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Internships

All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies. Internships are self-sourced and further information can be found on the Engineering Internships web page: <https://ecms.adelaide.edu.au/study-with-us/student-support/internships/engineering>.

Electives

How to choose an elective course in your area of interest?

Please refer to the steps via the link: <https://ecms.adelaide.edu.au/study-with-us/student-support/enrolment>

Mathematics Electives

Mathematics Electives may be chosen from the Mathematics courses listed in the Program Rules for the degree of Bachelor of Mathematical and Computer Sciences: <https://calendar.adelaide.edu.au/faculty/ecms>

Program Rules

For academic program rules please refer to the following website: <https://calendar.adelaide.edu.au/faculty/ecms>

Information and Enrolment Advice

Ask ECMS

Email: askecms@adelaide.edu.au

Website: <https://ecms.adelaide.edu.au/study-with-us/student-support>

Year 1				
S 2	MATHS 1011 Mathematics IA <input type="checkbox"/>	*CHEM 1200 Chemistry IB <input type="checkbox"/> OR CHEM 1201 Foundations of Chemistry IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	▲ENG 1001 Introduction to Engineering <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	*CHEM 1100 Chemistry IA <input type="checkbox"/> OR CHEM 1101 Foundations of Chemistry IA <input type="checkbox"/>	CHEM ENG 1007 Introduction to Process Engineering <input type="checkbox"/>	Level I/II Science Elective <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CHEM ENG 2011 Process Engineering Thermodynamics <input type="checkbox"/>	CHEM ENG 2014 Heat & Mass Transfer <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CHEM ENG 2010 Process Design II <input type="checkbox"/>	CHEM ENG 2018 Process Fluid Mechanics <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 3033 Separation Process Engineering <input type="checkbox"/>	CHEM ENG 3030 Process Design III <input type="checkbox"/>	Level II Chemical Engineering Elective (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see page 2.				
Year 4				
S 1	CHEM ENG 3034 Chemical Reactor Engineering <input type="checkbox"/>	ENG 3005 Research Methodology & Project Management <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 3031 Process Control & Instrumentation <input type="checkbox"/>	CHEM ENG Unit Operations Laboratory <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	CHEM ENG 4056 Process Design IV <input type="checkbox"/>	CHEM ENG 4034 Chemical Engineering Practice <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 4054 Research Project <input type="checkbox"/>	CHEM ENG 4014 Plant Design Project (6 units) <input type="checkbox"/>	Level IV Chemical Engineering Elective (see elective table) <input type="checkbox"/>	Level IV Chemical Engineering Elective (see elective table) <input type="checkbox"/>
Year 6				
S 1	CHEM ENG 3035 Fluid & Particle Mechanics <input type="checkbox"/>	CHEM ENG 4050 Advanced Chemical Engineering <input type="checkbox"/>	CHEM ENG 3029 Material Science and Engineering <input type="checkbox"/>	Level IV Chemical Engineering Elective (see elective table) <input type="checkbox"/>
Core Courses		Elective (see table)		Double Degree Course

▲EAL: Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering

*Chemistry: Students with at least C+ in SACE Stage 2 Chemistry (or equivalent) must enrol in CHEM 1100 Chemistry IA and CHEM 1200 Chemistry IB. All other students must enrol into CHEM 1101 Foundations of Chemistry IA and CHEM 1201 Foundations of Chemistry IB.

Food and Beverage Engineering Major

Year 1				
S 2	MATHS 1011 Mathematics IA <input type="checkbox"/>	*CHEM 1200 Chemistry IB OR CHEM 1201 Foundations of Chemistry IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	▲ENG 1001 Introduction to Engineering <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	*CHEM 1100 Chemistry IA OR CHEM 1101 Foundations of Chemistry IA <input type="checkbox"/>	CHEM ENG 1007 Introduction to Process Engineering <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CHEM ENG 2011 Process Engineering Thermodynamics <input type="checkbox"/>	CHEM ENG 2014 Heat & Mass Transfer <input type="checkbox"/>	CHEM ENG 2073 Food Engineering <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CHEM ENG 2010 Process Design II <input type="checkbox"/>	CHEM ENG 2018 Process Fluid Mechanics <input type="checkbox"/>	OENOLOGY 2501WT Microbiology for Viticulture and Oenology II <input type="checkbox"/>
S 2	CHEM ENG 3033 Separation Process Engineering <input type="checkbox"/>	CHEM ENG 3030 Process Design III <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see page 2.				
Year 4				
S 1	CHEM ENG 3034 Chemical Reactor Engineering <input type="checkbox"/>	ENG 3005 Research Methodology & Project Management <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 3031 Process Control & Instrumentation <input type="checkbox"/>	CHEM ENG 3036 Unit Operations Laboratory <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	CHEM ENG 4056 Process Design IV <input type="checkbox"/>	CHEM ENG 4034 Chemical Engineering Practice <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
W S	CHEM ENG 4074 Brewery Engineering <input type="checkbox"/>			
S 2	CHEM ENG 4054 Research Project <input type="checkbox"/>	CHEM ENG 4014 Plant Design Project (6 units) <input type="checkbox"/>		CHEM ENG 4075 Winery Engineering (<i>not offered 2022</i>) <input type="checkbox"/>



Year 6			
S 1	CHEM ENG 3035 Fluid & Particle Mechanics <input type="checkbox"/>	CHEM ENG 4050 Advanced Chemical Engineering <input type="checkbox"/>	CHEM ENG 3029 Material Science and Engineering <input type="checkbox"/>
Core Courses	Double Degree Course	Major Course	

EAL: Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering

Chemistry: Students with at least C+ in SACE Stage 2 Chemistry (or equivalent) must enrol in CHEM 1100 Chemistry IA and CHEM 1200 Chemistry IB. All other students must enrol into CHEM 1101 Foundations of Chemistry IA and CHEM 1201 Foundations of Chemistry IB.

Minerals Processing Major

Year 1				
S 2	MATHS 1011 Mathematics IA <input type="checkbox"/>	*CHEM 1200 Chemistry IB <input type="checkbox"/> OR CHEM 1201 Foundations of Chemistry IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	*CHEM 1100 Chemistry IA <input type="checkbox"/> OR CHEM 1101 Foundations of Chemistry IA <input type="checkbox"/>	CHEM ENG 1007 Introduction to Process Engineering <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CHEM ENG 2011 Process Engineering Thermodynamics <input type="checkbox"/>	CHEM ENG 2014 Heat & Mass Transfer <input type="checkbox"/>	CHEM ENG 2019 Introduction to Minerals Processing <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CHEM ENG 2010 Process Design II <input type="checkbox"/>	CHEM ENG 2018 Process Fluid Mechanics <input type="checkbox"/>	CEME 2004 Introduction to Geo-Engineering <input type="checkbox"/>
S 2	CHEM ENG 3033 Separation Process Engineering <input type="checkbox"/>	CHEM ENG 3030 Process Design III <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see page 2.				
Year 4				
S 1	CHEM ENG 3034 Chemical Reactor Engineering <input type="checkbox"/>	ENG 3005 Research Methodology & Project Management <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 3031 Process Control & Instrumentation <input type="checkbox"/>	CHEM ENG 3036 Unit Operations Laboratory <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	CHEM ENG 4056 Process Design IV <input type="checkbox"/>	CHEM ENG 4034 Chemical Engineering Practice <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 4054 Research Project <input type="checkbox"/>	CHEM ENG 4014 Plant Design Project (6 units) <input type="checkbox"/>		CHEM ENG 4058 Metallurgical Processes <input type="checkbox"/>
Year 6				
S 1	CHEM ENG 3035 Fluid & Particle Mechanics <input type="checkbox"/>	CHEM ENG 4050 Advanced Chemical Engineering <input type="checkbox"/>	CHEM ENG 3029 Material Science and Engineering <input type="checkbox"/>	MECH ENG 4112 Combustion Technologies & High Temperature Processes <input type="checkbox"/>
Core Courses	Double Degree Course	Major Course		

[^]EAL: Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering

***Chemistry:** Students with at least C+ in SACE Stage 2 Chemistry (or equivalent) must enrol in CHEM 1100 Chemistry IA and CHEM 1200 Chemistry IB. All other students must enrol into CHEM 1101 Foundations of Chemistry IA and CHEM 1201 Foundations of Chemistry IB.

Pharmaceutical Engineering Major

Year 1				
S 2	MATHS 1011 Mathematics IA <input type="checkbox"/>	*CHEM 1200 Chemistry IB <input type="checkbox"/> OR CHEM 1201 Foundations of Chemistry IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	▲ ENG 1001 Introduction to Engineering <input type="checkbox"/>
Year 2				
S 1	MATHS 1012 Mathematics IB <input type="checkbox"/>	*CHEM 1100 Chemistry IA <input type="checkbox"/> OR CHEM 1101 Foundations of Chemistry IA <input type="checkbox"/>	CHEM ENG 1007 Introduction to Process Engineering <input type="checkbox"/>	ANAT SC 1102 Human Anatomy and Physiology IA OR BIOLOGY 1101 Biology I: Molecules, Genes and Cells <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CHEM ENG 2011 Process Engineering Thermodynamics <input type="checkbox"/>	CHEM ENG 2014 Heat & Mass Transfer <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CHEM ENG 2010 Process Design II <input type="checkbox"/>	CHEM ENG 2018 Process Fluid Mechanics <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 3033 Separation Process Engineering <input type="checkbox"/>	CHEM ENG 3030 Process Design III <input type="checkbox"/>	CHEM ENG 2012 Pharmaceutical Production Processes <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see page 2.				
Year 4				
S 1	CHEM ENG 3034 Chemical Reactor Engineering <input type="checkbox"/>	ENG 3005 Research Methodology & Project Management <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 3031 Process Control & Instrumentation <input type="checkbox"/>	CHEM ENG 3036 Unit Operations Laboratory <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	CHEM ENG 4056 Process Design IV <input type="checkbox"/>	CHEM ENG 4034 Chemical Engineering Practice <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	CHEM ENG 4054 Research Project <input type="checkbox"/>	CHEM ENG 4014 Plant Design Project (6 units) <input type="checkbox"/>		CHEM ENG 4036 Ensuring Quality in Pharmaceutical Manufacturing <input type="checkbox"/>
Year 6				
S 1	CHEM ENG 3035 Fluid & Particle Mechanics <input type="checkbox"/>	CHEM ENG 4050 Advanced Chemical Engineering <input type="checkbox"/>	CHEM ENG 3029 Material Science and Engineering <input type="checkbox"/>	CHEM ENG 4060 Pharmaceutical Formulation & Manufacturing <input type="checkbox"/>
Core Courses	Double Degree Course	Major Course		

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Chemical Engineering Electives

Not all Majors and Double Degrees permit electives in every semester slot.

Level II Chemical Engineering Elective						
			S2	CHEM ENG 2012	Pharmaceutical Production Processes	
				CHEM ENG 2019	Introduction to Minerals Processing	
				CHEM ENG 2073	Food Engineering	
Level IV Chemical Engineering Elective						
S1	MECH ENG 4112	Combustion Technologies & High Temperature Processes		S2	CHEM ENG 4048	Biofuels, Biomass and Wastes
	CHEM ENG 4051	Water and Wastewater Engineering			CHEM ENG 4058	Metallurgical Processes
WS	CHEM ENG 4074	Brewery Engineering		TBC	CHEM ENG 4075	Winery Engineering (not offered 2022)