

FYP with Professional Attachment

Total	139
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B.Sci. (Chemistry and Biological Chemistry)
Suggested Study Plan for AY2021-2022 intake
FYP with Professional Attachment Option

Year 1 Semester 1

Course		Type	AU
CM1021	Basic Inorganic Chemistry with Laboratory	C	4
CM1031	Basic Organic Chemistry with Laboratory	C	4
MH1802	Calculus for the Sciences	C	4
CC0001	Inquiry and Communication in an Interdisciplinary World	CC	2
CC0002	Navigating the Digital World	CC	2
CC0005	Healthy Living and Wellbeing	CC	3
HW0001	Introduction to Academic Communication*		

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**for students who have not cleared QET*

Year 2 Semester 1

Course		Type	AU
CM2011	Analytical 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 & Entrepreneurial Development for the Future World	CC	2
CC0006	Sustainability: Society, Economy & Environment	CC	3
	Broadening and Deepening Electives 2	BDE	3

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Year 3 Semester 1

Course		Type	AU
CM3011	Chemical Spectroscopy and Applications	C	3
CM3041	Physical and Biophysical Chemistry 2	C	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3
	Broadening and Deepening Elective 4	BDE	3
	Broadening and Deepening Elective 5	BDE	3

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Year 4 Semester 1

Course		Type	AU
CM4XXX	CHEM MPE	MPE	3
CM4XXX	CHEM MPE	MPE	3
CM4XXX	CHEM MPE	MPE	3
CM4XXX	CHEM MPE	MPE	3
	Broadening and Deepening Electives 7	BDE	3
	Broadening and Deepening Electives 8	BDE	3

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Year 1 Semester 2

Course		Type	AU
CM1041	Basic Physical Chemistry with Laboratory	C	4
CM1051	Basic Biological Chemistry	C	3
MH1804	Mathematics for Chemistry	C	2
PH1801	Foundation of Physics 1	C	3
CC0003	Ethics & Civics in a Multicultural World	CC	2
	Broadening and Deepening Electives 1	BDE	3

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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
CC0007	Science & Technology for Humanity	CC	3
PS0002	Introduction to Data Science and Artificial Intelligence	FC	3
	Broadening and Deepening Electives 3	BDE	3

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Year 3 Semester 2

Course		Type	AU
CM3021	Organometallic Chemistry	C	3
CM3031	Organic Reaction Mechanisms and Synthesis	C	3
CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
HW0218	Effective Communication 2	FC	2
	Broadening and Deepening Electives 6	BDE	3

Year 3 Special Sem

CM4082	Professional Attachment	FC	5
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Year 4 Semester 2

Course		Type	AU
CM4080	Honours Project 1	MPE	10
	Broadening and Deepening Electives 9	BDE	3

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Total (AU)

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with Professional Internship

BSc in Chemistry and Biological Chemistry (CHEM)

Major Requirement	CHEM Core			
	CM1021	Basic Inorganic Chemistry with Laboratory	4	63
	CM1031	Basic Organic Chemistry with Laboratory	4	
	MH1802	Calculus for the Sciences	4	
	CM1041	Basic Physical Chemistry with Laboratory	4	
	CM1051	Basic Biological Chemistry	3	
	MH1804	Mathematics for Chemistry	2	
	PH1801	Foundation of Physics 1	3	
	CM2011	Analytical Chemistry	3	
	CM2021	Inorganic and Bioinorganic 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	
	CM3011	Chemical Spectroscopy and Applications	3	
	CM3041	Physical and Biophysical Chemistry 2	3	
	CM3062	Chemistry & Biological Chemistry Laboratory 4	3	
	CM3021	Organometallic Chemistry	3	
	CM3031	Organic Reaction Mechanisms and Synthesis	3	
	CM3061	Chemistry & Biological Chemistry Laboratory 3	3	
	CHEM Major Prescribed Electives (MPE)			
	4 x MPEs		12	12

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with Professional Internship

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CC0002	Navigating the Digital World	CC	2
CC0005	Healthy Living and Wellbeing	CC	3
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Course		Type	AU
CM2011	Analytical Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3
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PS0001	Introduction to Computational Thinking	C	3
ML0004	Career & Entrepreneurial Development for the Future World	CC	2
CC0006	Sustainability: Society, Economy & Environment	CC	3
	Broadening and Deepening Electives 2	BDE	3

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Course		Type	AU
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CM3041	Physical and Biophysical Chemistry 2	C	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3
	Broadening and Deepening Elective 4	BDE	3
	Broadening and Deepening Elective 5	BDE	3
	Broadening and Deepening Elective 6	BDE	3

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Year 4 Semester 1

Course		Type	AU
CM4081	Professional Internship	FC	10

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Year 1 Semester 2

Course		Type	AU
CM1041	Basic Physical Chemistry with Laboratory	C	4
CM1051	Basic Biological Chemistry	C	3
MH1804	Mathematics for Chemistry	C	2
PH1801	Foundation of Physics 1	C	3
CC0003	Ethics & Civics in a Multicultural World	CC	2
	Broadening and Deepening Electives 1	BDE	3

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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
CC0007	Science & Technology for Humanity	CC	3
PS0002	Introduction to Data Science and Artificial Intelligence	FC	3
	Broadening and Deepening Electives 3	BDE	3

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Course		Type	AU
CM3021	Organometallic Chemistry	C	3
CM3031	Organic Reaction Mechanisms and Synthesis	C	3
CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
HW0218	Effective Communication 2	FC	2
	Broadening and Deepening Electives 7	BDE	3
	Broadening and Deepening Electives 8	BDE	3
	Broadening and Deepening Electives 9	BDE	2

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Year 4 Semester 2

Course		Type	AU
CM4XXX	CHEM MPE	MPE	3
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CM4XXX	CHEM MPE	MPE	3
CM4XXX	CHEM MPE	MPE	3
	Broadening and Deepening Electives 10	BDE	3
	Broadening and Deepening Electives 11	BDE	3

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Total (AU)

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with Professional Internship and FYP

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	CM1051	Basic Biological Chemistry	3	
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	PH1801	Foundation of Physics 1	3	
	CM2011	Analytical Chemistry	3	
	CM2021	Inorganic and Bioinorganic 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	
	CM3011	Chemical Spectroscopy and Applications	3	
	CM3041	Physical and Biophysical Chemistry 2	3	
	CM3062	Chemistry & Biological Chemistry Laboratory 4	3	
	CM3021	Organometallic Chemistry	3	
	CM3031	Organic Reaction Mechanisms and Synthesis	3	
CM3061	Chemistry & Biological Chemistry Laboratory 3	3		
	CHEM Major Prescribed Electives (MPE)			22
	CM4080	Honours Project 1	10	
	4 x MPEs		12	

Broadening and Deepening Electives (BDE)	22
Total	139

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with Professional Internship and FYP

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CM2011	Analytical Chemistry	C	3
CM2021	Inorganic and Bioinorganic Chemistry	C	3
CM2061	Chemistry & Biological Chemistry Laboratory 1	C	3
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CC0006	Sustainability: Society, Economy & Environment	CC	3
	Broadening and Deepening Electives 2	BDE	3

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CM3041	Physical and Biophysical Chemistry 2	C	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	C	3
	Broadening and Deepening Elective 4	BDE	3
	Broadening and Deepening Elective 5	BDE	3
	Broadening and Deepening Elective 6	BDE	3
	Broadening and Deepening Electives 7	BDE	2

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Year 4 Semester 1

Course		Type	AU
CM4081	Professional Internship	FC	10

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Year 1 Semester 2

Course		Type	AU
CM1041	Basic Physical Chemistry with Laboratory	C	4
CM1051	Basic Biological Chemistry	C	3
MH1804	Mathematics for Chemistry	C	2
PH1801	Foundation of Physics 1	C	3
CC0003	Ethics & Civics in a Multicultural World	CC	2
	Broadening and Deepening Electives 1	BDE	3

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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
CC0007	Science & Technology for Humanity	CC	3
PS0002	Introduction to Data Science and Artificial Intelligence	FC	3
	Broadening and Deepening Electives 3	BDE	3

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Year 3 Semester 2

Course		Type	AU
CM3021	Organometallic Chemistry	C	3
CM3031	Organic Reaction Mechanisms and Synthesis	C	3
CM3061	Chemistry & Biological Chemistry Laboratory 3	C	3
HW0218	Effective Communication 2	FC	2
	Broadening and Deepening Electives 8	BDE	2
CM4XXX	CHEM MPE	MPE	3

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Year 4 Semester 2

Course		Type	AU
CM4080	Honours Project 1	MPE	10
CM4XXX	CHEM MPE	MPE	3
CM4XXX	CHEM MPE	MPE	3
CM4XXX	CHEM MPE	MPE	3

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Total (AU)

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