BSc in Chemistry and Biological Chemistry with 2nd Major in Data Analytics (CHDA)

AY2023 - 2024 Intake onwards

with Professional Internship

			ſ	Number of Acad	lemic Units (AU	1)		
	Year of	Major Requirement		Interdis	ciplinary	Broadening and		
Programme	Study	Core (C)	Major PE (MPE)	Common Core (CC)	Foundational Core (FC)	Deepening Electives (BDE)	Total	
	1	17/18*		9		6	32/33*	
Chemistry and	2	21		8	3	9	41	
Biological	3	18			2	21	41	
Chemistry	4		12		10	6	28	
	Total	56/57*	12	17	15	42	142/143*	

BSc in Chemistry and Biological Chemistry with 2nd Major in Data Analytics (CHDA)

Category			AU	Total AU
	Common C	ore (University-level)		
	CC0001 Inc	uiry and Communication in the Interdisciplinary World	2	
	CC0002 Na	vigating the Digital World	2	
	CC0003 Eth	nics & Civics in a Multi-Cultural World	2	
	CC0005 He	althy Living & Wellbeing	3	
	CC0006 Sus	stainability: Society, Economy & Environment	3	17
nterdisciplinary	CC0007 Sci	ence & Technology for Humanity	3	
Collaborative Core (ICC)	ML0004 Ca	reer and Entrepreneurial Development for the Future World	2	
,				
	Foundation	nal Core (College-level)		
		ommunication Across the Sciences	2	15
	PS0002 Int	roduction to Data Science and Artificial Intelligence	3	13
	CM4081 Pr	ofessional Internship	10	
	CHEM Core	,		
	CM1001	Foundations of Chemistry I	4	
	CM1001	Foundations of Chemistry II	4	
	MH1082	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	/
Major	CM2041	Physical and Biophysical Chemistry 1	3	56/57*
Requirement	CM2062	Chemistry & Biological Chemistry Laboratory 2	3	
•	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 Maj	or Prescribed Electives (MPE)		
	4 x MPEs		12	12

Total			142 - 148*
BDE	Any 6 BDE	17	17
	Students are responsible to plan for their 2nd major courses		
	MH4320 Computational Economics (4AU) MH4511 Sampling and Survey (4AU) @ MH4512 Clinical Trials (4AU) MH4702 Probabilistic Methods in OR (4AU)		
2nd Major in Data Analytics (BDEs)	ES2001 Computational Earth Systems Science (4AU) MH3400 Algorithms for the Real World (4AU) MH3500 Statistics (4AU) MH3510 Regression Analysis (4AU) MH3511 Data Analysis with Computer (3AU) MH3701 Basic Optimization (4AU) MH4500 Time Series Analysis (4AU) MH4513 Survival Analysis (4AU) MH4513 Theory of Computing (4AU)	9 - 12	9 - 12
	Data Analytics Electives (Read any 3) BC2407 Analytics II: Advanced Predictive Techniques (4AU) BS3008 Computational Biology and Modeling (3AU) BS4017 High-Throughput Bioinformatics (3AU) CM4043+^ Molecular Modelling: Principles and Applications (3AU) CM4044+^ Artificial Intelligence in Chemistry (3AU)		
	7) Data Visualisation/Management: BC2406 Analytics I: Visual and Predictive Techniques (4AU)/ SC4024 Data Visualization (3AU)	3 - 4	
	Database Systems (3AU)/SC2207 Introduction to Database(3AU) 6) Data Mining: EE4483 Artificial Intelligence & Data Mining	3	
Data Analytics (BDEs)	4) Algorithms: MH1403 Algorithms & Computing 5) Database: BC2402 Designing & Developing Databases (4AU) / EE4791	3 3 - 4	16 - 18
2nd Major in	2) Linear Algebra: MH1804 Mathematics for Chemistry 3) Data Analysis/Computing: PS0001 Introduction to Computational Thinking 1) Algebra: MH1804 Mathematics for Chemistry 3) Data Analysis/Computing: PS0001 Introduction to Computational Thinking	NA NA	
	Data Analytics Compulsory Courses 1) Probability and Statistics: MH2500 Probability and Introduction to Statistics	4	

[^]Counted towards 2nd major in Data Analytic Compulsory Course

⁺ Counted towards CHEM MPE

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

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

	Study Plan for AY2023-2024 intake						
with Projes:	sional Internship						
Year 1 Sem Course	ester 1	Туре	AU	Year 1 Sem Course	nester 2	Туре	AU
CM1001	Foundations of Chemistry I	C	4	CM1002	Foundations of Chemistry II	C	4
MH1802	Calculus for the Sciences	С	4	CM1804^	Mathematics for Chemistry	С	2
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2	PH1011/	Physics <u>or</u>	С	3
CC0002	Navigating the Digital World	СС	2	PH1012*	Physics A (For students without 'A' Level Physics)	С	4
CC0005	Healthy Living & Well-being	СС	3	CC0003	Ethics & Civics in a Multi-Cultural World	СС	2
HW0001	Introduction to Academic Communicat	ion [#]			BDE 1 BDE 2	BDE BDE	3 3
			15				17/10*
# for studen	ts who have not cleared QET		15				17/18*
Year 2 Sem	ester 1			Year 2 Sem	nester 2		
Course	Analytical and Biognalytical	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	PS0002	Introduction to Data Science and Artificial Intelligence	FC	3
CC0006	Sustainability: Society, Economy & Environment	CC	3	CC0007	Science & Technology for Humanity	CC	3
ML0004	Career and Entrepreneurial Development for the Future World	CC	2	MH1403	Algorithms & Computing	BDE	3
	BDE 3	BDE	3		BDE 4	BDE	3
			20				21
Year 3 Sem	ester 1			Year 3 Sem	nester 2		
Course		Туре	AU	Course		Туре	AU
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core	С	3
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core	С	3
CM3062	Chemistry & Biological Chemistry	С	3	CM3061	Chemistry & Biological Chemistry	С	3
	Laboratory 4	DDE	4		Laboratory 3	50	2
BC2402	Designing & Developing Databases	BDE	4	HW0218	Communication Across the Sciences	FC	2
BC2406	Analytics I: Visual and Predictive Techniques Probability and Introduction to	BDE	4	MH3500	Statistics (CHDA Elective 1)	BDE	4
MH2500	Probability and Introduction to Statistics	BDE	4		CHDA Elective 2	BDE	3
					BDE 5	BDE	2
			21				20
Year 4 Sem	ester 1			Year 4 Sem	nester 2		
Course		Туре	AU	Course		Туре	AU
CM4043^/	Molecular Modelling: Principles and Applications or	MPE	3	CM4081	Professional Internship	FC	10
CM4044^	Artificial Intelligence in Chemistry						
	CHEM MPE2	MPE	3				
	CHEM MPE3	MPE	3				
FF4400	CHEM MPE4	MPE	3				
EE4483	Artificial Intelligence & Data Mining BDE 6	BDE BDE	3 3				
			18				10
					Total (AU)		142/143

This study plan is meant as a guide.

[^]Counted towards 2nd major in Data Analytic requirements

^{*}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 with 2nd Major in Data Analytics (CHDA)

AY2023 - 2024 Intake onwards

FYP with Professional Attachment

			N	umber of Acad	demic Units (Al	J)	
B	Year of	Major Requirement		Interdis	ciplinary	Broadening and	
Programme	Study	Core (C)	Major PE (MPE)	Common Core (CC)	Foundational Core (FC)	Deepening Electives (BDE)	Total
	1	17/18*		9		6	32/33*
Chemistry and	2	21		8	3	6	38
Biological	3	18			7	19	44
Chemistry	4		22			6	28
	Total	56/57*	22	17	10	37	142/143*

BSc in Chemistry and Biological Chemistry with 2nd Major in Data Analytics (CHDA)

Category		AU	Total AU
	Common Core (University-level)		
	CC0001 Inquiry and Communication in the Interdisciplinary World	2	
	CC0002 Navigating the Digital World	2	
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	CC0005 Healthy Living & Wellbeing	3	17
	CC0006 Sustainability: Society, Economy & Environment	3	17
Interdisciplinary	CC0007 Science & Technology for Humanity	3	
Collaborative Cor (ICC)	ML0004 Career and Entrepreneurial Development for the Future World	2	
	Foundational Core (College-level)		
	HW0218 Communication Across the Sciences	2	
	PS0002 Introduction to Data Science and Artificial Intelligence	3	10
	CM4082 Professional Attachment	5	
		1	
	CHEM Core	_	
	CM1001 Foundations of Chemistry I	4	
	CM1002 Foundations of Chemistry II	4	
	MH1082 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	
Major	CM2041 Physical and Biophysical Chemistry 1	3	56/57*
Requirement	CM2062 Chemistry & Biological Chemistry Laboratory 2	3	
	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	

2nd Major in Data Analytics (BDEs)	Data Analytics Compulsory Courses 1) Probability and Statistics: MH2500 Probability and Introduction to Statistics 2) Linear Algebra: CM804 Mathematics for Chemistry 3) Data Analysis/Computing: PS0001 Introduction to Computational Thinking 4) Algorithms: MH1403 Algorithms & Computing 5) Database: BC2402 Designing & Developing Databases (4AU) / EE4791 Database Systems (3AU) / SC2207 Introduction to Database (3AU) 6) Data Mining: EE4483 Artificial Intelligence & Data Mining 7) Data Visualisation/Management: BC2406 Analytics I: Visual and Predictive Techniques (4AU) / SC4024 Data Visualization (3AU)	4 NA NA 3 3-4 3	16 - 18
	Data Analytics Electives (Read any 3)	ı	
2nd Major in Data Analytics (BDEs)	BC2407 Analytics II: Advanced Predictive Techniques (4AU) BS3008 Computational Biology and Modeling (3AU) BS4017 High-Throughput Bioinformatics (3AU) CM4043 ^{+^} Molecular Modelling: Principles and Applications (3AU) CM4044 ^{+^} Artificial Intelligence in Chemistry (3AU) ES2001 Computational Earth Systems Science (4AU) MH3400 Algorithms for the Real World (4AU) MH3500 Statistics (4AU) MH3510 Regression Analysis (4AU) MH3511 Data Analysis with Computer (3AU) MH3701 Basic Optimization (4AU) MH4500 Time Series Analysis (4AU) MH4513 Survival Analysis (4AU) MH4513 Computational Economics (4AU) MH4302 Theory of Computing (4AU) MH4312 Clinical Trials (4AU) MH4512 Clinical Trials (4AU) MH4702 Probabilistic Methods in OR (4AU)	9 - 12	9 - 12
DDE	Students are responsible to plan for their 2nd major courses Any 3 BDE	12	12
BDE	MILY 3 BUL	12	12
Total			142 - 148*

[^]Counted towards 2nd major in Data Analytic Compulsory Course

[†] Counted towards CHEM MPE

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

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

Year 1 Sem	ester 1	_		Year 1 Sem	nester 2	_	
Course CM1001	Foundations of Chemistry I	Type C	AU 4	Course CM1002	Foundations of Chemistry II	Type C	<u>AU</u> 4
MH1802	Calculus for the Sciences	С	4	CM1804^	Mathematics for Chemistry	С	2
CC0001	Inquiry and Communication in the		2		•		2
C0001	Interdisciplinary World	CC	2	PH1011/	Physics <u>or</u>	С	3
CC0002	Navigating the Digital World	CC	2	PH1012*	Physics A (For students without 'A' Level Physics)	С	4
CC0005	Healthy Living & Well-being	CC	3	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
HW0001	Introduction to Academic Communicati	ion [#]			BDE 1 BDE 2	BDE BDE	3
			15				17/18
for studer	nts who have not cleared QET		10				-,, -
ear 2 Sem	ester 1	_		Year 2 Sen	nester 2	_	
Course	Analytical and Biognalytical	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	PS0002	Introduction to Data Science and Artificial Intelligence	FC	3
CC0006	Sustainability: Society, Economy & Environment Career and Entrepreneurial	CC	3	CC0007	Science & Technology for Humanity	CC	3
ML0004	Development for the Future World	CC	2	MH1403	Algorithms & Computing	BDE	3
	BDE 3	BDE	3				
			20				18
Year 3 Sem	ester 1			Year 3 Sem	nester 2		
Course		Туре	AU	Course		Туре	AU
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core	С	3
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core	С	3
CM3062	Chemistry & Biological Chemistry	С	3	CM3061	Chemistry & Biological Chemistry	С	3
BC2402	Laboratory 4 Designing & Developing Databases	BDE	4	HW0218	Laboratory 3 Communication Across the Sciences	FC	2
	Analytics I: Visual and Predictive						
BC2406	Techniques	BDE	4	MH3500	Statistics (CHDA Elective 1)	BDE	4
MH2500	Probability and Introduction to Statistics	BDE	4		CHDA Elective 2	BDE	3
				<u>Year 3 Spe</u> CM4082	Professional Attachment	FC	5
			21				23
Year 4 Sem Course	ester 1	Туре	AU	Year 4 Sen Course	nester 2	Туре	AU
	Molecular Modelling: Principles and				Honours Drois -+ 1		
CM4043^/ CM4044^	Applications <u>or</u> Artificial Intelligence in Chemistry	MPE	3	CM4080	Honours Project 1	MPE	10
	CHEM MPE2	MPE	3				
	CHEM MPE3	MPE	3				
	CHEM MPE4	MPE	3				
	Artificial Intelligence & Data Mining	BDE	3 3				
E4483	DDE 1						
EE4483	BDE 4	BDE	<u> </u>				

[^]Counted towards 2nd major in Data Analytic requirements

^{*}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 with 2nd Major in Data Analytics (CHDA)

AY2023 - 2024 Intake onwards

with Professional Internship and FYP

			N	umber of Acad	demic Units (Al	J)	
Duaguana	Year of	Major Re	quirement	Interdis	ciplinary	Broadening and	
Programme	Study	Core (C)	Major PE (MPE)	Common Core (CC)	Foundational Core (FC)		Total
	1	17/18*		9		7	33/34*
Chemistry and	2	21		8	3	3	35
Biological	3	18	3		2	19	42
Chemistry	4		19		10	3	32
	Total	56/57*	22	17	15	32	142/143*

BSc in Chemistry and Biological Chemistry with 2nd Major in Data Analytics (CHDA)

Category			AU	Total AU
	Common (Core (University-level)		
	CC0001 Ind	quiry and Communication in the Interdisciplinary World	2	
	CC0002 Na	vigating the Digital World	2	
	CC0003 Etl	nics & Civics in a Multi-Cultural World	2	
	CC0005 He	althy Living & Wellbeing	3	17
Intordicainlinen	CC0006 Su	stainability: Society, Economy & Environment	3	17
Interdisciplinary	CC0007 Sc	ence & Technology for Humanity	3	
Collaborative Core (ICC)	ML0004 Ca World	areer and Entrepreneurial Development for the Future	2	
	Foundatio	nal Core (College-level)		
	HW0218 C	ommunication Across the Sciences	2	
	PS0002 Int	roduction to Data Science and Artificial Intelligence	3	15
	CM4081 P	rofessional Internship	10	
			_	
	CHEM Cor			
	CM1001	Foundations of Chemistry I	4	
	CM1002	Foundations of Chemistry II	4	
	MH1082	Calculus for the Sciences	4	
	CM1804^	Mathematics for Chemistry	2	
	PH1011	Physics <u>or</u> 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	56/57*
Major	CM2041	Physical and Biophysical Chemistry 1	3	,
Requirement	CM2062	Chemistry & Biological Chemistry Laboratory 2	3	
•	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	
	<u> </u>	or Prescribed Electives (MPE)		
	CM4080	Honours Project 1	10	22
	4 x MPEs		12	

Total			142 - 148*
BDE	Any 2 BDE	7	7
	Students are responsible to plan for their 2nd major courses		
2nd Major in Data Analytics (BDEs)	Data Analytics Electives (Read any 3) BC2407 Analytics II: Advanced Predictive Techniques (4AU) BS3008 Computational Biology and Modeling (3AU) BS4017 High-Throughput Bioinformatics (3AU) CM4043+^ Molecular Modelling: Principles and Applications (3AU) CM4044+^ Artificial Intelligence in Chemistry (3AU) ES2001 Computational Earth Systems Science (4AU) MH3400 Algorithms for the Real World (4AU) MH3500 Statistics (4AU) MH3510 Regression Analysis (4AU) MH3511 Data Analysis with Computer (3AU) MH3701 Basic Optimization (4AU) MH4500 Time Series Analysis (4AU) MH4502 Theory of Computing (4AU) MH4513 Survival Analysis (4AU) MH4510 Computational Economics (4AU) MH4511 Sampling and Survey (4AU) MH4512 Clinical Trials (4AU) MH4512 Cloud Trials (4AU) MH4702 Probabilistic Methods in OR (4AU)	9 - 12	9 - 12
(BDEs)	 5) Database: BC2402 Designing & Developing Databases (4AU) / EE4791 Database Systems (3AU) / SC2207 Introduction to Database (3AU) 6) Data Mining: EE4483 Artificial Intelligence & Data Mining 7) Data Visualisation/Management: BC2406 Analytics I: Visual and Predictive Techniques (4AU) / SC4024 Data Visualization (3AU) 	3 - 4 3 3 - 4	
2nd Major in Data Analytics	Data Analytics Compulsory Courses 1) Probability and Statistics: MH2500 Probability and Introduction to Statistics 2) Linear Algebra: MH1804 Mathematics for Chemistry 3) Data Analysis/Computing: PS0001 Introduction to Computational Thinking 4) Algorithms: MH1403 Algorithms & Computing	4 NA NA 3	16 - 18

[^]Counted towards 2nd major in Data Analytic Compulsory Course

⁺ Counted towards CHEM MPE

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

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

	sional Internship and FYP						
ear 1 Sem	ester 1			Year 1 Sen	nester 2		
Course		Туре	AU	Course		Туре	AU
M1001	Foundations of Chemistry I	C	4	CM1002	Foundations of Chemistry II	С	4
ИН1802	Calculus for the Sciences Inquiry and Communication in the	С	4	CM1804^	Mathematics for Chemistry	С	2
CC0001	Interdisciplinary World	CC	2	PH1011/	Physics <u>or</u>	С	3
CC0002	Navigating the Digital World	СС	2	PH1012*	Physics A (For students without 'A' Level Physics)	С	4
CC0005	Healthy Living & Well-being	СС	3	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
HW0001	Introduction to Academic Communicat	ion [#]			BDE 1 BDE 2	BDE BDE	3 4
			15				18/19
for studen	ts who have not cleared QET						•
/ear 2 Sem Course	ester 1	Туре	AU	Year 2 Sen Course	nester 2	Туре	AU
	Analytical and Bioanalytical						
CM2011	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	PS0002	Introduction to Data Science and Artificial Intelligence	FC	3
CC0006	Sustainability: Society, Economy & Environment Career and Entrepreneurial	CC	3	CC0007	Science & Technology for Humanity	CC	3
ML0004	Development for the Future World	CC	2	MH1403	Algorithms & Computing	BDE	3
			17				18
Vaar 2 Sam	ester 1				nester 2		
		_		Year 3 Sen	icate: 2	_	
Course	CUENA	Туре	AU	Course		Туре	AU
Course	CHEM-Core	С	3	Course CM3xxx ^{&}	CHEM-Core	С	3
Course	CHEM-Core			Course	CHEM-Core CHEM-Core		
Course CM3xxx ^{&} CM3xxx ^{&}	CHEM-Core Chemistry & Biological Chemistry	С	3	Course CM3xxx ^{&}	CHEM-Core CHEM-Core Chemistry & Biological Chemistry	С	3
Course CM3xxx ^{&} CM3xxx ^{&} CM3xxx	CHEM-Core Chemistry & Biological Chemistry Laboratory 4	c c c	3 3 3	Course CM3xxx ^{&} CM3xxx ^{&} CM3061	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3	c c c	3 3 3
Course CM3xxx ⁸ CM3xxx ⁸ CM3062 3C2402	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases	C C	3	Course CM3xxx ^{&} CM3xxx ^{&}	CHEM-Core CHEM-Core Chemistry & Biological Chemistry	C C	3
Course CM3xxx ^{&} CM3xxx ^{&} CM3xxx CM3062 BC2402	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques	c c c	3 3 3	Course CM3xxx ^{&} CM3xxx ^{&} CM3061	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3	c c c	3 3 3
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to	C C C BDE BDE	3 3 3 4 4	Course CM3xxx ^{&} CM3xxx ^{&} CM3061 HW0218	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences	C C C FC	3 3 3 2
Course CM3xxx [®] CM3xxx [®] CM3062 3C2402 3C2406	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques	C C C BDE	3 3 3	Course CM3xxx ^{&} CM3xxx ^{&} CM3061 HW0218	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1)	C C C FC BDE	3 3 3 2 4
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406 MH2500	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to	C C C BDE BDE	3 3 3 4 4	Course CM3xxx ^{&} CM3xxx ^{&} CM3061 HW0218	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2	C C C FC BDE	3 3 2 4
Course CM3xxx ^{&} CM3xxx ^{&} CM3062 BC2402 BC2406	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to	C C C BDE BDE	3 3 4 4	Course CM3xxx ^{&} CM3xxx ^{&} CM3061 HW0218	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2	C C C FC BDE	3 3 3 2 4 3 3
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics	C C C BDE BDE	3 3 4 4	Course CM3xxx ^{&} CM3xxx ^{&} CM3061 HW0218	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C C FC BDE	3 3 3 2 4 3 3
COURSE CM3xxx [®] CM3xxx [®] CM3062 3C2402 3C2406 MH2500	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics	C C C BDE BDE	3 3 4 4	Course CM3xxx ^{&} CM3061 HW0218 MH3500	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C C FC BDE	3 3 3 2 4 3 3
COURSE CM3xxx [®] CM3xxx [®] CM3062 3C2402 3C2406 MH2500 Year 4 Sem Course	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics	C C BDE BDE BDE	3 3 4 4 4	Course CM3xxx ^{&} CM3061 HW0218 MH3500	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C FC BDE BDE	3 3 2 4 3 3
COURSE CM3xxx [®] CM3xxx [®] CM3062 3C2402 3C2406 MH2500	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics ester 1 Honours Project 1 Molecular Modelling: Principles and	C C BDE BDE BDE	3 3 4 4 4 21	Course CM3xxx ^{&} CM3061 HW0218 MH3500 Year 4 Sen Course	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C FC BDE BDE MPE	3 3 2 4 3 3
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406 MH2500 Cear 4 Sem Course CM4080 CM4043^/	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics ester 1 Honours Project 1 Molecular Modelling: Principles and Applications or	C C BDE BDE BDE Type MPE	3 3 4 4 4 4 21	Course CM3xxx ^{&} CM3061 HW0218 MH3500 Year 4 Sen Course	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C FC BDE BDE MPE	3 3 2 4 3 3
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406 MH2500 Year 4 Sem Course CM4080 CM4043^/ CM4044^	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics ester 1 Honours Project 1 Molecular Modelling: Principles and Applications or Artificial Intelligence in Chemistry	C C BDE BDE BDE Type MPE MPE	3 3 4 4 4 4 21 10 3	Course CM3xxx ^{&} CM3061 HW0218 MH3500 Year 4 Sen Course	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C FC BDE BDE MPE	3 3 2 4 3 3
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406 MH2500 Year 4 Sem Course CM4080 CM4043^/ CM4044^	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics ester 1 Honours Project 1 Molecular Modelling: Principles and Applications or Artificial Intelligence in Chemistry Artificial Intelligence & Data Mining	C C BDE BDE BDE Type MPE MPE BDE	3 3 4 4 4 4 21 10 3	Course CM3xxx ^{&} CM3061 HW0218 MH3500 Year 4 Sen Course	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C FC BDE BDE MPE	3 3 2 4 3 3 21
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406 MH2500 Cear 4 Sem Course CM4080 CM4043^/	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics ester 1 Honours Project 1 Molecular Modelling: Principles and Applications or Artificial Intelligence in Chemistry	C C BDE BDE BDE Type MPE MPE	3 3 4 4 4 4 21 10 3	Course CM3xxx ^{&} CM3061 HW0218 MH3500 Year 4 Sen Course	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C FC BDE BDE MPE	3 3 2 4 3 3 21
Course CM3xxx [®] CM3xxx [®] CM3062 BC2402 BC2406 MH2500 Year 4 Sem Course CM4080 CM4043^/ CM4044^	CHEM-Core Chemistry & Biological Chemistry Laboratory 4 Designing & Developing Databases Analytics I: Visual and Predictive Techniques Probability and Introduction to Statistics ester 1 Honours Project 1 Molecular Modelling: Principles and Applications or Artificial Intelligence in Chemistry Artificial Intelligence & Data Mining CHEM MPE 3	C C BDE BDE BDE Type MPE MPE MPE MPE	3 3 4 4 4 4 21 10 3 3 3 3 3	Course CM3xxx ^{&} CM3061 HW0218 MH3500 Year 4 Sen Course	CHEM-Core CHEM-Core Chemistry & Biological Chemistry Laboratory 3 Communication Across the Sciences Statistics (CHDA Elective 1) CHDA Elective 2 CHEM MPE 1	C C FC BDE BDE MPE	3 3 2 4 3 3

[^]Counted towards 2nd major in Data Analytic requirements

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

⁸ CM3xxx refers to CM3011, CM3021, CM3031, CM3041 - These courses are offered in both semesters