

BSc in Chemistry and Biological Chemistry (CHEM)								
AY2025 - 2026 Intake onwards								
FYP with Professional Internship								
Programme	Year of Study	Number of Academic Units (AU)						
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	Total
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)		
Chemistry and Biological Chemistry	1	18/19*		6			9	33/34*
	2	22		8	3	3	2	38
	3	18	6		3		8	35
	4		16		10			26
	Total	58/59*	22	14	16	3	19	132/133*
BSc in Chemistry and Biological Chemistry (CHEM)								
Category							AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (University-level)							
	CC0001 Inquiry & Communication in an Interdisciplinary World						2	14
	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	
	CC0006 Sustainability: Society, Economy & Environment						3	
	CC0007 Science & Technology for Humanity						3	
	Professional Series (College-level)							
	HW0218 Communication Across the Sciences						2	16
	PS0002 Introduction to Data Science and Artificial Intelligence						3	
CM4081 Professional Internship						10		
MLXXXX Profession Preparation						1		
XXXXXX Care, Serve, Learn (University-level)						3	3	
Major Requirement	CHEM Core							
	CM1001 Foundations of Chemistry I						4	58/59*
	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	
	CM2041 Physical and Biophysical Chemistry 1						3	
	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 Major Prescribed Electives (MPE)							
	CM4080 Honours Project 1						10	22
	4 x MPEs						12	
Broadening and Deepening Electives (BDE)								19
Total								132/133*

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

[&] CM3011, CM3021. CM3031, CM3041 are offered in both semesters.

B.Sci. (Chemistry and Biological Chemistry)
Suggested Study Plan for AY2025-2026 intake
FYP with Professional Internship

Year 1 Semester 1

Course		Type	AU
CM1001	Foundations of Chemistry I	C	4
MH1802	Calculus for the Sciences	C	4
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	C	1
CC0001	Inquiry & Communication in an Interdisciplinary World	CC	2
CC0015	Health & Wellbeing	CC	2
	BDE 1	BDE	3
HW0001	Introduction to Academic Communication [#]		

16

[#] for students who have not cleared QET

Year 2 Semester 1

Course		Type	AU
CM2011	Analytical and Bioanalytical Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3
PS0001	Introduction to Computational Thinking	C	3
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
CC0006	Sustainability: Society, Economy & Environment	CC	3
	BDE 4	BDE	2

19

Year 3 Semester 1

Course		Type	AU
CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3
MLxxxx	Profession Preparation	PS	1
	BDE 5	BDE	3
	BDE 6	BDE	3
	BDE 7	BDE	2

18

Year 4 Semester 1

Course		Type	AU
CM4081	Professional Internship	PS	10

10

Year 1 Semester 2

Course		Type	AU
CM1002	Foundations of Chemistry II	C	4
CM1804	Mathematics for Chemistry	C	2
PH1011/	Physics <u>or</u>	C	3
PH1012*	Physics A (For students without 'A' Level Physics)	C	4
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 2	BDE	3
	BDE 3	BDE	3

17/18*

Year 2 Semester 2

Course		Type	AU
CM2031	Organic and Bioorganic Chemistry	C	3
CM2041	Physical and Biophysical Chemistry 1	C	3
CM2062	Chemistry & Biological Chemistry Laboratory 2	C	3
CB2002	Introduction to Chemical and Biological Safety	C	1
PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
CC0007	Science & Technology for Humanity	CC	3
XXXXXX	Care, Serve, Learn	CSL	3

19

Year 3 Semester 2

Course		Type	AU
CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3
CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
HW0218	Communication Across the Sciences	PS	2
	CHEM MPE1	MPE	3
	CHEM MPE2	MPE	3

17

Year 4 Semester 2

Course		Type	AU
CM4080	Honours Project 1	MPE	10
	CHEM MPE3	MPE	3
	CHEM MPE4	MPE	3

16

Total (AU)

132/133*

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								
FYP with Professional Attachment								
Programme	Year of Study	Number of Academic Units (AU)						
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	Total
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)		
Chemistry and Biological Chemistry	1	18/19*		6			9	33/34*
	2	22		8	3	3		36
	3	18			8		9	35
	4		22				6	28
	Total	58/59*	22	14	11	3	24	132/133*
BSc in Chemistry and Biological Chemistry (CHEM)								
Category							AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (University-level)							
	CC0001 Inquiry & Communication in an Interdisciplinary World						2	14
	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	
	CC0006 Sustainability: Society, Economy & Environment						3	
	CC0007 Science & Technology for Humanity						3	
	Professional Series (College-level)							
	HW0218 Communication Across the Sciences						2	11
	PS0002 Introduction to Data Science and Artificial Intelligence						3	
CM4082 Professional Attachment						5		
MLXXXX Profession Preparation						1		
XXXXXX Care, Serve, Learn (University-level)						3	3	
Major Requirement	CHEM Core							
	CM1001 Foundations of Chemistry I						4	58/59*
	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	
	CM2041 Physical and Biophysical Chemistry 1						3	
	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 Major Prescribed Electives (MPE)							
	CM4080 Honours Project 1						10	22
4 x MPEs						12		
Broadening and Deepening Electives (BDE)								24
Total								132/133*

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

[&] CM3011, CM3021, CM3031, CM3041 are offered in both semesters.

B.Sci. (Chemistry and Biological Chemistry)
Suggested Study Plan for AY2025-2026 intake
FYP with Professional Attachment

Year 1 Semester 1

Course		Type	AU
CM1001	Foundations of Chemistry I	C	4
MH1802	Calculus for the Sciences	C	4
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	C	1
CC0001	Inquiry & Communication in an Interdisciplinary World	CC	2
CC0015	Health & Wellbeing	CC	2
	BDE 1	BDE	3
HW0001	Introduction to Academic Communication [#]		
			16

[#] for students who have not cleared QET

Year 2 Semester 1

Course		Type	AU
CM2011	Analytical and Bioanalytical Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3
PS0001	Introduction to Computational Thinking	C	3
CC0006	Sustainability: Society, Economy & Environment	CC	3
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
			17

Year 3 Semester 1

Course		Type	AU
CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3
MLxxxx	Profession Preparation	PS	1
	BDE 4	BDE	3
	BDE 5	BDE	3
			16

Year 4 Semester 1

Course		Type	AU
	CHEM MPE1	MPE	3
	CHEM MPE2	MPE	3
	CHEM MPE3	MPE	3
	CHEM MPE4	MPE	3
	BDE 7	BDE	2
			14

Year 1 Semester 2

Course		Type	AU
CM1002	Foundations of Chemistry II	C	4
CM1804	Mathematics for Chemistry	C	2
PH1011/	Physics <u>or</u>	C	3
PH1012*	Physics A (For students without 'A' Level Physics)	C	4
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 2	BDE	3
	BDE 3	BDE	3
			17/18*

Year 2 Semester 2

Course		Type	AU
CM2031	Organic and Bioorganic Chemistry	C	3
CM2041	Physical and Biophysical Chemistry 1	C	3
CM2062	Chemistry & Biological Chemistry Laboratory 2	C	3
CB2002	Introduction to Chemical and Biological Safety	C	1
PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
CC0007	Science & Technology for Humanity	CC	3
XXXXXX	Care, Serve, Learn	CSL	3
			19

Year 3 Semester 2

Course		Type	AU
CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3
CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
HW0218	Communication Across the Sciences	PS	2
	BDE 6	BDE	3
			19

Year 3 Special Sem

CM4082	Professional Attachment	PS	5
			19

Year 4 Semester 2

Course		Type	AU
CM4080	Honours Project 1	MPE	10
	BDE 8	BDE	2
	BDE 9	BDE	2
			14

Total (AU) 132/133*

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								
Programme	Year of Study	Number of Academic Units (AU)						
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	Total
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)		
Chemistry and Biological Chemistry	1	18/19*		6			9	33/34*
	2	22		8	3	3		36
	3	18			3		17	38
	4		12		10		3	25
	Total	58/59*	12	14	16	3	29	132/133*
BSc in Chemistry and Biological Chemistry (CHEM)								
Category							AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (University-level)							
	CC0001 Inquiry & Communication in an Interdisciplinary World						2	14
	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	
	CC0006 Sustainability: Society, Economy & Environment						3	
	CC0007 Science & Technology for Humanity						3	
Interdisciplinary Collaborative Core (ICC)	Professional Series (College-level)							
	HW0218 Communication Across the Sciences						2	16
	PS0002 Introduction to Data Science and Artificial Intelligence						3	
	CM4081 Professional Internship						10	
	MLXXXX Profession Preparation						1	
XXXXXX Care, Serve, Learn (University-level)						3	3	
Major Requirement	CHEM Core							
	CM1001 Foundations of Chemistry I						4	58/59*
	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	
	CM2041 Physical and Biophysical Chemistry 1						3	
	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 Major Prescribed Electives (MPE)							
	4 x MPEs						12	12
Broadening and Deepening Electives (BDE)								29
Total								132/133*

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

[&] CM3011, CM3021. CM3031, CM3041 are offered in both semesters.

B.Sci. (Chemistry and Biological Chemistry)
Suggested Study Plan for AY2025-2026 intake
with Professional Internship

Year 1 Semester 1

Course		Type	AU
CM1001	Foundations of Chemistry I	C	4
MH1802	Calculus for the Sciences	C	4
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	C	1
CC0001	Inquiry & Communication in an Interdisciplinary World	CC	2
CC0015	Health & Wellbeing	CC	2
	BDE 1	BDE	3
HW0001	Introduction to Academic Communication #		

16

for students who have not cleared QET

Year 2 Semester 1

Course		Type	AU
CM2011	Analytical and Bioanalytical Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3
PS0001	Introduction to Computational Thinking	C	3
CC0006	Sustainability: Society, Economy & Environment	CC	3
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2

17

Year 3 Semester 1

Course		Type	AU
CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3
MLxxxx	Profession Preparation	PS	1
	BDE 5	BDE	3
	BDE 6	BDE	3
	BDE 7	BDE	2

18

Year 4 Semester 1

Course		Type	AU
CM4081	Professional Internship	PS	10

10

Year 1 Semester 2

Course		Type	AU
CM1002	Foundations of Chemistry II	C	4
CM1804	Mathematics for Chemistry	C	2
PH1011/	Physics <u>or</u>	C	3
PH1012*	Physics A (For students without 'A' Level Physics)	C	4
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 2	BDE	3
	BDE 3	BDE	3

17/18*

Year 2 Semester 2

Course		Type	AU
CM2031	Organic and Bioorganic Chemistry	C	3
CM2041	Physical and Biophysical Chemistry 1	C	3
CM2062	Chemistry & Biological Chemistry Laboratory 2	C	3
CB2002	Introduction to Chemical and Biological Safety	C	1
PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
CC0007	Science & Technology for Humanity	CC	3
XXXXXX	Care, Serve, Learn	CSL	3

19

Year 3 Semester 2

Course		Type	AU
CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3
CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
HW0218	Communication Across the Sciences	PS	2
	BDE 8	BDE	3
	BDE 9	BDE	3
	BDE 10	BDE	3

20

Year 4 Semester 2

Course		Type	AU
	CHEM MPE1	MPE	3
	CHEM MPE2	MPE	3
	CHEM MPE3	MPE	3
	CHEM MPE4	MPE	3
	BDE 11	BDE	3

15

Total (AU)

132/133*

This study plan is meant as a guide.

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