility and ethics in the workplace

According to Forbes, chemical engineering was the highest paying job in 2016. Graduate Chemical Engineers are in high demand throughout the world with roles including operatioon of plants, troubleshooting manufacturing processes, and research to develop new and improved manufacturing processes.

Our students have taken up internships in a wide range of companies including Abu Dhabi Ports, ADCO, ADGAS, Al Masaood Oil & Gas, Arab Geotech Laboratories, Bureau Veritas, Gulf Laboratory, Masder Institue, Schlumberger, Union Chemicals Factory, Worley Parsons and others.



Student's Testimonial

MY DREAM BECAME A REALITY AT ADU

Noora Al Mansoori - Alumna, BSc. in Chemical Engineering

As a graduate from ADU, I was exposed to high-quality education and hands-on experience. The state-of-the-art Chemical Engineering laboratories include a plethora of cutting-edge technology and advanced equipment that simulate the real-industrial experience. As a result, the students gain not just theoretical knowledge, but also high-level practical skills that are essential for a Chemical Engineer. I owe my success to the esteemed Chemical Engineering faculty members who imparted their vast knowledge and wisdom through their exceptional teaching. In addition, they encourage the students to work on novel research and motivate us to dive deep into innovative ideas. Being a Chemical Engineer means that we have opportunities in various industries since it is a very broad major that incorporates numerous sectors. The knowledge and skills I have gained from my education at ADU has paved the way for my professional career. I work in academia as a Teaching Assistant in Chemical Engineering at ADU and I am currently pursuing my Master's degree in Chemical Engineering.

Career Prospects

Graduates of the Chemical Engineering program can work in a variety of sectors including the oil and gas industry, petrochemicals, materials (aluminum, steel, plastics), water desalination, food and drinking water industry, electronics industry, pharmaceuticals, and the cosmetics industry. Chemical Engineers can work as Project Engineers, Design Engineers, Operations Engineers, Research and Development (R&D), Product Engineers, Quality Control Engineers, Sales and Marketing Engineers, and Health and Safety Engineers.