

Chemistry Curriculum
Four-year Academic Plan
Digital/Business Foundation



جامعة الملك فهد للبترول والمعادن
King Fahd University of Petroleum & Minerals

Freshman Year

Course	Title	LT	LB	Cr	Course	Title	LT	LB	Cr
CHEM 101	Principles of Chemical Science I	3	3	4	CHEM 102	Principles of Chemical Science II	3	4	4
ENGL 101	Intro. to Academic Discourse	3	0	3	ICS 104	Intro. to Programm. In Python & C	2	3	3
MATH 101	Calculus I	4	0	4	MATH 102	Calculus II	4	0	4
PE 101	Health and Physical Education I	0	2	1	PHYS 102	General Physics II	3	3	4
PHYS 101	General Physics I	3	3	4	IAS 121	Language Foundation	2	0	2
Total					Total				
13					14				
8					10				
16					17				

Sophomore Year

Course	Title	LT	LB	Cr	Course	Title	LT	LB	Cr
CHEM 201	Organic Chemistry I	3	0	3	CHEM 204	Organic Chemistry II	3	0	3
CHEM 202	Organic Chemistry Laboratory	0	4	1	CHEM 212	Physical Chemistry I: Chemical Thermodynamics	3	0	3
CHEM 221	Quantitative Chemical Analysis	2	0	2	CHEM 213	Chemical Thermodynamics Lab.	0	4	1
CHEM 222	Quantitative Chemical Analysis Lab.	0	4	1	ENGL 214	Academic & Professional Comm.	3	0	3
ENGL 102	Intro. to Report Writing	3	0	3	XXX xxx	Math/STAT Elective	3	0	3
MATH 201	Calculus III	3	0	3	IAS 111	Belief & Its Consequences	2	0	2
BUS 200	Business & Entrepreneurship	3	0	3	Total				
Total					Total				
14					14				
8					4				
16					15				

Junior Year

Course	Title	LT	LB	Cr	Course	Title	LT	LB	Cr
CHEM 311	Physical Chemistry II: Kinetics and Spectroscopy	3	0	3	CHEM 305	Organic Syn. and Chara. Lab	0	8	2
CHEM 312	Kinetics and Spectroscopy Lab	0	4	1	CHEM 363	Biochemistry	3	0	3
CHEM 335	Fund. of Inorg. Chem.	3	0	3	CHEM 336	Adv. Inorganic Chem.	2	0	2
ISE 291	Intro. to Data Science	3	0	3	CHEM 337	Inorganic Syn & Charac. Lab	0	4	1
IAS 212	Ethics and Governance	2	0	2	COE 292	Intro. to Artificial Intelligence	3	0	3
CHEM 324	Instrumental Chem. Analysis	3	0	3	XE xxx	Technical Elective I	3	0	3
CHEM 325	Instru. Chem. Analysis Lab	0	4	1	CGS 392	Career Essentials	0	2	1
Total					Total				
14					11				
8					14				
16					15				

Summer Session

CHEM 399	Summer Training	0	0	0
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Senior Year

Course	Title	LT	LB	Cr	Course	Title	LT	LB	Cr
CHEM xxx	Chemistry Elective I	3	0	3	CHEM 458	Materials Chemistry	3	0	3
XE xxx	Engineering Elective	3	0	3	CHEM 459	Material Synth. Char. Lab	0	4	1
CHEM 488	Undergraduate Research	0	8	2	CHEM 479	Chemistry Seminar	1	0	1
GS xxx	GS Elective	3	0	3	XE xxx	Technical Elective II	3	0	3
XXX xxx	Free Elective	3	0	3	CHEM xxx	Chemistry Elective II	3	0	3
Total					Total				
12					12				
8					4				
14					13				

Total Credit Hours 122