UNSW Co-op Program Scholarship

Sample Study Outline

Materials Science and Engineering (Honours) (MSA)

Program / Degree: 3131 BE(Honours) in Materials Science and Engineering

Year	Term 1	UOC	Term 2	UOC	Term 3	UOC
1st	CHEM1811 Engineering Chemistry 1A	6	CHEM1821 Engineering Chemistry 1B	6	DESN1000 Introduction to Engineering Design and Innovation	6
	MATS1192 Design and Applications of Materials in Science and Engineering	6	MATH1231 Mathematics 1B	6	ENGG1811 Computing for Engineers	6
	MATH1131 Mathematics 1A	6			PHYS1121 Physics 1A	6
	Total UOC	18	Total UOC	12	Total UOC	18
2nd	MATS2001 Physical Prop of Materials	6	MATS2004 Mechanical Behaviour of Mats	6	***ENGG4909 Co-op Industry Training 1***	**12**
	MATS2003 Materials Characterisation	6	MATS2008 Thermodynamics & Phase Equilibria	6		
	MATH2019 Engineering Mathematics 2E	6	General Education/Free Elective*	6		
	Total UOC	18	Total UOC	18	Total UOC (nominal)	12
3rd	MATS3001 Micromechanisms of Mechanical Behaviour of Metals	6	MATS3002 Fundamentals of Ceramic Processing	6	MATS2009 Transport Processes in Materials Engineering	6
	MATS3005 Phase Transformations	6	MATS3004 Polymer Sci & Engineering 1	6	MATS3008 Design and Engineering of Composites and Coatings	6
	MATH2089 Numerical Methods & Statistics	6	MATS3006 Design and Applications of Materials in Science and Engineering 3	6	MATS3007 Materials Industry Management	6
	Total UOC	18	Total UOC	18	Total UOC	18
4th	**ENGG4902 *Co-op Industry Training 2A***	**12**	**ENGG4903 *Co-op Industry Training 2B***	**6**	**ENGG4905 *Co-op Industry Training 3B***	**12**
			ENGG4904 *Co-op Industry Training 3A*	**6**		
	Total UOC (nominal)	12	Total UOC (nominal)	12	Total UOC (nominal)	12
5th	MATS4025 Honours Project A	4	MATS4026 Honours Project B	4	MATS4027 Honours Project C	4
	MATS4014 Sustainable Materials Selection and Design	6	MATS Discipline Elective#	6	MATS Discipline Elective#	6
			General Education/Free Elective*	6	General Education/Free Elective*	6
	MATS4015 Data Management and Communication for Materials Engineers	6	General Education/Free Elective*	6		
	Total UOC	16	Total UOC	22	Total UOC	16

* Complete 24 UOC in total comprising of 12 UOC General Education courses and 12 UOC Free Electives (can be done in any term depending on student's timetable).

Select from MATS4004 Fracture Mechanics and Failure Analysis, MATS4007 Engineered Surfaces to Resist Corrosion and Wear, MATS4016 Structural Materials in Transportation and Infrastructure, MATS4017 Materials for Renewable Energy Technologies, MATS4018 Materials and Processing of Electronic Circuits and Devices, MATS4019 Materials and Processes for Biomedical Applications (complete 12 UOC in total).

Notes:

- This is a SAMPLE study outline only and can be subject to change.
- You must always take your Industry Training schedule into consideration when planning your course enrolment or other commitments (see diagram below).

Resources:

- UNSW Handbook: https://www.handbook.unsw.edu.au/undergraduate/programs/2024/3131?q=3131
- School: http://www.materials.unsw.edu.au/
- Co-op: http://www.coop.unsw.edu.au/programs/materials-science-and-engineering-msa

Co-op Academic Coordinator

For enrolment related questions please always contact your Co-op Academic Coordinator in the first instance:

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When would I be on Industry Training (IT)?