



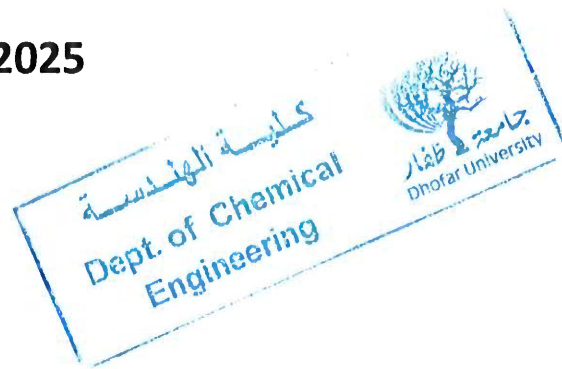
Dhofar University

College of Engineering

Department of Chemical Engineering

**Bachelor of Science in Chemical Engineering
Plan of Study**

September 2025



Bachelor Study Plan

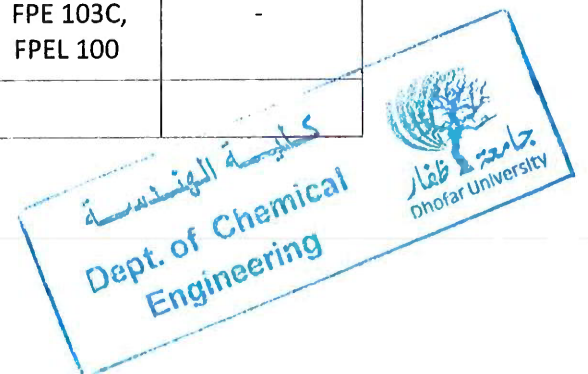
1- Program Statistics by Course Category

Course Category	No. of Courses	Credit Hours	Percentage of Total Credit Hours
University Requirements	9	27	19.57%
College Requirements	11	30	21.74%
Program Major Requirements	26	66	47.82%
Program Elective Courses	6	12	8.6%
General Elective	1	3	2.17%
Total	53	138	

2- Classification of Requirements

2.1 University Requirements

Course Code	Course Title	Credit Hours	Prerequisite	Co-requisite
ARAB 101	Academic Writing in Arabic	3	FPE 103C, FPEL 100	-
ENGL 101	Basic Academic English	3	FPE 103C	-
ENGL 102E	English for Engineering and Sciences I	3	ENGL 101	-
ENGL 203E	English for Engineering and Sciences II	3	ENGL 102E, ENGL 102C	-
ENGL 204	Advanced English for Academic Purposes and Research	3	ENGL 203E	-
ENGL 305	Advanced English Language and Communication Skills	3	ENGL 204	-
ENTR 200	Entrepreneurship: Innovation and Creativity	3	ENGL 203E	-
MATH 199	Calculus I	3	FPE 103C, FPM 101A, FPM 102B	-
SOCS 102	Omani Society	3	FPE 103C, FPEL 100	-
Total Credits		27		



2.2 College Requirements

Course Code	Course Title	Credit Hours	Prerequisite	Co-requisite
EECE 130	Computers and Programming I	3	FPE 103C, FPM 102B, FPT 102B	-
ENGR 100	Introduction to Engineering	3	FPE 103C, FPM 102B, FPT 102B	-
ENGR 105	Engineering Graphics	2	FPE 103C	-
ENGR 110	Engineering Workshop	1	FPE 103C, FPM 101A, FPM 102B	-
ENGR 300	Engineering Economy	3	ENGR 100, MATH 199	-
MATH 200	Calculus II	3	MATH 199	-
MATH 205	Calculus III	3	MATH 200	-
MATH 210	Differential Equations	3	MATH 200	-
MATH 250E	Probability and Statistics	3	MATH 200	MATH 200
MATH 335	Mathematics for Science and Engineering	3	MATH 205, MATH 210	-
PHYS 170	Fundamentals of Physics I	3	MATH 199, MATH 103	MATH 199
Total Credits		30		

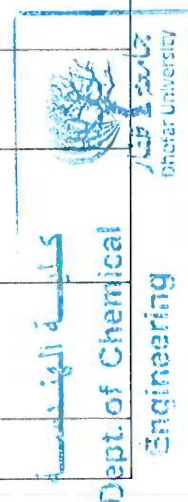
2.3 Program Major (Compulsory) Requirements

Course Code	Course Title	Credit Hours	Prerequisite	Co-requisite
CHEM 140	Chemistry I	3	FPE 103C, FPM 102B, FPT 102B	
CHEM 140L	Introductory Chemistry Laboratory	1	CHEM 140	CHEM 140
CHEM 180	Chemistry II	3	CHEM 140	
CHEM 210	Organic Chemistry I	3	CHEM 180	
CHEM 250	Organic Chemistry II	3	CHEM 210	
CHEM 250L	Organic Chemistry Laboratory	1	CHEM 250	CHEM 250



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Engineering

CHEM 260	Analytical Chemistry	3	CHEM 180	
CHEM 370	Physical Chemistry for Engineers	3	CHEM 180, MATH 200	
CHEE 201	Principles of Chemical Engineering	3	CHEM 140, MATH 199	
CHEE 208	Instrumentation	3	PHYS 170, CHEM 180	
CHEE 270	Fluid Mechanics for Chemical Engineers	3	PHYS 170, MATH 200	
CHEE 270L	Fluid Mechanics Laboratory	1	CHEE 270	CHEE 270
CHEE 275	Thermodynamics for Chemical Engineers	3	MATH 200, CHEM 140	
CHEE 280	Mass Transfer	3	CHEE 201, MATH 200	
CHEE 300	Computational Methods in Chemical Engineering	3	EECE 130, MATH 210	
CHEE 310	Reactive Process Engineering	3	CHEE 275, CHEE 201	
CHEE 330	Materials Science	3	PHYS 170, CHEM 180	
CHEE 340	Introduction to Biotechnology	3	CHEM 250	
CHEE 380	Heat Transfer	3	CHEE 270, MATH 210	
CHEE 370	Chemical Process Safety and Hazards Management	3	CHEE 310	
CHEE 410	Separation Processes	3	CHEE 280, CHEE 275, CHEE 310	
CHEE 420	Chemical Engineering Process Design	3	CHEE 310, CHEE 410	
CHEE 470	Chemical Process Dynamics and Control	3	MATH 210, CHEE 300, CHEE 420	
CHEE 401	Final Year Project I	0	Senior Standing (Completed 90+ Crs)	
CHEE 402	Final Year Project II	3	CHEE 401	



CHEE 400	Practical Training	0	Senior Standing (Completed 90+ Crs)
Total Credits		66	

2.4a Program Elective Courses

Course Code	Course Title	Credit Hours	Prerequisite	Co-requisite
CHEE 450	Materials Engineering	3	CHEE 330, CHEE 430	
CHEE 455	Introduction to Nanotechnology	3	CHEE 330, CHEE 430	
CHEE 460	Computational Engineering	3	CHEE 300	
CHEE 465	Fundamentals of Natural Gas Processing	3	CHEE 370	
CHEE 475	Chemical Reactor Design	3	CHEE 300, CHEE 310	
CHEE 480	Biochemical Engineering	3	CHEE 340	
CHEE 485	Fuel Cell Technology	3	CHEE 275, CHEE 330	
CHEE 487	Polymer Engineering	3	CHEM 250	
CHEE 488	Instrumentation and Process Control	3	CHEE 470	
CHEE 489	Pharmaceutical Biotechnology	3	CHEE 340	
CHEE 490	Renewable Energy	3	CHEE 275	
CHEE 495	Wastewater Treatment	3	CHEE 330	
Total Credits		9		

2.4b Program Elective Laboratories

Course Code	Course Title	Credit Hours	Prerequisite	Co-requisite
CHEE 311L	Reactive Process Engineering Laboratory	1	CHEE 310	
CHEE 341L	Biotechnology Laboratory	1	CHEE 340	
CHEE 411L	Separation Processes Laboratory	1	CHEE 410	
CHEE 421L	Chemical Engineering Process Design Laboratory	1	CHEE 420	
CHEE 476L	Chemical Reactor Design Laboratory	1	CHEE 475	
CHEE 486L	Fuel Cell Laboratory	1	CHEE 485	
CHEE 487L	Polymer Engineering Laboratory	1	CHEE 487	
CHEE 311L	Reactive Process Engineering Laboratory	1	CHEE 310	



Total Credits	3		
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2.5 General Elective Courses

Course Code	Course Title	Credit Hours	Prerequisite	Co-requisite
XXX 000	General Elective	3	As per course	-
Total Credits		3		

3- Plan of Study

Year 1				
Course Code	Course Title	Credit Hours	Prerequisite	University/ College/Major/Elective requirements
<i>Fall</i>				
SOCS 102	Omani Society	3	FPE 103C, FPEL 100	U
ENGL 101	Basic Academic English I	3	FPE 103C	U
MATH 199	Calculus I	3	FPE 103C, FPM 101A, FPM 102B	U
CHEM 140	Chemistry I	3	FP	M
CHEM140L	Introductory Chemistry Laboratory	1	CHEM 140	M
ENGR 105	Engineering Graphics	2	FPE 103C	C
Total Credits		15		
<i>Spring</i>				
EECE 130	Computers and Programming I	3	FPE 103C, FPM 102B, FPT 102B	C
CHEM 180	Chemistry II	3	CHEM 140	M
ENGL 102E	English for Engineering and Sciences I	3	ENGL 101	U



ENGR 100	Introduction to Engineering	3	FPE 103C, FPM 102B, FPT 102B	C
MATH 200	Calculus II	3	MATH 199	C
ENGR 110	Engineering Workshop	1	FPE 103C, FPM 101A, FPM 102B	C
Total Credits		16		
<i>Summer</i>				
ENGL 203E	English for Engineering and Sciences II	3	ENGL 102E, ENGL 102C	U
MATH 250E	Probability and Statistics	3	MATH 200	C
Total Credits		6		

Year 2				
Course Code	Course Title	Credit Hours	Prerequisite	University/ College/Major/ Elective requirements
<i>Fall</i>				
CHEE 270	Fluid Mechanics for Chemical Engineers	3	PHYS 170, MATH 200	M
CHEM 260	Analytical Chemistry	3	CHEM 180	M
PHYS 170	Fundamentals of Physics I	3	MATH 199, MATH 103	C
CHEE 275	Thermodynamics for Chemical Engineers	3	MATH 200, CHEM 140	M
CHEE 201	Principles of Chemical Engineering	3	CHEM 140, MATH 199	M
CHEM 210	Organic Chemistry I	3	CHEM 180	M
Total Credits		18		
<i>Spring</i>				
CHEE 270L	Fluid Mechanics Laboratory	1	CHEE 270	M
ENTR 200	Introduction to Entrepreneurship	3	ENGL 203E	U
CHEE 208	Instrumentation	3	PHYS 170, CHEM 180	M



CHEM 370	Physical Chemistry for Engineers	3	CHEM 180, MATH 200	M
CHEE 280	Mass Transfer	3	CHEE 201, MATH 200	M
CHEM 250	Organic Chemistry II	3	CHEM 210	M
CHEM 250L	Organic Chemistry Laboratory	1	CHEM 250	M
Total Credits		17		
<i>Summer</i>				
MATH 210	Differential Equations	3	MATH 200	C
MATH 205	Calculus III	3	MATH 200	C
Total Credits		6		

Year 3				
Course Code	Course Title	Credit Hours	Prerequisite	University/College/Major/Elective requirements
<i>Fall</i>				
CHEE 300	Computational Methods in Chemical Engineering	3	EECE 130, MATH 210	M
CHEE 380	Heat Transfer	3	CHEE 270, MATH 210	M
MATH 335	Mathematics for Science and Engineering	3	MATH 205, MATH 210	C
ENGL 204	Advanced English for Academic Purposes and Research	3	ENGL 203E	U
CHEE 330	Materials Science	3	PHYS 170, CHEM 180	M
CHEE 340	Introduction to Biotechnology	3	CHEM 250	M
Total Credits		18		
<i>Spring</i>				
CHEE 310	Reactive Process Engineering	3	CHEE 275, CHEE 201	M
ENGR 300	Engineering Economy	3	ENGR 100, MATH 199	C



CHEE 470	Chemical Process Dynamics and Control	3	MATH 210, CHEE 300, CHEE 420	M
ENGL 305	Advanced English Language and Communication Skills	3	ENGL 204	U
CHEE XXX	Major Elective Laboratory -1	1	As per selected lab	E
CHEE XXX	Major Elective Laboratory -2	1	As per selected lab	E
CHEE XXX	Major Elective-1	3	As per selected elective	E
Total Credits		17		
<i>Summer</i>				
CHEE 400 Practical Training		0		M
Total Credits		0		

Year 4				
Course Code	Course Title	Credit Hours	Prerequisite	University/ College/Major/Elective requirements
<i>Fall</i>				
CHEE 401	Final Year Project I	0	Senior Standing (Completed 90+ Crs)	M
CHEE 410	Separation Process Engineering	3	CHEE 280, CHEE 275, CHEE 310	M
CHEE 420	Chemical Engineering Process Design	3	CHEE 310, CHEE 410	M
CHEE XXX	Major Elective-2	3	As per selected elective	E
ARAB 101	Academic Writing in Arabic	3	FPE 103C, FPEL 100	U
CHEE 370	Chemical Process Safety and Hazards Management	3	CHEE 310	M
Total Credits		15		
<i>Spring</i>				



CHEE 402	Final Year Project II	3	CHEE 401	M
CHEE XXX	Major Elective-3	3	As per selected elective	E
XXX 000	General Elective	3	As per selected course	E
CHEE XXX	Major Elective Laboratory -3	1	As per selected lab	E
Total Credits		10		

Total Program Credit Hours 138



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