BSc in Chemistry and Biological Chemistry with 2nd Major in Food Science and Technology (CHFS)

AY2023 Intake

FYP with Professional Attachment

				Number of Acad	lemic Units (AU)	
Programme	Year of	Major Requirement		Interdisc	ciplinary	Broadening and	
	Study	Core (C)	Major PE (MPE)	Common Core (CC)	CC) Foundational Core (FC) Deepening Electives (BDE)		Total
	1	17/18*		11			28/29*
Chemistry and	2	21		6	3	8	38
Biological	3	18			7	18	43
Chemistry	4		22			8	30
	Total	56/57*	22	17	10	34	139/140*

Category		AU	Total AU	
<u> </u>	Common Core (University-level)			
		AU 2 2 2 3 3 3 3		
	Common Core (University-level) CC0001 Inquiry and Communication in the Interdisciplinary World CC0002 Navigating the Digital World CC0003 Ethics & Civics in a Multi-Cultural World CC0003 Ethics & Civics in a Multi-Cultural World CC0005 Healthy Living & Wellbeing 3 CC0006 Sustainability: Society, Economy & Environment 3 Iaborative ore (ICC) ML0004 Career and Entrepreneurial Development for the Future World 2 Foundational Core (College-level) HW0218 Communication Across the Sciences PS0002 Introduction to Data Science and Artificial Intelligence CM1001 Foundations of Chemistry I CM1002 Foundations of Chemistry II MH1802 Calculus for the Sciences CM1804 Mathematics for Chemistry H1011 Physics of PH1012* Physics A CM2021 Inorganic and Bioinorganic Chemistry CM2021 Inorganic and Bioinorganic Chemistry CM2031 Analytical Chemistry Major QUIriement Major QUIRIEM Major QUIRIEM Major QUIRIEM MAJOR CM2041 Physical and Biophysical Chemistry CM3062 Chemistry & Biological Chemistry Laboratory 2 CM3011* Organic Reaction Mechanisms and Synthesis CM3021* Organometallic Chemistry CM3061 Chemistry & Biological Chemistry Laboratory 3 CM3061 Chemistry & Biological Chemistry Laboratory 3 CHEM Major Prescribed Electives (MPE) CM4080 Honours Project 1 CHEM Major Prescribed Electives (MPE) CM4080 Honours Project 1	2		
		17		
nterdisciplinary	,	3		
Collaborative		3		
Core (ICC)		2		
CC0001 Inquiry and Communication in the Interdisciplinary World CC0002 Navigating the Digital World CC0003 Ethics & Civics in a Multi-Cultural World CC0005 Healthy Living & Wellbeing 3 Interdisciplinary CC0006 Sustainability: Society, Economy & Environment 3 CC01aborative CC0007 Science & Technology for Humanity 3 ML0004 Career and Entrepreneurial Development for the Future World 2 Foundational Core (College-level) HW0218 Communication Across the Sciences PS0002 Introduction to Data Science and Artificial Intelligence 3 CM4082 Professional Attachment 5 CHEM Core CM1001 Foundations of Chemistry I CM1002 Foundations of Chemistry II MH1802 Calculus for the Sciences CM1804 Mathematics for Chemistry PH1011 Physics of PH1012* Physics A CM2021 Inorganic and Bioinorganic Chemistry 3 CM2011 Analytical Chemistry & Biological Chemistry Laboratory 1 3 CM2011 Introduction to Computational Thinking 3 CM2001 Introduction to Computational Thinking 3				
	HW0218 Communication Across the Sciences	2		
ategory nterdisciplinary Collaborative Core (ICC)	PS0002 Introduction to Data Science and Artificial Intelligence	3	10	
	CM4082 Professional Attachment	5		
	CHEM Core			
	CM1001 Foundations of Chemistry I	4		
	CM1002 Foundations of Chemistry II	4		
	MH1802 Calculus for the Sciences			
	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	56/57*	
Major	CM2031 Organic and Bioorganic Chemistry	3	30/37	
	CM2041 Physical and Biophysical Chemistry 1	3		
Requirement	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		
	CM3031 ^{&} Organic Reaction Mechanisms and Synthesis	3		
		3		
	CM3061 Chemistry & Biological Chemistry Laboratory 3	3		
		4.2		
	·		22	
	4 x MPEs	12		

Total			139/140*
BDE	Any 2 BDE	4	4
	6) NTU-FST MPE x 4	12	
(FST)	5) CH5204 Quality Systems Operations	2	
and Technology	3) CH5203 Food Process Engineering 4) CH5202 Food Physics	3	30
Food Science	2) CH5200 Food Microbiology	3	
2nd Major in	1) CH5201 Food Chemistry	5	
	Food Science and Technology Compulsory Courses		

^{*}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 with 2nd	d Major i	n Food Scie	nce and Technol	logy (CHFS)		
	Study Plan for AY2023 intake						
FYP with Pi	rofessional Attachment Option						
· · · · · · · · · · · · · · · · · · ·				V46			
Year 1 Sem	nester 1	Tuna	A11	Year 1 Sen	nester 2	Tura	A11
Course	Farmalations of Chambiature	Туре	AU	Course	Farmedations of Chambiatan II	Туре	AU
CM1001	Foundations of Chemistry I Calculus for the Sciences	C C	4 4	CM1002	Foundations of Chemistry II	C C	4
MH1802 CC0001	Inquiry and Communication in the	CC	2	CM1804 PH1011/	Mathematics for Chemistry Physics or	C	2 3
CC0001	inquiry and communication in the	CC	2	PH1011/	Physics <u>or</u> Physics A (For students without 'A'	C	3
CC0002	Navigating the Digital World	CC	2	PH1012*	Level Physics)	С	4
					Ethics & Civics in a Multi-Cultural		
CC0005	Healthy Living & Well-being	CC	3	CC0003	World	CC	2
					Career and Entrepreneurial		
				ML0004	Development for the Future World	CC	2
HW0001	Introduction to Academic Communicati	ion #			·		
			15				13/14*
for studer	nts who have not cleared QET						,
joi studen	ns who have not cleared QET						
Year 2 Sem	nester 1			Year 2 Sen	nester 2		
Course		Туре	AU	Course		Туре	AU
	Analytical and Bioanalytical						
CM2011	Chemistry	С	3	CM2031	Organic and Bioorganic Chemistry	С	3
CN 42C24	,		2	0110011	District and District 1. 1. Cl. 1. 1. 1.	6	_
CM2021	Inorganic and Bioinorganic Chemistry	С	3	CM2041	Physical and Biophysical Chemistry 1	С	3
C1 100C1	Chemistry & Biological Chemistry		•	01.400.00	Chemistry & Biological Chemistry		
CM2061	Laboratory 1	С	3	CM2062	Laboratory 2	С	3
00004	Introduction to Computational		•	20000	Introduction to Data Science and		
PS0001	Thinking	С	3	PS0002	Artificial Intelligence	FC	3
ccooc	Sustainability: Society, Economy &	66	2	660007	Colores O Tachaalaa, faall, maaita	66	2
CC0006	Environment	CC	3	CC0007	Science & Technology for Humanity	CC	3
CH5201	Food Chemistry	BDE	5	CH5200	Food Microbiology	BDE	3
			20	_			18
Year 3 Sem	nester 1			Year 3 Sen	nester 2		
Course		Type	AU	Course		Type	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
CIVISOUZ	Laboratory 4	C	3	CIVISOOI	Laboratory 3	C	
CH5203	Food Process Engineering	BDE	5	CH5202	Food Physics	BDE	3
	NTU-FST Prescribed Elective	BDE	3	CH5204	Quality Systems Operations	BDE	2
	BDE 1	BDE	2		NTU-FST Prescribed Elective	BDE	3
				HW0218	Communication Across the Sciences	FC	2
				Year 3 Spe			_
				CM4082	Professional Attachment	FC	5
			42				
			19				24
Year 4 Sem	agetor 1			Year 4 Sen	nostor 2		
rear 4 Sen Course	iestei 1	Туре	۸		nester 2	Туре	AU
-Jui 3E	CHEM MPE1	MPE	AU 3	Course CM4080	Honours Project 1	MPE	10
	CHEM MPE2	MPE	3	CIVI4UOU	BDE 2	BDE	2
	CHEM MPE3	MPE	3		DDL Z	DDE	2
	CHEM MPE4	MPE	3				
	NTU-FST Prescribed Elective	BDE	3				
		BDE	3				
		DUE	J				
	NTU-FST Prescribed Elective						
	NTO-FST Prescribed Elective		18				12
	NTO-FST Prescribed Elective		18		Total (AU)		12 139/140

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 with 2nd Major in Food Science and Technology (CHFS)

AY2023 Intake

with Professional Internship

		Number of Academic Units (AU)							
Programme	Year of Study	Major Re	quirement	Interdis	ciplinary	Broadening and			
3	,	Core (C) Major PE (MPE)		Common Core (CC)	Foundational Core (FC)	Deepening Electives (BDE)	Total		
	1	17/18*		11		6	34/35*		
Chemistry and	2	21		6	3	8	38		
Biological	3	18			2	19	39		
Chemistry	4		12		10	6	28		
	Total	56/57*	12	17	15	39	139/140*		

BSc in Chemistry and Biological Chemistry with 2nd Major in Food Science and Technology (FST)

Category			AU	Total AU
	-		2	
		2		
			2	
		, ,	3	17
	Common Core (University-level) CC0001 Inquiry and Communication in the Interdisciplinary World CC0002 Navigating the Digital World CC0003 Ethics & Civics in a Multi-Cultural World CC0005 Healthy Living & Wellbeing CC0006 Sustainability: Society, Economy & Environment CC0007 Science & Technology for Humanity ML0004 Career and Entrepreneurial Development for the Future World ML0004 Career and Entrepreneurial Development for the Future World HW0218 Communication Across the Sciences PS0002 Introduction to Data Science and Artificial Intelligence CM4081 Professional Internship CHEM Core	3		
	Common Core (University-level) CC0001 Inquiry and Communication in the Interdisciplinary World CC0002 Navigating the Digital World CC0003 Ethics & Civics in a Multi-Cultural World CC0005 Healthy Living & Wellbeing rdisciplinary Illaborative CC0006 Sustainability: Society, Economy & Environment CC0007 Science & Technology for Humanity ML0004 Career and Entrepreneurial Development for the Future World Foundational Core (College-level) HW0218 Communication Across the Sciences PS0002 Introduction to Data Science and Artificial Intelligence CM4081 Professional Internship CHEM Core CM1001 Foundations of Chemistry I CM1002 Foundations of Chemistry II MH1802 Calculus for the Sciences CM1804 Mathematics for Chemistry PH1011 Physics or PH1012* Physics A CM2021 Inorganic and Bioinorganic Chemistry CM2011 Analytical Chemistry CM2011 Analytical Chemistry CM2061 Chemistry & Biological Chemistry Laboratory 1 PS0001 Introduction to Computational Thinking Major CM2031 Organic and Biophysical Chemistry 1 CM2062 Chemistry & Biological Chemistry Laboratory 2 CM3011* Chemical Spectroscopy and Applications CM3041* Physical and Biophysical Chemistry Laboratory 2 CM3011* Chemical Spectroscopy and Applications CM3041* Physical and Biophysical Chemistry 2	3		
Core (ICC)	ML0004 Car	eer and Entrepreneurial Development for the Future World	2	
iterdisciplinary Collaborative Core (ICC)	Foundation	al Core (College-level)		
	HW0218 Co	mmunication Across the Sciences	2	
	PS0002 Intro	oduction to Data Science and Artificial Intelligence	3	15
	CM4081 Pro	ofessional Internship	10	
	-			
		•	4	
		·	4	
	MH1802		4	
	CM1804	•	2	
	PH1011		3/4*	
	CM2021	· ·	3	
	CM2011		3	
	CM2061	· · · · · · · · · · · · · · · · · · ·	3	
	PS0001		3	56/57*
Major	CM2031	=	3	30/3/
Requirement			3	
			3	
			3	
	CM3041 ^{&}		3	
			3	
		-	3	
	CM3021 ^{&}		3	
	CM3061	Chemistry & Biological Chemistry Laboratory 3	3	<u> </u>
	CHEM Majo	r Prescribed Electives (MPE)		
	4 x MPEs		12	12

	Food Science and Technology Compulsory Courses		
2nd Major in	1) CH5201 Food Chemistry	5	
2nd Major in Food Science	2) CH5200 Food Microbiology	3	
	3) CH5203 Food Process Engineering	5	20
and Technology	4) CH5202 Food Physics	3	30
(FST)	5) CH5204 Quality Systems Operations	2	
	6) NTU-FST MPE x 4	12	
205	L. 2005	 	0
BDE	Any 3 BDE	9	9
Total			139/140*

^{*}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 with 2nd	ı iviajor i	ii roou scie	iice and recimo	logy (CHF3)		
	Study Plan for AY2023 intake ssional Internship						
ear 1 Sem	nester 1			Year 1 Sen	nester 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
CC0001	Inquiry and Communication in the 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'	С	4
					Level Physics) Ethics & Civics in a Multi-Cultural		
CC0005	Healthy Living & Well-being	CC	3	CC0003 ML0004	World Career and Entrepreneurial	СС	2
					Development for the Future World		
HW0001	Introduction to Academic Communicati	on#			BDE 1	BDE	3
					BDE 2	BDE	3
for studer	nts who have not cleared QET		15				19/20
ear 2 Ser	nester 1			Year 2 Sen	nester 2		
Course	-	Туре	AU	Course		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 &	CC	3	CC0007	Science & Technology for Humanity	CC	3
	Environment				Science a recimology for trainancy		
CH5201	Food Chemistry	BDE	5	CH5200	Food Microbiology	BDE	3
			20				18
Year 3 Sem	nester 1			Year 3 Sen	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 Laboratory 4	С	3	CM3061	Chemistry & Biological Chemistry Laboratory 3	С	3
CH5203	Food Process Engineering	BDE	5	CH5202	Food Physics	BDE	3
	NTU-FST Prescribed Elective	BDE	3	CH5204	Quality Systems Operations	BDE	2
	BDE 3	BDE	3		NTU-FST Prescribed Elective	BDE	3
				HW0218	Communication Across the Sciences	FC	2
			20				19
Year 4 Sem	nester 1			Year 4 Sen	nester 2		
Course		Туре	AU	Course		Туре	AU
M4081	Professional Internship	FC	10	-	CHEM MPE1	MPE	3
	·				CHEM MPE2	MPE	3
					CHEM MPE3	MPE	3
					CHEM MPE4	MPE	3
					NTU-FST Prescribed Elective	BDE	3
					NTU-FST Prescribed Elective	BDE	3
			10				18
					Total (AU)		139/14

This study plan is meant as a guide.

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

 $^{^{\}it 8}$ CM3xxx refers to CM3011, CM3021, CM3031, CM3041 - These courses are offered in both semesters

BSc in Chemistry and Biological Chemistry with 2nd Major in Food Science and Technology (CHFS)

AY2023 Intake

with Professional Internship and FYP

		Number of Academic Units (AU)							
Programme	Year of	Major Requirement		Interdisciplinary		Broadening and			
	Study	Core (C)	Core (C) Major PE (MPE) Common Core (CC) Foundational Core (FC) Elect		Deepening Electives (BDE)	Total			
	1	20/21*		11			31/32*		
Chemistry and	2	18		6	3	14	41		
Biological	3	18	6		2	16	42		
Chemistry	4		16		10		26		
	Total	56/57*	22	17	15	30	140/141*		

	Total	56/57*	22	17	15	30	140/141			
-	and Biolo	gical Chemistry	with 2nd Majo	r in Food Scienc	e and Technolo					
Category	ı					AU	Total AU			
		Core (University								
		quiry and Comm		e Interdisciplina	ry World	2				
		avigating the Dig				2				
		hics & Civics in a		World		2				
		ealthy Living & V	_			3	17			
						3				
		cience & Techno		-		3				
nterdisciplinary Collaborative Core (ICC) Major Requirement	ML0004 C	areer and Entre	oreneurial Deve	lopment for the	Future World	2				
	Foundation	nal Core (Colleg	e-level)							
	HW0218 (Communication A	Across the Scie	nces		2				
	PS0002 In:	troduction to Da	ta Science and	Artificial Intellig	ence	3	15			
	CM4081 P	rofessional Inter	rnship			10				
	I									
	CHEM Cor		Charaistan I			4				
		Foundations of				4				
	CM1002	Foundations of	· · · · · · · · · · · · · · · · · · ·			4				
	MH1802	Calculus for the				4				
	CM1804	Mathematics fo	· · · · · · · · · · · · · · · · · · ·			2				
	PH1011	Physics or PH10	-	: t ·		3/4*				
	CM2021	Inorganic and B	-	emistry		3				
	CM2011	Analytical Chen				3				
	CM2061			try Laboratory 1	•	3				
	PS0001	Introduction to	=	_		3	56/57*			
Major	CM2031	Organic and Bio	_	=		3				
Requirement	CM2041	Physical and Bio		-		3				
	CM2062	•	_	try Laboratory 2	1	3				
		Chemical Spect				3				
		Physical and Bio				3				
	CM3062			try Laboratory 4	,	3				
		Organic Reaction		and Synthesis		3				
		Organometallic				3				
	CM3061	Chemistry & Bio	ological Chemis	try Laboratory 3		3				
	СНЕМ Ма	jor Prescribed E	lectives (MPE)							
	CM4080	Honours Projec	t 1			10	22			
	4 x MPEs					12				

	Food Science and Technology Compulsory Courses		
2nd Maior in	1) CH5201 Food Chemistry	5	
Food Science	2) CH5200 Food Microbiology	3	
and Technology	3) CH5203 Food Process Engineering	5	30
(FST)	4) CH5202 F000 Physics	3	
(1 5 1)	5) CH5204 Quality Systems Operations	2	
	6) NTU-FST MPE x 4	12	
Total			140/141*

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

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

Suggested	mistry and Biological Chemistry with 2nd Study Plan for AY2023 intake	Major in	Food Scien	ce and Technol	ogy (CHFS)		
Year 1 Sem	isional Internship and FYP			Year 1 Sen	nester 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
CC0001	Inquiry and Communication in the Interdisciplinary World	СС	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	СС	2
				ML0004	Career and Entrepreneurial Development for the Future World	CC	2
HW0001	Introduction to Academic Communicati	on*					
#			15				13/14*
	nts who have not cleared QET						
	M2011 Analytical and Bioanalytical Chemistry M2021 Inorganic and Bioinorganic Chemistry M2061 Chemistry & Biological Chemistry Laboratory 1 Introduction to Computational Thinking Sustainability: Society, Economy & Environment	_		Year 2 Sen	nester 2	_	
Course		Туре	AU	Course		Туре	AU
CM2011	Analytical and Bioanalytical Chemistry	С	3	CM2031	Organic and Bioorganic Chemistry	С	3
CM2021	,	С	3	CM2041	Physical and Biophysical Chemistry 1	С	3
CM2061	·	С	3	CM2062	Chemistry & Biological Chemistry Laboratory 2	С	3
PS0001	·	С	3	PS0002	Introduction to Data Science and Artificial Intelligence	FC	3
CC0006		CC	3	CC0007	Science & Technology for Humanity	CC	3
CH5201	Food Chemistry	BDE	5	CH5200	Food Microbiology	BDE	3
					NTU-FST Prescribed Elective	BDE	3
			20				21
Year 3 Sem	nester 1			Year 3 Sen	nester 2		
Course		Туре	AU	Course		Туре	AU
CM3xxx ^{&}	CHEM-Core	С	3	CM3xxx ^{&}	CHEM-Core	С	3
CM3xxx ^{&}	CHEM-Core	С	3	CM3061	Chemistry & Biological Chemistry Laboratory 3	С	3
CM3xxx ^{&}	CHEM-Core	С	3	CH5202	Food Physics	BDE	3
CM3062	Chemistry & Biological Chemistry Laboratory 4	С	3	CH5204	Quality Systems Operations	BDE	2
CH5203	Food Process Engineering	BDE	5	HW0218	Communication Across the Sciences	FC	2
C113203				1100210			
	NTU-FST Prescribed Elective	BDE	3		NTU-FST Prescribed Elective NTU-FST Prescribed Elective	BDE BDE	3 3
					CHEM MPE 1	MPE	3
			20				22
Year 4 Sem	ester 1	_		Year 4 Sen	nester 2	_	
		Туре	AU	Course	Honours Droit - + 4	Type	AU
Course	Drofossional Internation		10	CM4080	Honours Project 1	MPE	10
Course CM4081	Professional Internship	FC			CHEMINIDE 2	VADE	•
	Professional Internship	FC			CHEM MPE 2 CHEM MPE 3	MPE MPF	3 3
	Professional Internship	FC			CHEM MPE 2 CHEM MPE 3 CHEM MPE 4	MPE MPE MPE	3 3 3
	Professional Internship	FC			CHEM MPE 3	MPE	3
	Professional Internship	FC	10		CHEM MPE 3	MPE	3

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