Single Degree (Single Major) Programmes

Programme	Year of Study	Number of Academic Units (AUs)								
		Major Requirements		General Education Requirement (GER)						Total
Bioengineering (PI@)	1 2 3 4	27/28^ 27 23 16	9	3 5 3 3	3	3	3		3 6 3 3	
	Total	93/94^	9	14	9				15	140/141^
Chemical & Biomolecular Engineering (PI@)	1 2 3 4	29 31 22 11	9	6 2 6	3	3	3		6 9	
	Total	93	9	14	9				15	140

^ *For students who do not have "A" level Physics.*

B.Eng. (Chemical & Biomolecular Engineering / Bioengineering) (ABP)

		Academic Units (AU)
University Requirement	**General Education Requirement Core (GER-Core)**	14
	Engineering Communication I (2 AU)	
	Engineering Communication II (2 AU)	
	Introduction to Sustainability: Multidisciplinary Approaches and Solutions (1 AU)	
	Ethics and Moral Reasoning (1 AU)	
	Enterprise and Innovation (1 AU)	
	Kickstart your Career Success (1 AU)	
	Introduction to Data Science and Artificial Intelligence (3 AU)	
	Engineers & Society (3 AU)	
	General Education Requirement Elective (GER-Elective)	9
	GER-Elective in Business Management (3 AU)	
	GER-Elective in Science, Technology & Society (3 AU)	
	GER-Elective in Liberal Arts (3 AU)	
Major Requirement	**CBE / BIE Core**	93/94^
	Major Prescribed Electives (Major PE)	9
Unrestricted Electives		15
Total AU requirement		140/141^

^ *For students who do not have "A" level Physics.*

AU requirements for OEP, wef AY1617

OEP consists of 20AU with 10AU drawn from Core for Professional Internship and another 10AU that students can utilize from their Unrestricted Electives. To facilitate the credit transfer for OEP, Engineering students who take up the programme will have their degree requirements adjusted to move the 10AU of UE to Core. The tables below show the original and adjusted AU distribution for students taking OEP. There is no change in the total AU.

SINGLE DEGREE PROGRAMMES (PROFESSIONAL INTERNSHIP)

SCHOOL	PROGRAMME	MAJOR REQUIREMENTS			GENERAL EDUCATION REQUIREMENTS (GER)					TOTAL
					GER-PRESCRIBED ELECTIVE (GER-PE)				UNRESTRICTED ELECTIVE (UE)	
		CORE (C)	MAJOR PRESCRIBED ELECTIVE (PE)	GER-CORE (GC)	BUSINESS & MANAGEMENT (BM)	LIBERAL ARTS (LA)	SCIENCE, TECHNOLOGY & SOCIETY (STS)	ANY CATEGORY (BM/LA/STS)		
SCBE	BIE	103/104^	9	14	3	3	3	0	5	140/141^
	CBE	103	9	14	3	3	3	0	5	140

^ *For students who do not have "A" level Physics.*

B.Eng. (Chemical & Biomolecular Engineering)

Suggested Study Plan for AY2019-2020 intake

with Professional Internship

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Materials & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
CH2106	Introduction to Multidisciplinary Engineering	2
GC0001	Introduction to Sustainability	1
HW0001	Introduction to Academic Communication*	
MH1810	Math 1	3
	GER elective 1	3
		19

Year 1 Semester 2

Course		AU
CH1108	Thermodynamics	4
CH1117	Engineering Mathematics	4
CH1802	Lab 2	1
CH2102	Organic Chemistry & Spectrophotometry	4
HW0188	Engineering Communication I	2
	GER elective 2	3
		18

**For students who have not passed or been exempted from the Qualifying English Test at the time of admission.*

Year 2 Semester1

Course		AU
CH0491	Engineers & Society	3
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH2801	Lab 3	2
CH3103	Chemical Thermodynamics	3
HY0001	Ethics & Moral Reasoning	1
ML0003	Kickstart your Career Success	1
		20

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer in Chemical and Biological Systems	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH2802	Lab 4	2
CH3102	Chemical Reaction Engineering	4
CH3104	Biochemical Engineering	3
		19

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH2109	Decision Tools for Business & Engineering	3
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
	GER elective 3	3
		22

Year 3 Semester 2

Course		AU
CH3880	Professional Internship	10
		10

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
	CBE elective 1	3
	CBE elective 2	3
	Free elective 1	3
	Free elective 2	3
	Free elective 3	3
		19

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
	CBE elective 3	3
	Free elective 4	3
	Free elective 5	3
		13

Total (AU) 140

B.Eng. (Chemical & Biomolecular Engineering)
Suggested Study Plan for AY2019-2020 intake (ABP)
with Professional Internship

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Materials & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
CH2106	Introduction to Multidisciplinary Engineering	2
GC0001	Introduction to Sustainability	1
HW0001	Introduction to Academic Communication*	
MH1810	Math 1	3
	GER elective 1	3
		19

Year 1 Semester 2

Course		AU
CH1108	Thermodynamics	4
CH1117	Engineering Mathematics	4
CH1802	Lab 2	1
CH2102	Organic Chemistry & Spectrophotometry	4
HW0188	Engineering Communication I	2
	GER elective 2	3
		18

** For students who have not passed or been exempted from the Qualifying English Test at the time of admission.*

Year 2 Semester1

Course		AU
CH0491	Engineers & Society	3
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH2801	Lab 2A	2
CH3103	Chemical Thermodynamics	3
HY0001	Ethics & Moral Reasoning	1
ML0003	Kickstart your Career Success	1
	GER elective 3	3
	Free elective 1	3
		26

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH2802	Lab 2B	2
CH3102	Reaction Engineering	4
CH3104	Biochemical Engineering	3
	Free elective 2	3
	CBE elective 1	3
		25

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH4801	Final Year Design Project	4
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
CH2109	Decision Tools for Business & Engineering	3
		23

Year 3 Semester 2

Course		AU
CH4801	Final Year Design Project	4
	CBE elective 2	3
	CBE elective 3	3
	Free elective 3	3
	Free elective 4	3
	Free elective 5	3
		19

Year 4 Semester1

Course		AU
CH3880	Professional Internship	10
		10

Total (AU) 140

B.Eng. (Chemical & Biomolecular Engineering)

Suggested Study Plan for AY2019-2020 intake (Direct entry)

with Professional Internship

Year 2 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1131	Biomolecular Engineering	4
CH2103	Fluid Systems	4
CH2106	Introduction to Multidisciplinary Engineering	2
CH2107	Introduction to Computational Thinking	3
CH2801	Lab 2A	2
GC0001	Introduction to Sustainability	1
MH1810	Math 1	3
HW0001	Introduction to Academic Communication*	
		20

Year 2 Semester 2

Course		AU
CH1108	Thermodynamics	4
CH1117	Engineering Mathematics	4
CH2104	Heat & Mass Transfer	4
CH2802	Lab 2B	2
CH3102	Reaction Engineering	4
HW0188	Engineering Communication I	2
CH0494	Introduction to Data Science and Artificial Intelligence	3
		23

*For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 3 Semester 1

Course		AU
CH2109	Decision Tools for Business & Engineering	3
CH2140	Unit Operations	4
CH3101	Process Control and Dynamics	4
CH3103	Chemical Thermodynamics	3
CH3802	Lab 3	3
CH4101	Chemical, Biological & Plant Safety	2
HW0288	Engineering Communication II	2
ET0001	Enterprise & Innovation	1
HY0001	Ethics & Moral Reasoning	1
		23

Year 3 Semester 2

Course		AU
CH2102	Organic Chemistry & Spectrophotometry	4
CH0491	Engineers & Society	3
CH3104	Biochemical Engineering	3
CH3141	Advanced Unit Operations	3
CH4801	Final Year Design Project	4
	CBE elective 1	3
	GER elective **(Any)**	3
		23

Year 4 Semester 1

Course		AU
CH3880	Professional Internship	10
ML0003	Kickstart your Career Success	1
		11

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
	CBE elective 2	3
	CBE elective 3	3
	Free elective	3
		13

Total (AU) **113**

2nd Major Business (PI Option)

		Academic Units (AU)
University Requirement	**General Education Requirement Core (GER-Core)**	14
	Engineering Communication I (2 AU)	
	Engineering Communication II (2 AU)	
	Kickstart your Career Success (1 AU)	
	Introduction to Data Science and Artificial Intelligence (3 AU)	
	Engineers & Society (3 AU)	
	Introduction to Sustainability; Multidisciplinary Approaches and Solutions (1 AU)	
	Enterprise & Innovation (1 AU)	
	Ethics and Moral Reasoning (1 AU)	
	General Education Requirement Elective (GER-Elective)	0
	GER-Elective in Science, Technology & Society (3 AU)	
	GER-Elective in Liberal Arts (3 AU)	
Major Requirement	**CBE Core**	93
	Major Prescribed Electives (Major PE)	9
2nd Major in Business	**Business Foundation Courses**	20
	Track Courses	12
Total AU requirement		148

^ *For students who do not have "A" level Physics.*

B.Eng. (Chemical & Biomolecular Engineering)
Suggested Study Plan for AY2019-2020 intake (BM)
with Professional Internship

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Mass & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
CH2106	Introduction to Multidisciplinary Engineering	2
MH1810	Math 1	3
HW0001	Introduction to Academic Communication*	
AD1101	Financial Accounting	4
AB1201	Financial Management	3
GC0001	Introduction to Sustainability	1
		23

Year 1 Semester 2

Course		AU
CH1108	Thermodynamics	4
CH1117	Engineering Mathematics	4
CH1802	Lab 2	1
CH2102	Organic Chemistry and Spectrophotometry	4
HW0188	Engineering Communication I	2
AB1501	Marketing	3
BE1401	Business Operations and Processes	4
		22

* For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab 3	2
AB1301	Business Law	3
HY0001	Ethics & Moral Reasoning	1
ML0003	Kickstart your Career Success	1
		20

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab 4	2
CH3104	Biochemical Engineering	3
AB1601	Organisational Behaviour & Design	3
		22

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		19

Year 3 Semester 2

Course		AU
CH3880	Professional Internship	10
		10

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	CBE elective 1	3
	Track Course 1	4
	Track Course 2	4
		18

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
	CBE elective 2	3
	CBE elective 3	3
	Track Course 3	4
		14
	Total (AU)	**148**

2nd Major Business (PA Option)

		Academic Units (AU)
University Requirement	**General Education Requirement Core (GER-Core)**	14
	Engineering Communication I (2 AU)	
	Engineering Communication II (2 AU)	
	Kickstart your Career Success (1 AU)	
	Introduction to Data Science and Artificial Intelligence (3 AU)	
	Engineers & Society (3 AU)	
	Introduction to Sustainability; Multidisciplinary Approaches and Solutions (1 AU)	
	Enterprise & Innovation (1 AU)	
	Ethics and Moral Reasoning (1 AU)	
	General Education Requirement Elective (GER-Elective)	0
	GER-Elective in Science, Technology & Society (3 AU)	
	GER-Elective in Liberal Arts (3 AU)	
Major Requirement	**CBE Core**	88
	Major Prescribed Electives (Major PE)	9
2nd Major in Business	**Business Foundation Courses**	20
	Track Courses	12
Unrestricted Electives	**Unrestricted Electives**	5
Total AU requirement		148

^ *For students who do not have "A" level Physics.*

B.Eng. (Chemical & Biomolecular Engineering)

Suggested Study Plan for AY2019-2020 intake (BM)

with Professional Attachment

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Mass & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
CH2106	Introduction to Multidisciplinary Engineering	2
MH1810	Math 1	3
HW0001	Introduction to Academic Communication*	
AD1101	Financial Accounting	4
AB1201	Financial Management	3
GC0001	Introduction to Sustainability	1
		23

Year 1 Semester 2

Course		AU
CH1108	Thermodynamics	4
CH1117	Engineering Mathematics	4
CH1802	Lab 2	1
CH2102	Organic Chemistry and Spectrophotometry	4
HW0188	Engineering Communication I	2
AB1501	Marketing	3
BE1401	Business Operations and Processes	4
		22

* For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab 3	2
AB1301	Business Law	3
HY0001	Ethics & Moral Reasoning	1
ML0003	Kickstart your Career Success	1
		20

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab 4	2
CH3104	Biochemical Engineering	3
		19

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		19

Year 3 Semester 2

Course		AU
AB1601	Organisational Behaviour and Design	3
	CBE elective 1	3
	CBE elective 2	3
	Free elective 1	3
	Free elective 2	2
Year 3 Special Semester		
CH3885	Professional Attachment	5
		19

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	CBE elective 3	3
	Track Course 1	4
	Track Course 2	4
		18

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
	Track Course 2	4
		8
	Total (AU)	**148**

2nd Major Business ITP Track (PI Option)

		Academic Units (AU)
University Requirement	**General Education Requirement Core (GER-Core)**	14
	Engineering Communication I (2 AU)	
	Engineering Communication II (2 AU)	
	Kickstart your Career Success (1 AU)	
	Introduction to Data Science and Artificial Intelligence (3 AU)	
	Engineers & Society (3 AU)	
	Introduction to Sustainability; Multidisciplinary Approaches and Solutions (1 AU)	
	Enterprise & Innovation (1 AU)	
	Ethics and Moral Reasoning (1 AU)	
	General Education Requirement Elective (GER-Elective)	0
	GER-Elective in Science, Technology & Society (3 AU)	
	GER-Elective in Liberal Arts (3 AU)	
Major Requirement	**CBE Core**	93
	Major Prescribed Electives (Major PE)	9
2nd Major in Business	**Business Foundation Courses**	14
	Track Courses	16
Total AU requirement		146

^ *For students who do not have "A" level Physics.*

B.Eng. (Chemical & Biomolecular Engineering)
Suggested Study Plan for AY2019-2020 intake (BM ITP Track)
with Professional Internship

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Mass & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
CH2106	Introduction to Multidisciplinary Engineering	2
MH1810	Math 1	3
HW0001	Introduction to Academic Communication*	
AD1101	Financial Accounting	4
AB1201	Financial Management	3
GC0001	Introduction to Sustainability	1
		23

Year 1 Semester 2

Course		AU
CH1117	Engineering Mathematics	4
CH2102	Organic Chemistry & Spectrophotometry	4
CH1108	Thermodynamics	4
CH1802	Lab	1
HW0188	Engineering Communication I	2
AB1501	Marketing	3
BE1401	Business Operations and Processes	4
		22

* For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab 3	2
BF2217	Commodity Markets	3
ML0003	Kickstart your Career Success	1
HY0001	Ethics & Moral Reasoning	1
	CBE elective 1	3
		23

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab 4	2
CH3104	Biochemical Engineering	3
BF3214	Commodities Trading	2
BF4001	Industry Seminar	1
		22

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
BF2216	Trade Incoterms & Ship Chartering	4
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		23

Year 3 Semester 2

Course		AU
CH3880	Professional Internship	10
		10

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	CBE elective 2	3
	CBE elective 3	3
BF2302	International Tax and Trading Law	2
		15

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
BF3212	Trade, Structured & Supply Chain Finance	2
BF3213	Enterprise Risk Management	2
		8

Total (AU) 146

2nd Major Business ITP Track (PA)

		Academic Units (AU)
University Requirement	**General Education Requirement Core (GER-Core)**	14
	Engineering Communication I (2 AU)	
	Engineering Communication II (2 AU)	
	Kickstart your Career Success (1 AU)	
	Introduction to Data Science and Artificial Intelligence (3 AU)	
	Engineers & Society (3 AU)	
	Introduction to Sustainability; Multidisciplinary Approaches and Solutions (1 AU)	
	Enterprise & Innovation (1 AU)	
	Ethics and Moral Reasoning (1 AU)	
	General Education Requirement Elective (GER-Elective)	0
	GER-Elective in Science, Technology & Society (3 AU)	
	GER-Elective in Liberal Arts (3 AU)	
Major Requirement	**CBE Core**	88
	Major Prescribed Electives (Major PE)	9
2nd Major in Business	**Business Foundation Courses**	14
	Track Courses	16
Unrestricted Electives	**Unrestricted Electives**	5
Total AU requirement		146

^ *For students who do not have "A" level Physics.*

B.Eng. (Chemical & Biomolecular Engineering)

Suggested Study Plan for AY2019-2020 intake (BM ITP Track)

with Professional Attachment

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Mass & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
CH2106	Introduction to Multidisciplinary Engineering	2
MH1810	Math 1	3
HW0001	Introduction to Academic Communication*	
AD1101	Financial Accounting	4
AB1201	Financial Management	3
GC0001	Introduction to Sustainability	1
		23

Year 1 Semester 2

Course		AU
CH1117	Engineering Mathematics	4
CH2102	Organic Chemistry & Spectrophotometry	4
CH1108	Thermodynamics	4
CH1802	Lab 2	1
HW0188	Engineering Communication I	2
AB1501	Marketing	3
BE1401	Business Operations and Processes	4
		22

* For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab 3	2
BF2217	Commodity Markets	3
ML0003	Kickstart your Career Success	1
HY0001	Ethics & Moral Reasoning	1
		20

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab 4	2
CH3104	Biochemical Engineering	3
BF3214	Commodities Trading	2
		21

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
BF2216	Trade Incoterms & Ship Chartering	4
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		23

Year 3 Semester 2

Course		AU
BF3213	Enterprise Risk Management	2
BF4001	Industry Seminar	1
	CBE elective 1	3
	CBE elective 2	3
	Unrestricted Elective	5

Year 3 Special Semester

CH3885	Professional Attachment	5
		19

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	CBE elective 3	3
BF2302	International Tax and Trading Law	2
		12

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
BF3212	Trade, Structured & Supply Chain Finance	2
		6

Total (AU) 146

BEng (Chemical and Biomolecular Engineering) Hons with 2nd Major in Food Science and Technology AY 2018/2019 onwards

FST (PI Option)

Curriculum Structure			Academic Unit (AU) Requirement	
			BEng Hons with 2nd Major in Food Science and Technology	**BEng Hons**
Core			93	93
Major Prescribed Elective (Major PE)			9	9
General Education Requirement (GER)	Core		14	14
	Prescribed Elective (PE)	Liberal Arts (LA)	3	3
		Business & Management (BM)		3
		Science, Technology & Society (STS)	0[#]	3
	Unrestricted Electives (UE)	UE	0	15
		Food Science and Technology (Core)	18	NA
		Food Science and Technology (PE)	15	NA
Total AUs			**152**	**140**

FST (PA Option)

Curriculum Structure			Academic Unit (AU) Requirement
			BEng Hons with 2nd Major in Food Science and Technology
Core			88
Major Prescribed Elective (Major PE)			9
General Education Requirement (GER)	Core		14
	Prescribed Elective (PE)	Liberal Arts (LA)	3
		Business & Management (BM)	
		Science, Technology & Society (STS)	0[#]
	Unrestricted Electives (UE)	UE	5
		Food Science and Technology (Core)	18
		Food Science and Technology (PE)	15
Total AUs			**152**

[#] CH9200 Food Microbiology will be used to satisfy the requirement of PE-STS.

B.Eng. (Chemical & Biomolecular Engineering)
Suggested Study Plan for AY2019-2020 intake (FST)
with Professional Internship

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Mass & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab	1
CH2106	Introduction to Multidisciplinary Engineering	2
MH1810	Math 1	3
HW0001	Introduction to Academic Communication *	
GC0001	Introduction to Sustainability	1
		16

Year 1 Semester 2

Course		AU
CH1117	Engineering Mathematics	4
CH2102	Organic Chemistry and Spectrophotometry	4
CH1108	Thermodynamics	4
CH1802	Lab	1
HW0188	Engineering Communication I	2
	CBE elective 1	3
		18

* For students who have not passed or been exempted from the Qualifying English test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab	2
CH9201	Food Chemistry	5
	GER-UE (FST)	3
ML0003	Kickstart your Career Success	1
HY0001	Ethics & Moral Reasoning	1
		25

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab	2
CH9200	Food Microbiology	3
CH3104	Biochemical Engineering	3
CH0494	Introduction to Data Science and Artificial Intelligence	3
	GER-UE (FST)	3
		25

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
CH9203	Food Process Engineering	5
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		24

Year 3 Semester 2

Course		AU
CH3880	Professional Internship	10
		10

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	CBE elective 2	3
	CBE elective 3	3
	GERPE (BM/LA)	3
	GER-UE (FST)	3
		19

Year 4 Semester 2

Course		AU
	GER-UE (FST)	3
CH4801	Final Year Design Project	4
CH9202	Food Physics	3
CH9204	Quality Systems Operations	2
	GER-UE (FST)	3
		15

Total (AU) **152**

B.Eng. (Chemical & Biomolecular Engineering)
Suggested Study Plan for AY2019-2020 intake (FST)
with Professional Attachment

Year 1 Semester 1

Course		AU
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Mass & Energy Balance	4
CH1131	Biomolecular Engineering	4
CH1801	Lab	1
CH2106	Introduction to Multidisciplinary Engineering	2
MH1810	Math 1	3
HW0001	Introduction to Academic Communication *	
GC0001	Introduction to Sustainability	1
		16

Year 1 Semester 2

Course		AU
CH1117	Engineering Mathematics	4
CH2102	Organic Chemistry and Spectrophotometry	4
CH1108	Thermodynamics	4
CH1802	Lab	1
HW0188	Engineering Communication I	2
		15

* For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab	2
CH9201	Food Chemistry	5
	GER-UE (FST)	3
ML0003	Kickstart your Career Success	1
HY0001	Ethics & Moral Reasoning	1
		25

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab	2
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH9200	Food Microbiology	3
CH3104	Biochemical Engineering	3
	GER-UE (FST)	3
		25

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
CH9203	Food Process Engineering	5
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		24

Year 3 Semester 2

Course		AU
CH9202	Food Physics	3
CH9204	Quality Systems Operations	2
	CBE elective 1	3
	CBE elective 2	3
	CBE elective 3	3
Year 3 Special Semester		
CH3885	Professional Attachment	5
		19

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	GER-UE (FST)	3
	GER-UE (FST)	3
	GERPE (BM/LA)	3
		16

Year 4 Semester 2

Course		AU
	GER-UE (FST)	3
CH4801	Final Year Design Project	4
	Free elective 3	3
	Free elective 4	2
		12
	Total (AU)	**152**

CN Yang

CBE

Course Type	AU Required
Core Courses	119
Major Prescribed Electives	3
GER-Core	17
GERPE	0
Unrestricted Electives	3
Total	142

B.Eng. (Chemical & Biomolecular Engineering)
Suggested Study Plan for AY19-20 intake (CN Yang)
with Professional Attachment

Year 1 Semester 1

Course		AU
CY1001	Introduction to Biology	3
CY1101	Principles of Modern Chemistry	3
CY1308	Physics	3
CY1500	Introductory Research Methodology	3
CY1601	Mathematics I	4
CH1102	Introduction to Chemical Engineering	1
CH1104	Materials & Energy Balance	4
CH2106	Introduction to Multidisciplinary Eng.	2
GC0001	Introduction to Sustainability	1
HW0001	Introduction to Academic Communications*	
		24

Year 1 Semester 2

Course		AU
CY1007	Climate Change	3
CY1307	Relativity and Quantum Physics	3
CY1400	CN Yang Scholars Programme Undergraduate Research Experience	3
CY1602	Mathematics II	4
CH1108	Thermodynamics	4
CH2102	Organic Chemistry and Spectrophotometry	4
Year 1 Special Term		**AU**
CY2003	Research Attachment 3 (Making & Tinkering) Overseas Learning Trip	4
		25

**For students who have not passed or been exempted from the Qualifying English Test at the time of admission.*

Year 2 Semester 1

Course		AU
CH2107	Introduction to Computational Thinking	3
CH1131	Biomolecular Engineering	4
CH2103	Fluids Systems	4
CH3103	Chemical Thermodynamics	3
CY0002	Ethics	3
CY2001	Research Attachment I	4
		21

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH2802	Lab 4	2
CH3104	Biochemical Engineering	3
CH3102	Chemical Reaction Engineering	4
CY0001	Writing & Reasoning	3
ML0003	Kickstart your Career Success	1
		23

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH0491	Engineers & Society	3
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH2109	Decision Tools for Business & Eng.	3
CY0006	Enterprise, Innovation and Leadership	3
		22

Year 3 Semester 2

Course		AU
CH4211	CNYSP Overseas Final Year Project	8
Year 3 Special Terms		**AU**
CH3885	Professional Attachment	5
		13

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
	CBE elective	3
	Free elective 1	3
		10

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
		4
	Total (AU)	**142**

USP

CBE

Course Type	AU Required (new)
Core Courses	93
Major Prescribed Electives	9
USP Core	12
GER-Core	10
GER-PE –BM	0
GER-PE –STS	0
GER-PE –LA	0
GER-PE –Any Category	0
USP Electives	15
Unrestricted Electives	3
Total	142

B.Eng. (Chemical & Biomolecular Engineering)

Suggested Study Plan for AY2019-2020 intake (USP) with Professional Internship

Year 1 Semester 1			**Year 1 Semester 2**		
Course		**AU**	**Course**		**AU**
MH1810	Math 1	3	CH1117	Engineering Mathematics	4
CH1102	Introduction to Chemical Engineering in New Era	1	CH2102	Organic Chemistry and Spectrophotometry	4
CH1104	Materials & Energy Balance	4	CH1108	Thermodynamics	4
CH2106	Introduction of Multidisciplinary Engineering	2	CH1802	Lab 2	1
CH1131	Biomolecular Engineering	4	SP0002	Ethics	3
CH1801	Lab 1	1	SP0007	Fieldwork and Documentation	3
SP0001	Writing and Reasoning	3			
SP0005	Quantitative Reasoning	3			
GC0001	Introduction to Sustainability	1			
HW0001	Introduction to Academic Communication *				
		22			**19**

*For students who have not passed or been exempted from the Qualifying English Test at admission.

Year 2 Semester1			**Year 2 Semester 2**		
Course		**AU**	**Course**		**AU**
CH2103	Fluid Systems	4	CH2104	Heat & Mass Transfer	4
CH2010	Engineering Statistics	3	CH0494	Introduction to Data Science and Artificial Intelligence	3
CH2107	Introduction to Computational Thinking	3	CH3141	Advanced Unit Operations	3
CH3103	Chemical Thermodynamics	3	CH3102	Chemical Reaction Engineering	4
CH2801	Lab 3	2	CH2802	Lab 4	2
ML0003	Kickstart your Career Success	1	CH3104	Biochemical Engineering	3
HY0001	Ethics & Moral Reasoning	1		USP Elective 2	3
	USP Elective 1	3			
		20			**22**

Year 3 Semester 1			**Year 3 Semester 2**		
Course		**AU**	**Course**		**AU**
CH3101	Process Control and Dynamics	4	CH3880	Professional Internship	10
CH2140	Unit Operations	4			
CH3802	Lab 5	3			
CH4101	Chemical, Biological & Plant Safety	2			
CH0491	Engineers & Society	3			
ET0001	Enterprise & Innovation	1			
	USP Elective 3	3			
	USP Elective 4	3			
		23			**10**

USP

Year 4 Semester 1			Year 4 Semester 2		
Course		**AU**	**Course**		**AU**
CH2109	Decision Tools for Business & Engineering	3			
CH4801	Final Year Design Project	4	CH4801	Final Year Design Project	4
	CBE Elective 1	3		CBE Elective 3	3
	CBE Elective 2	3		Free Elective 1	3
	USP Elective 5	3			
		16			**10**
				Total (AU)	**142**

CBEC (PI Option)

Category		**AU**	
Core		93	141
Major Prescribed Electives (Major PE)	CBE	9	
	Economics	39	
GER Core		14	14
GER Elective		0	
Free Elective (Economics <Core>)		25	
Total		180	

CBEC (PA Option)

Category		**AU**	
Core		88	136
Major Prescribed Electives (Major PE)	CBE	9	
	Economics	39	
GER Core		14	19
GER Elective		5	
Free Elective (Economics <Core>)		25	
Total		180	

Double Degree in Engineering and Economics
B.Eng. (Chemical & Biomolecular Engineering) and Economics
Suggested Study Plan for AY2019-2020 intake
with Professional Internship

Year 1 Semester 1

Course		AU
MH1810	Math 1	3
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Materials & Energy Balance	4
CH2106	Introduction to Multidisciplinary Engineering	2
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
HE1001	Microeconomics Principles	3
HE1002	Macroeconomics Principles	3
HW0001	Introduction to Academic Communication*	
GC0001	Introduction to Sustainability	1
		22

Year 1 Semester 2

Course		AU
CH1117	Engineering Mathematics	4
CH2102	Organic Chemistry and Spectrophotometry	4
CH1108	Thermodynamics	4
CH1802	Lab 2	1
HW0188	Engineering Communication I	2
HE1005	Intro to Probability & Statistical Inference	3
HE2001	Intermediate Microeconomics	3
		21

* For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab 3	2
HE2005	Principles of Ecometrics	3
ML0003	Kickstart your Career Success	1
HY0001	Ethics & Moral Reasoning	1
		20

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab 4	2
CH3104	Biochemical Engineering	3
HE3021	Intermediate Econometrics	3
HE2002	Intermediate Macroeconomics	3
		25

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
HE4010	Singapore Economy in A Globalized World	4
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		23

Year 3 Semester 2

Course		AU
CH3880	Professional Internship	10
		10

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	CBE elective 1	3
	CBE elective 2	3
	Econs elective 1	3
	Econs elective 2	3
		19

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
	CBE elective 3	3
	Econs elective 3	3
	Econs elective 4	3
		13

Year 5 Semester 1

Course		AU
	Econs elective 5	3
	Econs elective 6	3
	Econs elective 7	3
	Econs elective 8	3
	Econs elective 9	3
		15

Year 5 Semester 2

Course		AU
	Econs elective 10	4
	Econs elective 11	4
	Econs elective 12	4
		12

Total (AU) **180**

Double Degree in Engineering and Economics
B.Eng. (Chemical & Biomolecular Engineering) and Economics
Suggested Study Plan for AY2019-2020 intake
with Professional Attachment

Year 1 Semester 1

Course		AU
MH1810	Math 1	3
CH1102	Introduction to Chemical Engineering in New Era	1
CH1104	Materials & Energy Balance	4
CH2106	Introduction to Multidisciplinary Engineering	2
CH1131	Biomolecular Engineering	4
CH1801	Lab 1	1
HE1001	Microeconomics Principles	3
HE1002	Macroeconomics Principles	3
HW0001	Introduction to Academic Communication*	
GC0001	Introduction to Sustainability	1
		22

Year 1 Semester 2

Course		AU
CH1117	Engineering Mathematics	4
CH2102	Organic Chemistry and Spectrophotometry	4
CH1108	Thermodynamics	4
CH1802	Lab 2	1
HW0188	Engineering Communication I	2
HE1005	Intro to Probability & Statistical Inference	3
HE2001	Intermediate Microeconomics	3
		21

* For students who have not passed or been exempted from the Qualifying English Test at the time of admission.

Year 2 Semester1

Course		AU
CH2103	Fluid Systems	4
CH2010	Engineering Statistics	3
CH2107	Introduction to Computational Thinking	3
CH3103	Chemical Thermodynamics	3
CH2801	Lab 3	2
HE2005	Principles of Ecometrics	3
ML0003	Kickstart your Career Success	1
HY0001	Ethics & Moral Reasoning	1
		20

Year 2 Semester 2

Course		AU
CH2104	Heat & Mass Transfer	4
CH0494	Introduction to Data Science and Artificial Intelligence	3
CH3141	Advanced Unit Operations	3
CH3102	Chemical Reaction Engineering	4
CH2802	Lab 4	2
HE2002	Intermediate Macroeconomics	3
CH3104	Biochemical Engineering	3
		22

Year 3 Semester 1

Course		AU
CH3101	Process Control and Dynamics	4
CH2140	Unit Operations	4
CH3802	Lab 5	3
CH4101	Chemical, Biological & Plant Safety	2
CH0491	Engineers & Society	3
HE4010	Singapore Economy in A Globalized World	4
ET0001	Enterprise & Innovation	1
HW0288	Engineering Communication II	2
		23

Year 3 Semester 2

Course		AU
HE3021	Intermediate Econometrics	3
	Econs Elective 1	3
	Econs Elective 2	3
	Econs Elective 3	3
	Econs Elective 4	3
	Free elective 1	3

Year 3 Special Semester

CH3885	Professional Attachment	5
		23

Year 4 Semester 1

Course		AU
CH4801	Final Year Design Project	4
CH2109	Decision Tools for Business & Engineering	3
	CBE elective 1	3
	CBE elective 2	3
	Econs Elective 5	3
		16

Year 4 Semester 2

Course		AU
CH4801	Final Year Design Project	4
	CBE elective 3	3
	Free elective 2	2
		9

Year 5 Semester 1

Course		AU
	Econs Elective 6	3
	Econs Elective 7	3
	Econs Elective 8	3
	Econs Elective 9	3
		12

Year 5 Semester 2

Course		AU
	Econs Elective 10	4
	Econs Elective 11	4
	Econs Elective 12	4
		12

Total (AU) **180**