BSc in Chemistry and Biological Chemistry (CHEM)

AY2025 - 2026 Intake onwards FYP with Professional Internship

		Number of Academic Units (AU)								
Programme	Year of	Major Re	quirement	Interdisci	plinary Collaborati	Broadening and				
	Study	Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)	Deepening Electives (BDE)	Total		
	1	18/19*		6			9	33/34*		
Chemistry and	2	22		8	3	3	2	38		
Biological	3	18	6		3		8	35		
Chemistry	4		16		10			26		
	Total	58/59*	22	14	16	3	19	132/133*		

ategory	and Biological Chemistry (CHEM)	AU	Total AU
	Common Core (University-level)	7.0	Totalito
	CC0001 Inquiry & Communication in an Interdisciplinary World	2	
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	ML0004 Career Design & Workplace Readiness in the V.U.C.A World	2	
	CC0015 Health & Wellbeing	2	14
	_	3	
	CC0006 Sustainability: Society, Economy & Environment	_	
nterdisciplinary	CC0007 Science & Technology for Humanity	3	
Collaborative			
Core (ICC)	Professional Series (College-level)		
	HW0218 Communication Across the Sciences	2	
	PS0002 Introduction to Data Science and Artificial Intelligence	3	16
	CM4081 Professional Internship	10	
	MLXXXX Profession Preparation		
	XXXXXX Care, Serve, Learn (University-level)	3	3
	CUERA Como		T
	CHEM Core	4	
	CM1001 Foundations of Chemistry I	4	
	CM1002 Foundations of Chemistry II	4	
	CB1102 Introduction to Chemistry, Chemical and Biomedical Engineeri	1	
	MH1802 Calculus for the Sciences	4	
	CM1804 Mathematics for Chemistry	2	
	PH1011 Physics or PH1012* Physics A	3/4*	
	CM2011 Analytical and Bioanalytical Chemistry	3	
	CM2021 Inorganic and Bioinorganic Chemistry	3	
	CM2061 Chemistry & Biological Chemistry Laboratory 1	3	
	CM2031 Organic and Bioorganic Chemistry	3	58/59
Major	CM2041 Physical and Biophysical Chemistry 1	3	30/33
•	CM2062 Chemistry & Biological Chemistry Laboratory 2	3	
Requirement	CB2002 Introduction to Chemical and Biological Safety	1	
	PS0001 Introduction to Computational Thinking	3	
	CM3011 ^{&} Chemical Spectroscopy and Applications	3	
	CM3041 ^{&} Physical and Biophysical Chemistry 2	3	
	CM3062 Chemistry & Biological Chemistry Laboratory 4	3	
	CM3031 ^{&} Organic Reaction Mechanisms and Synthesis	3	
	CM3021 ^{&} Organometallic Chemistry	3	
	CM3061 Chemistry & Biological Chemistry Laboratory 3	3	
	CHEM Major Prescribed Electives (MPE)		1
	CM4080 Honours Project 1	10	
	4 x MPEs	12	22
	and the first (DDF)	•	10
oadening and D	eepening Electives (BDE)		19
otal			132/13

^{*}Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).

 $^{^{\&}amp;}$ CM3011, CM3021. CM3031, CM3041 are offered in both semesters.

Suggested	mistry and Biological Chemistry) Study Plan for AY2025-2026 intake						
FYP with Pr	rofessional Internship						
Year 1 Sem	iester 1			Year 1 Sen	nester 2		
Course		Туре	AU	Course		Type	AU
CM1001	Foundations of Chemistry I	С	4	CM1002	Foundations of Chemistry II	С	4
MH1802	Calculus for the Sciences	С	4	CM1804	Mathematics for Chemistry	С	2
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	С	1	PH1011/	Physics <u>or</u>	С	3
CC0001	Inquiry & Communication in an Interdisciplinary World	СС	2	PH1012*	Physics A (For students without 'A' Level Physics)	С	4
CC0015	Health & Wellbeing	СС	2	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 1	BDE	3		BDE 2 BDE 3	BDE BDE	3
HW0001	Introduction to Academic Communicati	ion [#]				-	
			16				17/18
# for studen	nts who have not cleared QET						
Year 2 Sem Course	iester 1	Tvpe	AU		nester 2	Tvpe	AU
	Analytical and Bioanalytical				Control of the state of the sta		
CM2011	Chemistry			CM2031			3
CM2021	Inorganic and Bioinorganic Chemistry	С	3	CM2041		С	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	С	3	CM2062	Laboratory 2	С	3
PS0001	Introduction to Computational Thinking	С	3	CB2002	Introduction to Chemical and Biological Safety	С	1
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	СС	2	PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
CC0006	Sustainability: Society, Economy & Environment	СС	3	CC0007	Science & Technology for Humanity	CC	3
	BDE 4	Year 2 Semester 2 Course Type Inic Chemistry C 3 CM2031 Organic and Bioorganic Chemistry C Chemistry C Bichemistry C 3 CM2041 Physical and Biophysical Chemistry 1 C Chemistry C Biological Chemistry C C C C C C C C C C C C C C C C C C C	3				
			19				19
Year 3 Sem	nester 1			Year 3 Sen	nester 2		
Course		Tvpe	AU		ieste. 2	Tvpe	AU
CM3xxx ^{&}	CHEM-Core	_	_		CHFM-Core	_	3
CM3xxx ^{&}	CHEM-Core			CM2xxx&			3
CM3062	Chemistry & Biological Chemistry				Chemistry & Biological Chemistry		3
Al sayay	Laboratory 4 Profession Preparation	DC	1	U\\/0210	•	DC	2
MLxxxx	BDE 5			UM0710			3
	BDE 6	BDE	3			MPE	3
	BDE 7	BDE	2		CHEM MPE2	IVIFE	5
			18				17
	- 4			Y A Com			
Year 4 Sem	iester 1	-	***	Year 4 Sen	nester 2	T	
Course	- C	Type	AU	Course		Type	AU
CM4081	Professional Internship	PS	10	CM4080	Honours Project 1	MPE	10
					CHEM MPE3	MPE	3
ĺ					CHEM MPE4	MPE	3
			10				16
					Total (AU)		132/1

This study plan is meant as a guide.

*Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).

[&]amp; CM3xxx refers to CM3011, CM3021, CM3031, CM3041 - These courses are offered in both semesters

BSc in Chemistry and Biological Chemistry (CHEM)

AY2025 - 2026 Intake onwards

FYP with Professional Attachment

		Number of Academic Units (AU)									
	Year of	Major Re	quirement	Interdiscip	linary Collabo	Broadening					
Programme	Study	Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)		Total			
	1	18/19*		6			9	33/34*			
Chemistry and	2	22		8	3	3		36			
Biological	3	18			8		9	35			
Chemistry	4		22				6	28			
	Total	58/59*	22	14	11	3	24	132/133*			

Category	•	AU	Total AU
•	Common Core (University-level)		
	CC0001 Inquiry & Communication in an Interdisciplinary World	2	
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	ML0004 Career Design & Workplace Readiness in the V.U.C.A World	2	
	CC0015 Health & Wellbeing	2	14
	CC0006 Sustainability: Society, Economy & Environment	3	
nterdisciplinary	CC0007 Science & Technology for Humanity	3	
Collaborative	,		
Core (ICC)	Professional Series (College-level)		
00.0 (.00)	HW0218 Communication Across the Sciences	2	
	PS0002 Introduction to Data Science and Artificial Intelligence	3	
	CM4082 Professional Attachment	5	11
	MLXXXX Profession Preparation	1	
	INILAAAA PIOIESSIOII PIEparatioii	1	
	XXXXXX Care, Serve, Learn (University-level)	3	3
	CHEM Core		
	CM1001 Foundations of Chemistry I	4	
	CM1002 Foundations of Chemistry II	4	
	CB1102 Introduction to Chemistry, Chemical and Biomedical Engineering	1	
	MH1802 Calculus for the Sciences	4	
	CM1804 Mathematics for Chemistry	2	
	PH1011 Physics or PH1012* Physics A	3/4*	
	CM2011 Analytical and Bioanalytical Chemistry	3	
	CM2021 Inorganic and Bioinorganic Chemistry	3	
	CM2061 Chemistry & Biological Chemistry Laboratory 1	3	
	CM2031 Organic and Bioorganic Chemistry	3	F0/F0*
	CM2041 Physical and Biophysical Chemistry 1	3	58/59*
Major	CM2062 Chemistry & Biological Chemistry Laboratory 2	3	
Requirement	CB2002 Introduction to Chemical and Biological Safety	1	
	PS0001 Introduction to Computational Thinking	3	
	CM3011 ^{&} Chemical Spectroscopy and Applications	3	
	CM3041 ^{&} Physical and Biophysical Chemistry 2	3	
	CM3062 Chemistry & Biological Chemistry Laboratory 4	3	
	CM3031 ^{&} Organic Reaction Mechanisms and Synthesis	3	
	CM3021 ^{&} Organometallic Chemistry	3	
	CM3061 Chemistry & Biological Chemistry Laboratory 3	3	
	, , ,		
	CHEM Major Prescribed Electives (MPE)		
	CM4080 Honours Project 1	10	22
	4 x MPEs	12	
	Dooponing Floatives (RDF)		24
roadening and	Deepening Electives (BDE)		24

^{*}Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).

 $^{^{\&}amp;}$ CM3011, CM3021. CM3031, CM3041 are offered in both semesters.

p.sci. (Chei	mistry and Biological Chemistry)						
Suggested	Study Plan for AY2025-2026 intake						
FYP with Pr	rofessional Attachment						
Year 1 Sem	nester 1	Tuna	A11	Year 1 Sen	nester 2	Tura	AU
Course CM1001	Foundations of Chemistry I	Type C	<u>AU</u> 4	Course CM1002	Foundations of Chemistry II	Type C	4
MH1802	Calculus for the Sciences	C	4	CM1804	Mathematics for Chemistry	C	2
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	С	1	PH1011/	Physics <u>or</u>	С	3
CC0001	Inquiry & Communication in an Interdisciplinary World	СС	2	PH1012*	Physics A (For students without 'A' Level Physics)	С	4
CC0015	Health & Wellbeing	СС	2	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 1	BDE	3		BDE 2 BDE 3	BDE BDE	3 3
HW0001	Introduction to Academic Communicati	ion [#]			BDL 3	DDL	3
			16	-			17/18*
[#] for studen	its who have not cleared QET						
Year 2 Sem	nester 1	_		Year 2 Sen	nester 2	_	
Course	And the land Birms I was	Туре	AU	Course		Туре	AU
CM2011	Analytical and Bioanalytical Chemistry	С	3	CM2031	Organic and Bioorganic Chemistry	С	3
CM2021	Inorganic and Bioinorganic Chemistry	С	3	CM2041	Physical and Biophysical Chemistry 1	С	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	С	3	CM2062	Chemistry & Biological Chemistry Laboratory 2	С	3
PS0001	Introduction to Computational Thinking	С	3	CB2002	Introduction to Chemical and Biological Safety	С	1
CC0006	Sustainability: Society, Economy & Environment	CC	3	PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	СС	2	CC0007	Science & Technology for Humanity	CC	3
	Neddiness in the Violes Viola			XXXXXX	Care, Serve, Learn	CSL	3
			17				19
Year 3 Sem	nester 1			Year 3 Sen	nester 2		
Course	icate: 1	Туре	AU	Course	10310. 2	Type	AU
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core		3
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core		3
CM3062	Chemistry & Biological Chemistry Laboratory 4	С	3	CM3061	Chemistry & Biological Chemistry	С	3
MLxxxx	Profession Preparation	PS	1	HW0218	Laboratory 3 Communication Across the Sciences	PS	2
	BDE 4 BDE 5	BDE BDE	3 3		BDE 6	mistry 1 C cistry C cand PS manity CC CSL Type C C cistry C ciences PS BDE PS	3
	552 3	DDL	3	Year 3 Spe	cial Sem		
				CM4082	Professional Attachment	PS	5
			16				19
Year 4 Sem	nester 1	_		Year 4 Sen	nester 2	_	
Course	CUENANADEA	Туре	AU	Course	Harris Burk 1.5	Type	AU
	CHEM MPE1	MPE	3	CM4080	Honours Project 1	MPE	10
	CHEM MPE2	MPE	3		BDE 8	BDE	2
l	CHEM MPE3	MPE	3		BDE 9	BDE	2
1	CHEM MPE4	MPE BDE	3 2				
	BDE 7						
	BUE /		14				14

This study plan is meant as a guide.

*Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).

& CM3xxx refers to CM3011, CM3021, CM3031, CM3041 - These courses are offered in both semesters

BSc in Chemistry and Biological Chemistry (CHEM)

AY2025 - 2026 Intake onwards with Professional Internship

		Number of Academic Units (AU)								
	Year of	Major Re	quirement	Interdisci	olinary Collabo	Broadening				
Programme	Study	Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)	and Deepening Electives (BDE)	Total		
	1	18/19*		6			9	33/34*		
Chemistry and	2	22		8	3	3		36		
Biological	3	18			3		17	38		
Chemistry	4		12		10		3	25		
	Total	58/59*	12	14	16	3	29	132/133*		

BSc in Chemistry and Biological Chemistry (CHEM)

	y and Biolog	rical Chemistry (CHEM)		ı			
Category	1		AU	Total AU			
	CC0001 Inc	2					
		hics & Civics in a Multi-Cultural World	2				
		areer Design & Workplace Readiness in the V.U.C.A World	2	14			
		ealth & Wellbeing	2				
		stainability: Society, Economy & Environment	3				
Interdisciplinary	CC0007 Sci	ience & Technology for Humanity	3				
Collaborative		10 1 10 11 11					
Core (ICC)		al Series (College-level)					
		ommunication Across the Sciences	2				
		roduction to Data Science and Artificial Intelligence	3	16			
		rofessional Internship	10				
	MLXXXX Pr	1					
	XXXXXX Ca	re, Serve, Learn (University-level)	3	3			
				1			
	CHEM Core	e					
	CM1001 Foundations of Chemistry I		4				
		Foundations of Chemistry II	4				
	CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	1				
	MH1802	Calculus for the Sciences	4				
	CM1804	Mathematics for Chemistry	2				
		Physics or PH1012* Physics A	3/4*				
	CM2011	Analytical and Bioanalytical Chemistry	3				
	CM2021	Inorganic and Bioinorganic Chemistry	3				
	CM2061	Chemistry & Biological Chemistry Laboratory 1	3				
	CM2031	Organic and Bioorganic Chemistry	3	58/59*			
Major	CM2041	Physical and Biophysical Chemistry 1	3	36/39			
Requirement	CM2062	Chemistry & Biological Chemistry Laboratory 2	3				
	CB2002	Introduction to Chemical and Biological Safety	1				
	PS0001	Introduction to Computational Thinking	3				
	CM3011 ^{&}	Chemical Spectroscopy and Applications	3				
	CM3041 ^{&}	Physical and Biophysical Chemistry 2	3				
	CM3062	Chemistry & Biological Chemistry Laboratory 4	3				
	CM3031 ^{&}	Organic Reaction Mechanisms and Synthesis	3				
	CM3021 ^{&}	Organometallic Chemistry	3				
	CM3061	Chemistry & Biological Chemistry Laboratory 3	3				
	CHEM Mai	CHEM Major Prescribed Electives (MPE)					
	4 x MPEs 12						
	1 23			12			
Broadening and	Deepening I	Electives (BDE)		29			
Total				132/133*			
*Students witho	ut 'Δ' Level I	Physics will take 'PH1012 Physics A' (4AU).					

^{*}Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).

 $^{^{\&}amp;}$ CM3011, CM3021. CM3031, CM3041 are offered in both semesters.

-	mistry and Biological Chemistry)							
	Study Plan for AY2025-2026 intake sional Internship							
Year 1 Sem	nester 1			Year 1 Semester 2				
Course		Туре	AU	Course		Туре	AU	
CM1001	Foundations of Chemistry I	С	4	CM1002	Foundations of Chemistry II	С	4	
MH1802	Calculus for the Sciences	С	4	CM1804	Mathematics for Chemistry	С	2	
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	С	1	PH1011/	Physics <u>or</u>	С	3	
CC0001	Inquiry & Communication in an Interdisciplinary World	СС	2	PH1012*	Physics A (For students without 'A' Level Physics)	С	4	
CC0015	Health & Wellbeing	СС	2	CC0003	Ethics & Civics in a Multi-Cultural World	СС	2	
	BDE 1	BDE	3		BDE 2 BDE 3	BDE BDE	3 3	
HW0001	Introduction to Academic Communicati	ion [#]						
# 6			16				17/18*	
" for studen	its who have not cleared QET							
Year 2 Sem	nester 1			Year 2 Sen	nester 2			
Course		Type	AU	Course		Type	AU	
CM2011	Analytical and Bioanalytical Chemistry	С	3	CM2031	Organic and Bioorganic Chemistry	С	3	
CM2021	Inorganic and Bioinorganic Chemistry	С	3	CM2041	Physical and Biophysical Chemistry 1	С	3	
CM2061	Chemistry & Biological Chemistry Laboratory 1	С	3	CM2062	Chemistry & Biological Chemistry Laboratory 2	С	3	
PS0001	Introduction to Computational Thinking	С	3	CB2002	Introduction to Chemical and Biological Safety	С	1	
CC0006	Sustainability: Society, Economy & Environment	CC	3	PS0002	Introduction to Data Science and Artificial Intelligence	PS	3	
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	СС	2	CC0007	Science & Technology for Humanity	CC	3	
	Readiness in the V.O.C.A World			XXXXXX	Care, Serve, Learn	CSL	3	
			17				19	
Year 3 Sem	nester 1			Year 3 Sen	nester 2			
Course		Туре	AU	Course		Type	AU	
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core	C	3	
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core	С	3	
CM3062	Chemistry & Biological Chemistry Laboratory 4	С	3	CM3061	Chemistry & Biological Chemistry Laboratory 3	С	3	
MLxxxx	Profession Preparation	PS	1	HW0218	Communication Across the Sciences	PS	2	
	BDE 5	BDE	3		BDE 8	BDE	3	
	BDE 6	BDE	3		BDE 9	BDE	3	
	BDE 7	BDE	2		BDE 10	BDE	3	
			18				20	
					_			
Year 4 Semester 1 Course		Туре	AU	Year 4 Sen Course	nester 2	Туре	AU	
CM4081	Professional Internship	PS	10	Course	CHEM MPE1	MPE	3	
C141-001	1 To ressional internsing	, ,	10		CHEM MPE2	MPE	3	
					CHEM MPE3	MPE		
							3	
					CHEM MPE4	MPE	3	
					BDE 11	BDE	3	
			10				15	
					Total (AU)		132/133*	

This study plan is meant as a guide.
*Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).

[&]amp; CM3xxx refers to CM3011, CM3021, CM3031, CM3041 - These courses are offered in both semesters