



Chemical & Water Desalination Engineering Program

Study Plan Booklet

Academic Year 2021-2022

Semester by Semester Study Plan	_____	Page 1
Flow Chart Study Plan	_____	Page 2
Technical Electives List	_____	Page 3
University Electives List	_____	Page 4



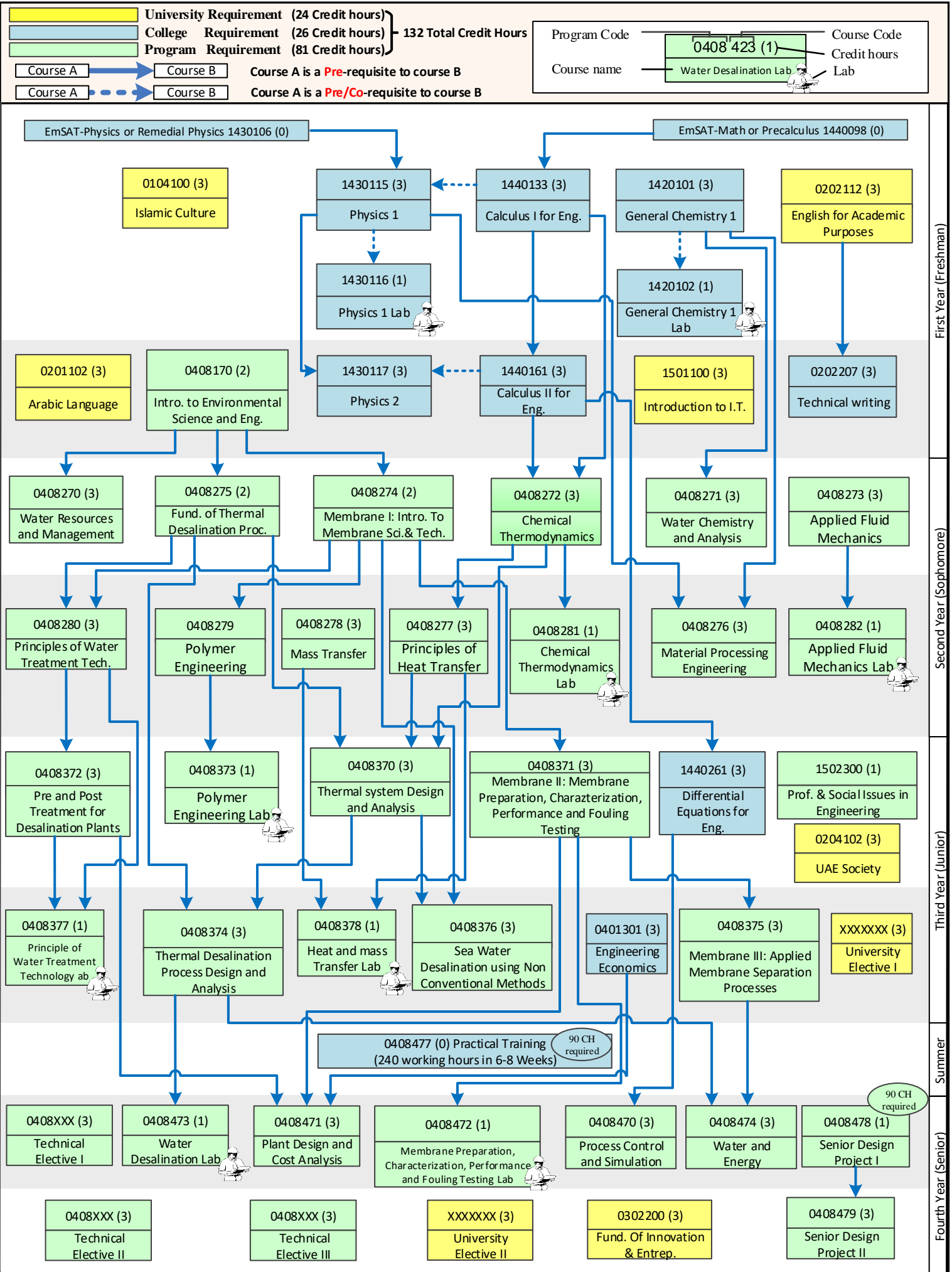
Chemical & Water Desalination Program

Academic Year 2021-2022

Semester-by-semester Study Plan

Freshman Year					
First Semester			Second Semester		
0104100	Islamic Culture	3	0202102	Arabic Language	3
0202112	English for Academic Purposes	3	1501100	Introduction to I.T.	3
1430115	Physics 1	3	1440161	Calculus II for Engineering	3
1430116	Physics 1 Lab	1	0202207	Technical Writing	3
1420101	General Chemistry (1)	3	1430117	Physics 2	3
1440133	Calculus I for Engineering	3	0408170	Intro. to Environmental Sci. & Eng.	2
1420102	General Chemistry I Lab	1			
	Total Credit Hours	17		Total Credit Hours	17
Sophomore Year					
Third Semester			Fourth Semester		
0408270	Water Resources and Management	3	0408276	Material Processing Engineering	3
0408271	Water Chemistry and Analysis	3	0408277	Principles of Heat Transfer	3
0408272	Chemical Thermodynamics	3	0408278	Mass Transfer	3
0408273	Applied Fluid Mechanics	3	0408279	Polymer Engineering	3
0408274	Membrane I	2	0408280	Principles of Water Treatment Tech.	3
0408275	Fund. of Thermal Desalination Proc.	2	0408281	Chemical Thermodynamics (Lab)	1
			0408282	Applied Fluid Mechanics (Lab)	1
	Total Credit Hours	16		Total Credit Hours	17
Junior Year					
Fifth Semester			Sixth Semester		
0204102	UAE Society	3	xxxxxxx	University Elective I	3
1440261	Differential Equations for Eng.	3	0401301	Engineering Economics	3
0408370	Thermal Sys. Design and Analysis	3	0408374	Thermal Desal. Proc. Design & Analysis	3
0408371	Membrane II	3	0408375	Membrane III	3
0408372	Pre & Post Treat. for Desal. Plants	3	0408376	Sea Wat. Desal. using Non-Conv. Methods	3
0408373	Polymer engineering lab	1	0408377	Principles of Water Treatment Tech. (Lab)	1
1502300	Prof. & Social Issues in Engineering	1	0408378	Heat and mass Transfer (Lab)	1
	Total Credit Hours	17		Total Credit Hours	17
Summer Semester					
	0408477	Practical Training (240 working hours in 6 - 8 weeks)			0
Senior Year					
Seventh Semester			Eighth Semester		
0408470	Process Control and Simulation	3	0408479	Senior Design Project II	3
0408471	Plant Design and Cost Analysis	3	0408xxx	Technical Elective II	3
0408472	Membrane (Lab)	1	0408xxx	Technical Elective III	3
0408473	Water Desalination Lab	1	0302200	Fund. of Innovations & Entrepreneur	3
0408474	Water and Energy	3	xxxxxxx	University Elective II	3
0408478	Senior Design Project I	1			
0408xxx	Technical Elective I	3			
	Total Credit Hours	15		Total Credit Hours	15
TOTAL CREDIT HOURS = 131					

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List of Technical Electives

#	Course Code	Course Name	Credit Hours	Pre-requisite
1	0408480	Renewable Energy Desalination	3	-
2	0408481	Hybrid Desalination Processes	3	-
3	0408482	Modeling & Simulation of Multi-Stage Flash Desalination	3	-
4	0408483	Membrane Distillation	3	-
5	0408484	Pressure Retarded Osmoses (PRO) Membranes	3	-
6	0408485	Nanotechnology for Water Treatments and Desalination	3	-
7	0408486	Nuclear Desalination	3	-
8	0408487	Special Topic	3	-



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List of University Electives

Important Notes:

1. This document is only for students who were first enrolled at the university in Fall 2021 onward.
2. You must select one course only from each of the below 2 groups of courses. If you select two courses from the same group, only one course will be considered for you.

Group 1			
#	Course Code	Course Name	Credit Hours
1	0103103	Islamic System	3
2	0104130	Analytical Biog of the Prophet	3
3	0201140	Intro. to Arabic Literature	3
4	0202130	French Language	3
5	0203100	Islamic Civilization	3
6	0203102	History of the Arabian Gulf	3
7	0203200	Hist of Sciences among Muslims	3
8	0206102	Fundamentals/Islamic Education	3
9	0206103	Introduction to Psychology	3
10	0302150	Intro.to Bus for Non-Bus	3
11	0308131	Personal Finance 3	3
12	0308150	Intro to Economics (Non-B)	3
13	0602246	Human Rights in Islam	3
14	0700310	Intro to Islamic Art & Design	3
15	0710109	Arts and Medicine	3
16	0800107	Media in Modern Societies	3
17	0900107	History of Medical and H.Sc.	3

Group 2			
#	Course Code	Course Name	Credit Hours
1	0401142	Man and The Environment	3
2	0503101	Health and Safety	3
3	0505101	Fitness and Wellness	3
4	0507101	Health Awareness and Nutrition	3
5	1430101	Astro & Space Sciences	3
6	1450100	Biology and Society 3	3
7	1502233	Artificial Intelligence	3