

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)								
AY2025 - 2026 Intake onwards								
Track 1 (Global Immersion in WUR)								
FYP with Professional Attachment								
Programme	Year of Study	Number of Academic Units (AU)						Total
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)		
Chemistry and Biological Chemistry	1	18/19*		8			1	27/28*
	2	22		6	3	3	6	40
	3	18	6 [3]		8		9	41 [3]
	4		16				12	28
	Total	58/59*	22 [3]	14	11	3	28	136/137* [3]
BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (FF)								
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		
MLXXX 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*	
	CM2021 Inorganic and Bioinorganic Chemistry						3	
	CM2011 Analytical Chemistry						3	
	CM2061 Chemistry & Biological Chemistry Laboratory 1						3	
	PS0001 Introduction to Computational Thinking						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	
	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 [^]		
2nd Major in Future Food (FF)	Food Future Compulsory Courses							
	CH5210 Food Process Technologies and New Production Systems						3	27 [^]
	CH5211 Data Analytics in Food Systems						3	
	CH5220 Food Standard - Food Safety & Risk Assessment						3	
	CH5222 Future Foods - Introduction to Advanced Meat						3	
	CM5101 Food Chemistry & Nutrition						3	
	Electives (Choose 5)							
4 WUR Electives						12		
1 NTU Electives [^]						-		
BDE	Any 1 BDE						1	1
Total							136/137*	

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

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

[^]CM4013 can be double counted towards 2nd Major in FF requirement (3AU)

[] AU of courses that could be used to fulfil Core/MPE requirement and 2nd Major requirement concurrently

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)							
Suggested Study Plan for AY2025-2026 intake							
<i>Track 1 (Global Immersion in WUR)</i>							
<i>FYP with Professional Attachment</i>							
Year 1 Semester 1			Year 1 Semester 2				
Course		Type	AU	Course	Type	AU	
CM1001	Foundations of Chemistry I	C	4	CM1002	Foundations of Chemistry II	C	4
MH1802	Calculus for the Sciences	C	4	CM1804	Mathematics for Chemistry	C	2
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	C	1	PH1011/	Physics <u>or</u>	C	3
CC0001	Inquiry & Communication in an	CC	2	PH1012*	Physics A (<i>For students without 'A'</i>)	C	4
CC0015	Health & Wellbeing	CC	2	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 1	BDE	1	ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
HW0001	<i>Introduction to Academic Communication[#]</i>						
			14				13/14*
<i>[#] for students who have not cleared QET</i>							
Year 2 Semester 1			Year 2 Semester 2				
Course		Type	AU	Course	Type	AU	
CM2011	Analytical and Bioanalytical Chemistry	C	3	CM2031	Organic and Bioorganic Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3	CM2041	Physical and Biophysical Chemistry 1	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3	CM2062	Chemistry & Biological Chemistry Laboratory 2	C	3
PS0001	Introduction to Computational Thinking	C	3	CB2002	Introduction to Chemical and Biological Safety	C	1
CC0006	Sustainability: Society, Economy & Environment	CC	3	PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
XXXXXX	Care, Serve, Learn	CSL	3	CC0007	Science & Technology for Humanity	CC	3
CM5101	Food Chemistry & Nutrition	BDE	3	CH5220	Food Standard - Food Safety and Risk Assessment	BDE	3
			21				19
Year 3 Semester 1			Year 3 Semester 2				
Course		Type	AU	Course	Type	AU	
CM3xxx ^{&}	CHEM-Core	C	3	CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3	CM3xxx ^{&}	CHEM-Core	C	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3	CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
CM4013 [^]	Current Topics in Analytical Chemistry	MPE	3	CH5211	Data Analytics in Food Systems	BDE	3
	CHEM MPE 2	MPE	3	CH5222	Future Foods - Introduction to Advanced Meet Alternative	BDE	3
MLXXXX	Profession Preparation	PS	1	HW0218	Communication Across the Sciences	PS	2
CH5210	Food Process Technologies and New Production System	BDE	3				
			19				22
Year 3 Special Sem							
CM4082	Professional Attachment	PS	5				
			19				22
Year 4 Semester 1			Year 4 Semester 2				
Course		Type	AU	Course	Type	AU	
	FF WUR Elective 1	BDE	3	CM4080	Honours Project 1	MPE	10
	FF WUR Elective 2	BDE	3		CHEM MPE 3	MPE	3
	FF WUR Elective 3	BDE	3		CHEM MPE 4	MPE	3
	FF WUR Elective 4	BDE	3				
			12				16
Total (AU)						136/137*	

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

[^]CM4013 can be double counted towards 2nd Major in FF requirement (3AU)

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)								
AY2025 - 2026 Intake onwards								
Track 1 (Global Immersion in WUR)								
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*		8			6	32/33*
	2	22		6	5	3	6	42
	3	9	6 [3]		11		3	29 [3]
	4	9	6				18	33
	Total	58/59*	12 [3]	14	16	3	33	136/137* [3]
BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (FF)								
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 <u>or</u> PH1012* Physics A				3/4*		
	CM2021	Inorganic and Bioinorganic Chemistry				3		
	CM2011	Analytical Chemistry				3		
	CM2061	Chemistry & Biological Chemistry Laboratory 1				3		
	PS0001	Introduction to Computational Thinking				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		
	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	
2nd Major in Future Food (FF)	Food Future Compulsory Courses							
	CH5210	Food Process Technologies and New Production Systems				3	27 [^]	
	CH5211	Data Analytics in Food Systems				3		
	CH5220	Food Standard - Food Safety & Risk Assessment				3		
	CH5222	Future Foods - Introduction to Advanced Meat				3		
CM5101	Food Chemistry & Nutrition				3			
Electives (Choose 5)								
4 WUR Electives						12		
1 NTU Electives [^]						-		
BDE	Any 3 BDE						6	6
Total							136/137*	

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

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

[^]CM4013 can be double counted towards 2nd Major in FF requirement (3AU)

[] AU of courses that could be used to fulfil Core/MPE requirement and 2nd Major requirement concurrently

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)							
Suggested Study Plan for AY2025-2026 intake							
Track 1 (Global Immersion in WUR)							
with Professional Internship							
Year 1 Semester 1			Year 1 Semester 2				
Course		Type	AU	Course	Type	AU	
CM1001	Foundations of Chemistry I	C	4	CM1002	Foundations of Chemistry II	C	4
MH1802	Calculus for the Sciences	C	4	CM1804	Mathematics for Chemistry	C	2
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	C	1	PH1011/	Physics <u>or</u>	C	3
CC0001	Inquiry & Communication in an Interdisciplinary World	CC	2	PH1012*	Physics A (For students without 'A' Level Physics)	C	4
CC0015	Health & Wellbeing	CC	2	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 1	BDE	3	ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
					BDE 2	BDE	3
HW0001	Introduction to Academic Communication [#]						
			16				16/17*
[#] for students who have not cleared QET							
Year 2 Semester 1			Year 2 Semester 2				
Course		Type	AU	Course	Type	AU	
CM2011	Analytical and Bioanalytical Chemistry	C	3	CM2031	Organic and Bioorganic Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3	CM2041	Physical and Biophysical Chemistry 1	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3	CM2062	Chemistry & Biological Chemistry Laboratory 2	C	3
PS0001	Introduction to Computational Thinking	C	3	CB2002	Introduction to Chemical and Biological Safety	C	1
CC0006	Sustainability: Society, Economy & Environment	CC	3	PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
XXXXXX	Care, Serve, Learn	CSL	3	HW0218	Communication Across the Sciences	PS	2
CM5101	Food Chemistry & Nutrition	BDE	3	CC0007	Science & Technology for Humanity	CC	3
				CH5220	Food Standard - Food Safety and Risk Assessment	BDE	3
			21				21
Year 3 Semester 1			Year 3 Semester 2				
Course		Type	AU	Course	Type	AU	
CM3xxx ^{&}	CHEM-Core	C	3	CM4081	Professional Internship	PS	10
CM3xxx ^{&}	CHEM-Core	C	3				
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3				
CM4013 [^]	Current Topics in Analytical Chemistry	MPE	3				
	CHEM MPE 2	MPE	3				
MLxxxx	Profession Preparation	PS	1				
CH5210	Food Process Technologies and New Production System	BDE	3				
			19				10
Year 4 Semester 1			Year 4 Semester 2				
Course		Type	AU	Course	Type	AU	
	FF WUR Elective 1	BDE	3	CM3xxx ^{&}	CHEM-Core	C	3
	FF WUR Elective 2	BDE	3	CM3xxx ^{&}	CHEM-Core	C	3
	FF WUR Elective 3	BDE	3	CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
	FF WUR Elective 4	BDE	3		CHEM MPE 3	MPE	3
					CHEM MPE 4	MPE	3
				CH5211	Data Analytics in Food Systems	BDE	3
				CH5222	Future Foods - Introduction to Advanced Meet Alternative	BDE	3
			12				21
Total (AU)						136/137*	

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

[^]CM4013 can be double counted towards 2nd Major in FF requirement (3AU)

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)								
AY2025 - 2026 Intake onwards								
Track 2 (NTU Based)								
FYP with Professional Attachment								
Programme	Year of Study	Number of Academic Units (AU)						Total
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)		
Chemistry and Biological Chemistry	1	18/19*		8			1	27/28*
	2	22		6	3	3	6	40
	3	18			8		15	41
	4		22 [3]				6	28 [3]
	Total	58/59*	22 [3]	14	11	3	28	136/137* [3]
BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (FF)								
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*	
	CM2021 Inorganic and Bioinorganic Chemistry						3	
	CM2011 Analytical Chemistry						3	
	CM2061 Chemistry & Biological Chemistry Laboratory 1						3	
	PS0001 Introduction to Computational Thinking						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	
	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 [^]		
2nd Major in Future Food (FF)	Food Future Compulsory Courses							
	CH5210 Food Process Technologies and New Production Systems						3	27 [^]
	CH5211 Data Analytics in Food Systems						3	
	CH5220 Food Standard - Food Safety & Risk Assessment						3	
	CH5222 Future Foods - Introduction to Advanced Meat						3	
	CM5101 Food Chemistry & Nutrition						3	
Electives (Choose 5)								
4 NTU Electives						12		
1 NTU Electives [^]						-		
BDE	Any 1 BDE						1	1
Total								136/137*

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

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

[^]CM4013 can be double counted towards 2nd Major in FF requirement (3AU)

[] AU of courses that could be used to fulfil Core/MPE requirement and 2nd Major requirement concurrently

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)							
Suggested Study Plan for AY2025-2026 intake							
<i>Track 2 (NTU Based)</i>							
<i>FYP with Professional Attachment Option</i>							
Year 1 Semester 1				Year 1 Semester 2			
Course		Type	AU	Course		Type	AU
CM1001	Foundations of Chemistry I	C	4	CM1002	Foundations of Chemistry II	C	4
MH1802	Calculus for the Sciences	C	4	CM1804	Mathematics for Chemistry	C	2
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	C	1	PH1011/	Physics <u>or</u>	C	3
CC0001	Inquiry & Communication in an	CC	2	PH1012*	Physics A (<i>For students without 'A'</i>)	C	4
CC0015	Health & Wellbeing	CC	2	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 1	BDE	1	ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
HW0001	<i>Introduction to Academic Communication #</i>						
			14				13/14*
# <i>for students who have not cleared QET</i>							
Year 2 Semester 1				Year 2 Semester 2			
Course		Type	AU	Course		Type	AU
CM2011	Analytical and Bioanalytical Chemistry	C	3	CM2031	Organic and Bioorganic Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3	CM2041	Physical and Biophysical Chemistry 1	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3	CM2062	Chemistry & Biological Chemistry Laboratory 2	C	3
PS0001	Introduction to Computational Thinking	C	3	CB2002	Introduction to Chemical and Biological Safety	C	1
CC0006	Sustainability: Society, Economy & Environment	CC	3	PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
XXXXXX	Care, Serve, Learn	CSL	3	CC0007	Science & Technology for Humanity	CC	3
	FF NTU Elective 1	BDE	3	CH5220	Food Standard - Food Safety and Risk Assessment	BDE	3
			21				19
Year 3 Semester 1				Year 3 Semester 2			
Course		Type	AU	Course		Type	AU
CM3xxx ^{&}	CHEM-Core	C	3	CM3xxx ^{&}	CHEM-Core	C	3
CM3xxx ^{&}	CHEM-Core	C	3	CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
CM3xxx ^{&}	CHEM-Core	C	3	CH5211	Data Analytics in Food Systems	BDE	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3	CH5222	Future Foods - Introduction to Advanced Meet Alternative	BDE	3
MLxxxx	Profession Preparation	PS	1	HW0218	Communication Across the Sciences	PS	2
CM5101	Food Chemistry & Nutrition	BDE	3		FF NTU Elective 2	BDE	3
CH5210	Food Process Technologies and New Production System	BDE	3				
			19				22
Year 3 Special Sem							
CM4082	Professional Attachment	PS	5				
Year 4 Semester 1				Year 4 Semester 2			
Course		Type	AU	Course		Type	AU
CM4013 [^]	Current Topics in Analytical Chemistry	MPE	3	CM4080	Honours Project 1	MPE	10
	CHEM MPE 2	MPE	3				
	CHEM MPE 3	MPE	3				
	CHEM MPE 4	MPE	3				
	FF NTU Elective 3	BDE	3				
	FF NTU Elective 4	BDE	3				
			18				10
						Total (AU)	136/137*

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

[^]CM4013 can be double counted towards 2nd Major in FF requirement (3AU)

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)

AY2025 - 2026 Intake onwards

Track 2 (NTU Based)

with Professional Internship

Programme	Year of Study	Number of Academic Units (AU)						Total
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve and Learn (CSL)		
Chemistry and Biological Chemistry	1	18/19*		8			6	32/34*
	2	22		6	5	3	6	42
	3	12			11		6	29
	4	6	12 [3]				15	33 [3]
	Total	58/59*	12 [3]	14	16	3	33	136/137* [3]

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (FF)

Category	AU	Total AU	
Common Core (University-level)			
Interdisciplinary Collaborative Core (ICC)	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)		
Interdisciplinary Collaborative Core (ICC)	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	

CHEM Core			AU	Total AU
Major Requirement	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*	
	CM2021	Inorganic and Bioinorganic Chemistry	3	
	CM2011	Analytical Chemistry	3	
	CM2061	Chemistry & Biological Chemistry Laboratory 1	3	
	PS0001	Introduction to Computational Thinking	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	
	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 [^]

Food Future Compulsory Courses			AU	Total AU
2nd Major in Future Food (FF)	CH5210	Food Process Technologies and New Production Systems	3	27 [^]
	CH5211	Data Analytics in Food Systems	3	
	CH5220	Food Standard - Food Safety & Risk Assessment	3	
	CH5222	Future Foods - Introduction to Advanced Meat	3	
	CM5101	Food Chemistry & Nutrition	3	
Electives (Choose 5)				
4 NTU Electives			12	
1 NTU Electives [^]			-	

BDE	Any 3 BDE	6	6
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Total 136/137*

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

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

^CM4013 can be double counted towards 2nd Major in FF requirement (3AU)

[] AU of courses that could be used to fulfil Core/MPE requirement and 2nd Major requirement concurrently

BSc in Chemistry and Biological Chemistry with 2nd Major in Future Foods (CHFF)							
Suggested Study Plan for AY2025-2026 intake							
<i>Track 2 (NTU Based)</i>							
<i>with Professional Internship</i>							
Year 1 Semester 1			Year 1 Semester 2				
Course		Type	AU	Course	Type	AU	
CM1001	Foundations of Chemistry I	C	4	CM1002	Foundations of Chemistry II	C	4
MH1802	Calculus for the Sciences	C	4	CM1804	Mathematics for Chemistry	C	2
CB1102	Introduction to Chemistry, Chemical and Biomedical Engineering	C	1	PH1011/	Physics <u>or</u>	C	3
CC0001	Inquiry & Communication in an Interdisciplinary World	CC	2	PH1012*	Physics A (<i>For students without 'A' Level Physics</i>)	C	4
CC0015	Health & Wellbeing	CC	2	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 1	BDE	3	ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
				BDE 2		BDE	3
HW0001	<i>Introduction to Academic Communication #</i>						
			16				16/17*
<i># for students who have not cleared QET</i>							
Year 2 Semester 1			Year 2 Semester 2				
Course		Type	AU	Course	Type	AU	
CM2011	Analytical and Bioanalytical Chemistry	C	3	CM2031	Organic and Bioorganic Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3	CM2041	Physical and Biophysical Chemistry 1	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3	CM2062	Chemistry & Biological Chemistry Laboratory 2	C	3
PS0001	Introduction to Computational Thinking	C	3	CB2002	Introduction to Chemical and Biological Safety	C	1
CC0006	Sustainability: Society, Economy & Environment	CC	3	PS0002	Introduction to Data Science and Artificial Intelligence	PS	3
XXXXXX	Care, Serve, Learn	CSL	3	HW0218	Communication Across the Sciences	PS	2
CM5101	Food Chemistry & Nutrition	BDE	3	CC0007	Science & Technology for Humanity	CC	3
			21	CH5220	Food Standard - Food Safety and Risk Assessment	BDE	3
							21
Year 3 Semester 1			Year 3 Semester 2				
Course		Type	AU	Course	Type	AU	
CM3xxx ^{&}	CHEM-Core	C	3	CM4081	Professional Internship	PS	10
CM3xxx ^{&}	CHEM-Core	C	3				
CM3xxx ^{&}	CHEM-Core	C	3				
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3				
MLxxxx	Profession Preparation	PS	1				
CH5210	Food Process Technologies and New Production System	BDE	3				
	FF NTU Elective 1	BDE	3				
			19				10
Year 4 Semester 1			Year 4 Semester 2				
Course		Type	AU	Course	Type	AU	
CM3xxx ^{&}	CHEM-Core	C	3	CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
CM4013 [^]	Current Topics in Analytical Chemistry	MPE	3		CHEM MPE 3	MPE	3
	CHEM MPE 2	MPE	3		CHEM MPE 4	MPE	3
	FF NTU Elective 2	BDE	3	CH5211	Data Analytics in Food Systems	BDE	3
	FF NTU Elective 3	BDE	3	CH5222	Future Foods - Introduction to Advanced Meet Alternative	BDE	3
	FF NTU Elective 4	BDE	3				
			18				15
							136/137*
							Total (AU)

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

[^]CM4013 can be double counted towards 2nd Major in FF requirement (3AU)