

Monash Science Pathway to Master of Professional Engineering

MPE commencement: FEBRUARY INTAKE

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It does not substitute for the list of required units as described in the course 'Requirements' section of the [Handbook](#). Please note that the map is subject to updates. Update version: 2 September 2021

Monash Science Pathway

You must take these units during your [Bachelor of Science](#) degree:

Science units: Chemistry: CHM1011 and CHM1022 or CHM1051 and CHM1052 Mathematics: MTH1030 plus one other mathematics unit	Engineering pathway units (24 points): CHE2161 Mechanics of fluids CHE2163 Heat and mass transfer CHE3162 Process control CHE3164 Reaction engineering
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Master of Professional Engineering

Specialisation – Chemical engineering

Bioprocessing and food engineering stream

Block credits for completed Monash Science Pathway engineering units					
YEAR 1 Semester 1 February	CHE2162 Materials and energy balance	CHE3165 Separations processes	ENG5001 Advanced engineering data analysis	CHE3161 Chemistry and chemical thermodynamics	ENG0003 Continuous Professional Development
YEAR 2 Semester 2 July	CHE5112 Advanced fluid dynamics	CHE5113 Advanced separation processes	CHE5889 Food engineering and processing	CHE3166 Process design	
YEAR 2 Semester 1 February	CHE5110 Advanced thermodynamics	CHE5881 Advanced reaction engineering	ENG5100 Professional engineer in organisation and society	Chemical engineering enhancement unit	
YEAR 3 Semester 2 July	CHE5105 Integrated design	ENG5005 Research methods	CHE5882 Biomass and biorefineries	CHE5888 Sustainability and innovation	
YEAR 3 Semester 1 February	CHE5884 Process modelling and optimisation	ENG5006 Research practice	Chemical engineering enhancement unit	Chemical engineering enhancement unit	

<input type="checkbox"/> Part A. Engineering foundation knowledge and application	<input type="checkbox"/> Part B. Engineering specialist knowledge and application	<input type="checkbox"/> Enhancement learning
<input type="checkbox"/> Part D. Research and knowledge skills	<input type="checkbox"/> Part E. Professional practice	

Chemical engineering enhancement units

ENG5002 Engineering entrepreneurship	MEC5888 Renewable energy systems
CHE5883 Nanostructured membranes for separation and energy production	MTE5882 Advanced polymeric materials
CHE5886 Advanced biopolymers	MTE5887 Additive manufacturing of polymeric and functional materials
ENG5008 Work integrated learning	

Continuous Professional Development (CPD)

CPD is a compulsory requirement for all Master of Professional Engineering students. It's a collection of all work, volunteering and personal and professional development opportunities. You must complete a total of **420 hours** of CPD activities and submit a series of reflections on their experience with particular reference to the development of each of the key Engineers Australia Stage 1 competencies. Further information is available on the [CPD website](#).

Monash Science Pathway to Master of Professional Engineering

MPE commencement: JULY INTAKE

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Master of Professional Engineering

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