Table 5-1 Curriculum

Chemical Engineering Program (Total 142 credits)

		Subject Area (Credit Hours)				
Course (Department, Number, Title) List all courses in the program by term starting with first term of the first year and ending with the last term of the final year.	Indicate whether course is Required, Elective or a Selected Elective by an R, an E or an SE.[1]	Math & Basic Sciences	Engineering Topics; Check if Contains Significant Design (√)	Other	Last Two Terms the Course was Offered: Year and Semester (or Quarter)	Maximum Section Enrollment for the Last Two Terms the Course was Offered[2]
1st semester year 1						
89510064 Wisdom of BUU	R			3	1st -2025, 1st-2024	253, 268
89510264 Happiness and Values of Life	SE			2	1st -2025, 1st-2024	256, 179
89520464 English for Communication	R			3	1st -2025, 1st-2024	77, 78
30212164 Engineering Mathematics I	R	3			1st -2025, 2nd-2024	68, 62
30810264 Introductory Physics for Engineering	R	3			1st -2025, 1st-2024	79, 71
50210164 Chemistry for Engineering	R	3			1st -2025, 2nd-2024	163, 200
50210264 Chemistry Laboratory for Engineering	R	1			1st -2025, 1st-2024	36, 40
50211164 Introduction to Chemical Engineering Foundation	R		2		1st -2025, 1st-2024	106, 90
2nd semester year 1						
89520364 Creative Activities	R			2	2nd-2024, 2nd -2023	55, 64
89520664 Experiential English	R			3	2nd-2024, 2nd -2023	68, 74
30212264 Engineering Mathematics II	R	3			2nd-2024, 2nd -2023	50, 50
30810464 General Physics for Engineering	R	3			2nd-2024, 2nd -2023	84, 80
50210464 Analytical Chemistry and Instruments	R	3			2nd-2024, 2nd -2023	95, 90
50210364 Cell and Molecular Biology for Engineers	R	3			2nd-2024, 2nd -2023	95, 90
50310164 Engineering Drawing	R		3		2nd-2024, 2nd -2023	76, 88
1st semester year 2						

[1] **Required** courses are required of all students in the program, **Elective** courses (often referred to as open or free electives) are optional for students, and **Selected Elective** courses are those for which students must take one or more courses from a specified group.

[2] For courses that include multiple elements (lecture, laboratory, recitation, etc.), indicate the maximum enrollment in each element. For Selected Elective courses, indicate the maximum enrollment for each option.

		Subject Area (Credit Hours)				
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89510664 Appreciation of Arts for a Happy Life	SE			2	1st -2025, 1st-2024	417, 462
89520864 Thai Language Skills for Careers in Contemporary Society	R			2	1st -2025, 1st-2024	271, 148
89530064 Opportunities and Challenges for Future Careers	R			2	1st -2025, 1st-2024	275, 217
30222164 Engineering Mathematics III	R	3			1st -2025, 1st-2024	62, 70
50220164 Organic and Bio-organic Chemistry	R	3			1st -2025, 1st-2024	90, 90
51410164 Computer Programming for Engineering	R		3		1st -2025, 1st-2024	40, 40
50221164 Mass and Energy Balance	R		3		1st -2025, 1st-2024	105, 90
50222164 Chemical Engineering Thermodynamics I	R		3		1st -2025, 1st-2024	90, 90
2nd semester year 2						
89510464 Food for Health	SE			2	2nd-2024, 2nd -2023	318, 304
89520264 Thinking Process for Understanding Oneself and Others	R			2	2nd-2024, 2nd -2023	37, 36
50220264 Chemistry Laboratory for Chemical Engineering	R	1			2nd-2024, 2nd -2023	25, 30
50221264 Mathematics for Chemical Engineering	R	3			2nd-2024, 2nd -2023	90, 50
50223164 Fluid Mechanics for Chemical Engineering	R		3		2nd-2024, 2nd -2023	90, 80
50232164 Chemical Engineering Thermodynamics II	R		3		2nd-2024, 2nd -2023	70, 51
50010164 Engineering Mechanics	R		3		2nd-2024, 2nd -2023	80, 70
50430164 Fundamental of Electrical Engineering	R		3		2nd-2024, 2nd -2023	40, 27
1st semester year 3						
895xxxxx General Education from Group 1 Knowledge in real-life working (Technology and Management) (No.1)	SE			2		
895xxxxx General Education from Group 1 Knowledge in real-life working (Technology and Management) (No.2)	SE			2		
50223264 Heat Transfer for Chemical Engineering	R		3		1st -2025, 1st-2024	70, 60
50233164 Mass Transfer	R		3		1st -2025, 1st-2024	75, 60
50236164 Chemical Engineering Economics and Project Management	R		3		1st -2025, 1st-2024	75, 50

		Subject Area (Credit Hours)				
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50237164 Engineering Materials and Selections	R		3		1st -2025, 1st-2024	80, 60
50237264 Chemical Process Safety and Risk Assessment	R		3		1st -2025, 1st-2024	70, 50
2nd semester year 3						
895xxxxx General Education from Group2 : Interdisciplinary	SE			3		
50234164 Chemical Engineering Kinetics and Reactor Design	R		3		1st-2025, 2nd -2024	30, 60
50235164 Unit Operations Laboratory I	R		1		2nd-2024, 2nd -2023	30, 35
50236264 Chemical Engineering Equipment Design	R		3		2nd-2024, 2nd -2023	65, 51
50236364 Process Dynamics and Control	R		3		2nd-2024, 2nd -2023	78, 53
50247164 Environmental Chemical Engineering	R		3		1st-2025, 2nd-2024	54, 62
50030064 Pre-cooperative Education	R		1		2nd-2024, 2nd -2023	64, 55
xxxxxxxx Free Elective	E			3		
Summer semester year 3						
50239164 Chemical Engineering Experience Training	R		1		Summer-2024, Summer-2023	61, 41
1st semester year 4						
50245164 Unit Operations Laboratory II	R		1			
50246164 Chemical Engineering Process and Plant Design	R		3		2nd-2024, 1st-2025	21, 29
502xxx64 Professional Chemical Engineering Elective Course	SE		3		2nd-2024, 1st-2025	
502xxx64 Professional Chemical Engineering Elective Course	SE		3		2nd-2024, 1st-2025	
50249164 Chemical Engineering Project I	R		1		1st-2025, 2nd-2024	29, 24
xxxxxxxx Free Elective	E			3		
2nd semester year 4						
502xxx64 Professional Chemical Engineering Elective Course	SE		3			
50249264 Chemical Engineering Project II	R		2		1st-2025, 2nd-2024	14, 43
50249464 Capstone Project for Chemical Engineering	R		2		1st-2025, 2nd-2024	25, 30
TOTALS (in terms of semester credit hours)		32 hours	74 hours	36 hours		

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Minimum Semester Credit Hours		30 hours	45 hours			
Total must satisfy minimum credit hours						