

DEPARTMENT OF MECHANICAL ENGINEERING

For students starting second year fall 2022

Students are expected to follow either the 4 year or the 5 year model program as closely as possible. This will ensure prerequisite and timetable requirements are met.

5 YEAR MODEL A PROGRAM

Note: c = corequisite Offered in all 3 terms (Fall/Winter/Summer)

Offered fall & winter terms

* common to all engineering programs

2022

FALL TERM					WINTER TERM					
FIRST YEAR	(2021)	hr	Prerequisites (*	16.5 hrs)	(2022)		hr	Prerequisites (15 hrs)		
CHEM 1100 *	Intro Chem 1	3	(formerly CHEM 130	0)	ENG 1430 *	Eng Design	3			
CHEM 1122 *	Chem Techs for Eng 1	1.5_	5		ENG 1450 *	Intro Elec Eng	3			
COMP 1012 *	Comp Prog Eng	3	p or c MATH 1510		ENG 1460 *	Thermal Sci	3			
PHYS 1050 *	Physics	3	p or c MATH 1510		MATH 1210 *	C/L Algebra	3			
ENG 1440*	Eng Statics	3			MATH 1710 *	-	3	1500/1510, p or c PHYS 1050		
MATH 1510 *	App Calc 1	3								
SECOND YEAR	(2022)			(18.5 hrs)	(2023)			(20 hrs)		
CHEM 1110 *	Intro Chem 2	3	CHEM 1100 (formerly CHE		MATH 2132 *	Math Analysis 2	3	MATH 1700/1710, MATH 1210		
CHEM 1126 *	Chem Techs for Eng 2	1.5	p or c CHEM 1122		MECH 2150	Numerical Methods	4	COMP 1012, p or c MATH 2132		
MATH 2130 *	-		2.		MECH 2112	C.A.D.	5	ENG 1430		
	Math Analysis 1	3	MATH 1700/1710,1210							
MECH 2202	Thermodynamics	4	ENG 1460, MATH 1500/10		MECH 2262	Fluid Mechanics	4	PHYS 1050, ENG 1440, ENG 1460 MATH 2130, p or c MATH 2132		
MECH 2222 Written English	Mechanics of Materials Choose course from	4	PHYS1050 ENG1440 COMP101	2 MATH1710	MECH 2272	Materials 1	4			
Requirement *	approved List	3					-	CHEM 1110/1126 or 1310, MECH 2222		
THIRD YEAR	(2023)			(15 hrs)	(2024)			(15 hrs)		
MATH 3132*	Math Analysis 3	3	MATH 2130, MATH 2132		MECH 3430	Meas. & Control	4	MATH 3132, ENG 1450		
MECH 3482	Kin.& Dynamics	4	PHYS 1050, COMP 1012,	Yr Cl 3	MECH 3420	Vibes	4	MECH 3482, MATH 3132		
MECH 3492	Fluids 2	4	MECH 2262, p or c MECH	2150	ENG 2030 or	* Eng Communication	3	Written English Course, ENG 1430		
MECH 3502	Stress Analysis	4	MECH 2112, MECH 2222, MA	TH 2130	ENG 2040*	Eng Communication		Witten English Course, ENG 1450		
					Technical Ele	ctive #1	4	(5 technical electives required in total)		
FOURTH YEAR	(2024)			(19 hrs)	(2025)			(17 hrs)		
ECE 3010	Digital Systems	4	ENG 1450, MATH 2132, Y	r Cl 3	ENG 3000*	Eng Economics	3	Yr Cl 3, (formerly CIVL 4050)		
MECH 3542	Materials 2	4	MECH 2272		MECH 3460	Heat Transfer	4			
MECH 3170	Project Management	4	MECH 2112 (formerly MEC	CH 2012)			•	1460, P or C MECH 3492		
			CE choice = 1000 level or bett	er from		Mashina Daaina				
•	(PHIL 1290 or Choice)		Faculty of Arts or Management		MECH 3652	Machine Design		MECH 3482, MECH 3502		
Technical Electiv	ve #2	4	(5 technical electives required	in total)	MECH 3992	ME Labs Thermofluids	2	ENG 2030/40, MECH 2202, MECH 2262, P or C 3460, Winter Only		
					Technical Ele	ctive #3	4	(5 technical electives required in total)		
	(2025)			(14 hrs)			_	(13 hrs)		
MECH 3982	ME Labs Solid Mech	2	ENG 2030/40, MECH 222 MECH 3420, Fall C		ENG 3020	Tech Soc		Written English (formerly CIVL 4460)		
STAT 2220 *	Eng Statistics	3	MATH 1700/1710		PHYS 1070	Physics 2	3	Phys 1050, MATH 1500/10, P or C Math 1700/10		
MECH 4860	Eng. Design Fall Only	5	ENG 2030/40, MECH 3170, M	ECH 3652	Technical Ele	ctive #5	4	(5 technical electives required in total)		
Technical Elect	ive #4	4	(5 technical electives required	in total)	Indigenous Knowledge Course	Choose course from approved list. See last page	3	MECH Program		
						,		e taken any term as scheduling allows)		
Te	echnical electives (TE)	offere	d vary from year to year.	See final p	bage for compl	ete TE course list or o	n th	e Mechanical website		
	9 hours of Comp. Electives Required = (Written Requirement, PHIL 1290 or Choice, Indigenous Knowledge Course)									
Total credit hrs: 163										



DEPARTMENT OF MECHANICAL ENGINEERING

For students starting second year fall 2022

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5 YEAR MODEL B PROGRAM

Note: c = corequisite

Offered in all 3 terms (Fall/Winter/Summer)

Offered fall & winter terms

	FALL	. TEF	M		WINTE	R	* common to all engineering program		
FIRST YEAR	(2021)	hr	Prerequisites (16.5 hrs)	(2022)		hr	Prerequisites (15 hrs)		
CHEM 1100 *	Intro Chem 1	3	(formerly CHEM 1300)	ENG 1430 *	Eng Design	3			
CHEM 1122 *	Chem Techs for Eng 1	1.5_		ENG 1450 *	Intro Elec Eng	3			
COMP 1012 *	Comp Prog Eng	3	p or c MATH 1510	ENG 1460 *	Thermal Sci	3			
PHYS 1050 *	Physics	3	p or c MATH 1510	MATH 1210 *	C/L Algebra	3			
ENG 1440*	Eng Statics	3		<mark>MATH 1710 *</mark>	App Calc 2	3	1500/1510, p or c PHYS 1050		
MATH 1510 *	App Calc 1	3							
SECOND YEAR	(2022)		(15.5 hrs)	(2023)			(17 hrs		
CHEM 1110 *	Intro Chem 2	3	CHEM 1100 (formerly CHEM 1310)	MATH 2132 *	Math Analysis 2	3	MATH 1700/1710, MATH 1210		
CHEM 1126 *	Chem Techs for Eng 2	1.5	p or c CHEM 1122	MECH 2202	Thermodynamics	4	ENG 1460, MATH 1500/10/1700/10		
MATH 2130 *	Math Analysis 1	3	MATH 1700/1710,1210	MECH 2222	Mechanics of Materials	4	PHYS1050 ENG1440 COMP1012 MATH17		
MECH 2112	C.A.D.	5	ENG 1430	Comp. Elective	* (PHIL 1290 or Choice)	3	CE choice = 1000 level or better from Faculty of Arts or Management		
Written English Requirement *	Choose course from approved List	3		Indigenous Knowledge Course	Choose course from approved list. See last page	3	MECH Program		
						an be	e taken any term as scheduling allows)		
THIRD YEAR	(2022)		(19 bro)	(2024)			(46 bac		
MATH 3132*	(2023) Math Analysis 3	3	(18 hrs) MATH 2130, MATH 2132	(2024) MECH 3482	Kin. & Dynamics	1	(16 hrs PHYS 1050, COMP 1012, Yr Cl 3		
MECH 2150	Numerical Methods	4	COMP 1012, p or c MATH 2132	MECH 3492	Fluids 2	4			
MECH 2262	Fluid Mechanics	4	PHYS 1050, ENG 1440, ENG 1460	MECH 3502	Stress Analysis		MECH 2112, MECH 2222, MATH 2130		
			MATH 2130, p or c MATH 2132	MECH 3542	Materials 2		MECH 2272		
MECH 2272	Materials 1	4	CHEM 1110/1126 or 1310, MECH 2222						
ENG 2030 or*	Eng Communication	_	Written English Course, ENG						
ENG 2040*	Eng Communication	3	1430						
	(2024)		(40 hrs)	(2025)			(47 km		
FOURTH YEAR ECE 3010	(2024)	4	(18 hrs)	(2025) STAT 2220 *	Face Otatiation		(17 hrs		
MECH 3420	Digital Systems Vibes	4 4	ENG 1450, MATH 2132, Yr Cl 3 MECH 3482, MATH 3132	MECH 3170	Eng Statistics Project Management		MATH 1700/1710 MECH 2112 (formerly MECH 2012)		
MECH 3460	Heat Transfer	4	MECH 2150, MATH 3132, ENG 1460,		ME Labs Thermofluids	2	· · · · · ·		
		-	P or C MECH 3492	MEONOSSE		2	2262, P or C 3460, Winter Only		
MECH 3652	Machine Design	4	MECH 3482, MECH 3502	Technical Ele	ctive #1	4	(5 technical electives required in total)		
MECH 3982	ME Labs Solid Mech	2	ENG 2030/40, MECH 2222, P or C MECH 3420, Fall Only	Technical Ele		4	(5 technical electives required in total)		
FIFTH YEAR	(2025)		(17 hrs)	(2026)			(13 hrs		
MECH 3430	Meas. & Control	4	MATH 3132, ENG 1450	ENG 3000*	Eng Economics	3	(formerly CIVL 4050)		
MECH 4860	Eng. Design Fall Only	5	ENG 2030/40, MECH 3170, MECH 3652	ENG 3020	Tech Soc	3	Written English (formerly CIVL 4460)		
Technical Electiv	ve #3	4	(5 technical electives required in total)	PHYS 1070	Physics 2	3	Phys 1050, MATH 1500/10, P or C		
Technical Electiv	ve #4	4	(5 technical electives required in total)				Math 1700/10		
				Technical Elective #5 4 (5 technical electives required in total)					
Te	. ,		d vary from year to year. See final	•					
	9 hours of Comp. E	Electiv	es Required = (Written Requiremen	t, PHIL 1290 o	Choice, Indigenous K	nov	wledge Course)		
	Total credit hrs: 163								

DEPARTMENT OF MECHANICAL ENGINEERING

This will ensure pFIRST YEAR(20CHEM 1100 *IntrCHEM 1122 *CheCOMP 1012CorPHYS 1050 *PhyENG 1440*EngMATH 1510 *AppWritten EnglishCheRequirement *CorSECOND YEAR(20CHEM 1110 *IntrCHEM 1110 *IntrCHEM 1126 *CheMATH 2130 *Mat	prerequisite and a FALL 021) fro Chem 1 hem Techs for Eng 1 omp Prog Eng hysics ing Statics op Calc 1 hoose course from oproved List	timet: TERI hr 3 3 3 3 3 3	Prerequisites (19.5 hrs) (formerly CHEM 1300)	(2022) ENG 1430 * ENG 1450 * ENG 1460 * MATH 1210 * MATH 1710 *		ER 1 hr 3 3 3 3 3 3	Offered in all 3 terms (Fall/Winter/Sumn Offered fall & winter ter * common to all engineering progra TERM Prerequisites (18 hrs)
FIRST YEAR (20 CHEM 1100 * Intr CHEM 1122 * Che COMP 1012 Cor PHYS 1050 * Phy ENG 1440* Eng MATH 1510 * App Written English Requirement * Che SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	FALL 021) tro Chem 1 hem Techs for Eng 1 omp Prog Eng hysics ng Statics op Calc 1 hoose course from oproved List	TERI hr 1.5_ 3 3 3 3 3 3	M Prerequisites (19.5 hrs) (formerly CHEM 1300)	ENG 1430 * ENG 1450 * ENG 1460 * MATH 1210 * MATH 1710 *	Eng Design Intro Elec Eng Thermal Sci C/L Algebra App Calc 2	hr 3 3 3 3 3	* common to all engineering progra
CHEM 1100 * Intr CHEM 1122 * Cha COMP 1012 Cor PHYS 1050 * Phy ENG 1440* Eng MATH 1510 * App Written English Requirement * Cha SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Cha MATH 2130 * Mat	021) tro Chem 1 hem Techs for Eng 1 omp Prog Eng hysics og Statics op Calc 1 hoose course from oproved List	hr 3 3 3 3 3 3	Prerequisites (19.5 hrs) (formerly CHEM 1300)	ENG 1430 * ENG 1450 * ENG 1460 * MATH 1210 * MATH 1710 *	Eng Design Intro Elec Eng Thermal Sci C/L Algebra App Calc 2	hr 3 3 3 3 3	TERM
CHEM 1100 * Intr CHEM 1122 * Cha COMP 1012 Cor PHYS 1050 * Phy ENG 1440* Eng MATH 1510 * App Vritten English Requirement * Cha SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Cha MATH 2130 * Mat	021) tro Chem 1 hem Techs for Eng 1 omp Prog Eng hysics og Statics op Calc 1 hoose course from oproved List	hr 3 3 3 3 3 3	Prerequisites (19.5 hrs) (formerly CHEM 1300)	ENG 1430 * ENG 1450 * ENG 1460 * MATH 1210 * MATH 1710 *	Eng Design Intro Elec Eng Thermal Sci C/L Algebra App Calc 2	hr 3 3 3 3 3	
CHEM 1100 * Intr CHEM 1122 * Cha COMP 1012 Cor PHYS 1050 * Phy ENG 1440* Eng MATH 1510 * App Written English Requirement * Cha SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Cha MATH 2130 * Mat	tro Chem 1 hem Techs for Eng 1 homp Prog Eng hysics hg Statics hp Calc 1 hoose course from hoproved List 022) tro Chem 2	3 1.5_ 3 3 3 3 3	(formerly CHEM 1300)	ENG 1430 * ENG 1450 * ENG 1460 * MATH 1210 * MATH 1710 *	Intro Elec Eng Thermal Sci C/L Algebra App Calc 2	3 3 3 3 3	Prerequisites (18 hrs)
CHEM 1122 * Che COMP 1012 Cor PHYS 1050 * Phy ENG 1440* Eng MATH 1510 * App Vritten English Requirement * Che SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	mem Techs for Eng 1 pmp Prog Eng hysics ng Statics pp Calc 1 hoose course from hyproved List 022) tro Chem 2	1.5 3 3 3 3 3		ENG 1450 * ENG 1460 * MATH 1210 * MATH 1710 *	Intro Elec Eng Thermal Sci C/L Algebra App Calc 2	3 3 3 3	
COMP 1012 Cor PHYS 1050 * Phy ENG 1440* Eng MATH 1510 * App Vritten English Requirement * Chr SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Chr MATH 2130 * Mat	omp Prog Eng hysics ng Statics op Calc 1 hoose course from oproved List	3 3 3 3 3		ENG 1460 * MATH 1210 * MATH 1710 *	Thermal Sci C/L Algebra App Calc 2	3 3 3	
PHYS 1050 * Phy ENG 1440* Eng MATH 1510 * Chi Written English Requirement * 200 SECOND YEAR (200 CHEM 1110 * Chi CHEM 1126 * Chi MATH 2130 * Mat	nysics ng Statics op Calc 1 noose course from oproved List 022) tro Chem 2	3 3 3		MATH 1210 * MATH 1710 *	C/L Algebra App Calc 2	3 3	
ENG 1440* Eng MATH 1510 * App Written English Requirement * app SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	ng Statics pp Calc 1 <u>noose course from</u> <u>pproved List</u> 022) tro Chem 2	3 3 3	pore math 1510	MATH 1710 *	App Calc 2	3	
MATH 1510 * App Written English Requirement * 20 SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	op Calc 1 hoose course from oproved List 022) tro Chem 2	3 3					1500/1510, p or c PHYS 1050
Written English Requirement * Ch SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	opproved List 022) aro Chem 2	3					CE choice = 1000 level or better from
SECOND YEAR (20 CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	022) tro Chem 2					Ŭ	Faculty of Arts or Management
CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	tro Chem 2						
CHEM 1110 * Intr CHEM 1126 * Che MATH 2130 * Mat	tro Chem 2		(04 E has)	(2022)			(00 h
CHEM 1126 * Che MATH 2130 * Mat		2	(21.5 hrs)	, ,	Math Analysis 0		(23 h
MATH 2130 * Mat	Ichi Teons for Eng E	3 1.5	CHEM 1100 (formerly CHEM 1310) p or c CHEM 1122	MATH 2132 MECH 2112	Math Analysis 2		MATH 1700/1710, MATH 1210 ENG 1430
	ath Analysis 1	3	MATH 1700/1710,1210	MECH 2112 MECH 2150	C.A.D. Numerical Methods	5 4	
	ig Statistics	3	MATH 1700/1710		Fluid Mechanics	4	PHYS 1050, ENG 1440, ENG 146
MECH 2202 The	ermodynamics	4	ENG 1460, MATH 1500/10/1700/10				MATH 2130, p or c MATH 2132
	echanics of Materials	4	PHYS1050 ENG1440 COMP1012 MATH1710	MECH 2272	Materials 1	4	CHEM 1110/1126 or 1310, MECI
ndigenous Cho	oose course from						2222
Knowledge ^{app} Course ^{pag}	proved list. See last ge	3	MECH Program	ENG 2030 or*	Eng Communication	_	
	•			ENG 2040*	Eng Communication	3	Written English Course, ENG 143
					-		
THIRD YEAR (20	023)		(23 hrs)	(2024)			(22 h
MATH 3132* Mat	ath Analysis 3	3	MATH 2130, MATH 2132	MECH 3420	Vibes	4	MECH 3482, MATH 3132
MECH 3170 Pro	oject Management	4	MECH 2112 (formerly MECH 2012)	MECH 3430	Meas. & Control	4	MATH 3132, ENG 1450
	n. & Dynamics	4	PHYS 1050, COMP 1012, Yr Cl 3	MECH 3460	Heat Transfer	4	MECH 2150, MATH 3132, El 1460, P or C MECH 3492
	uids 2	4	MECH 2262, p or c MECH 2150				
	ress Analysis	4	MECH 2112, MECH 2222, MATH 2130	MECH 3652	Machine Design		MECH 3482, MECH 3502
MECH 3542 Mat	aterials 2	4	MECH 2272	MECH 3992	ME Labs Thermofluids	2	ENG 2030/40, MECH 2202, MEC 2262, P or C 3460, Winter Only
				Technical Ele	ctive #1	4	(5 technical electives required in total)
FOURTH YEAR (20	024)		(19 hrs)	(2025)			(17 h
ECE 3010 Dig	gital Systems	4	ENG 1450, MATH 2132, Yr Cl 3	ENG 3000*	Eng Economics	3	(formerly CIVL 4050)
MECH 3982 ME	E Labs Solid Mech	2		ENG 3020	Tech Soc	3	Written English (formerly CIVL 4460)
			MECH 3420, Fall Only	PHYS 1070	Physics 2	3	Phys 1050, MATH 1500/10, P or
MECH 4860 Eng	ig. Design Fall Only	5	ENG 2030/40, MECH 3170, MECH 3652				Math 1700/10
Technical Elective #2	¥2	4	(5 technical electives required in total)	Technical Ele	ctive #4	4	
Fechnical Elective #3	#3	4	(5 technical electives required in total)	Technical Ele	ctive #5	4	(5 technical electives required in total)
			l vary from year to year. See final p es Required = (Written Requirement		ete TE course list or or	n the	e Mechanical website

2022

4 4 YEAR MODEL PROGRAM

Technical Elective Option and Streams in Mechanical Engineering

Students are required to take has 5 Technical Elective (TE) slots to be filled with non-core courses of your choice from the list of technical electives offered each year. Students wishing to pursue a variety of Mechanical topics have the chance here to do so by choosing courses in a variety of subject/research areas.

The 5 Technical Elective spots can be filled with courses from our Aerospace Option or Streams in Aerospace, Materials, Solid Mechanics, Thermofluids and Manufacturing.

To obtain the Aerospace Option students must take all courses from List A and a choice of 2 from List B. A Stream consists of 3 courses out of 5 TE slots.

To obtain a stream on your transcript select 3 TE courses from the stream area of your choice and 2 TE courses from the same area, another area or Thesis.

Students interested in research and experimentation have the option of replacing 2 Technical Elective slots with a 6-credit-hour Thesis (MECH 4162). Work on the thesis is done under the supervision of a Faculty Advisor and begins in September with an April completion date, done in the student's graduating year.

Please note:

- 1) Technical Electives listed may vary from year to year and may have limited space.
- 2) Students are urged to consult the Mechanical Engineering office or the website for a current list of technical electives offered.
- Students must be in their graduating year to register for MECH 4162 Thesis. 3)
- 4) Students may NOT use the same technical elective to count toward multiple streams.

Aerospace Opt	tion			Solid Mechanics Stream					
Complete all 3 TEs in List A. Choose the remaining			from List B. Some courses in List B will be	Choose 3 from the following 6 courses. Choose the remaining 2 TEs from the same strea					
offered in alternating	g years.	-		other TEs, or the	sis. Some courses will be offe	ered i	in alternating years.		
ist A (select 3		hr	Prerequisites			hr	Prereguisites		
MECH 3520	Aerodynamics	4	MECH 2150, MECH 3492	MECH 4182	Aerospace Structures: Analysis and Design	4	MECH 3502		
<u>MECH 4182</u>	Aerospace Structures: Analysis and Design	4	MECH 3502	MECH 4472	Mechanical Vibration	4	MECH 3420		
MECH 4192	Aerospace Materials and Manufacturing Processes	4	MECH 3542	<u>MECH 4510</u>	Fundamentals of Finite Element Analysis	4	MECH 2150, MATH 3132, MECH 2222		
_ist B (select 2	• 2)			MECH 4532	Advanced Strength of Materials	4	MECH 3502		
MECH 4200	Gas Turbine Propulsion Systems	4	MECH 2202, MECH 3520	MECH 4550	Noise Control	4	Instructor Approval		
<u>MECH 4452</u>	Aircraft Performance, Dynamics and Design	4	MECH 3520	MECH 4672	Advanced Mechanism Design	4	MECH 3482		
MECH 3582	Manufacturing Planning and Quality Control	4	MECH 2112 (formerly MECH 2012)	Thernofluids	s Stream				
<u>MECH 4482</u>	Applied Aerospace Instrumentation	4	MECH 3430, MECH 3982/92		e following 8 courses. Choos sis. Some courses will be offe		e remaining 2 TEs from the same stream, in alternating years.		
<u>MECH 4432</u>	Systems Engineering	4	Instructor Approval	MECH 4292	IC Engines	4	MECH 2202		
<u>ENG 4110</u>	Operational Excellence	4	STAT 2220 or (STAT 1000/2000)	MECH 4412	Heating, Ventilation and Air Conditioning	4	MECH 2202		
Aerospace Stream				MECH 4560	Selected Topics in Fluid Mechanics 4M	4	MECH 3132, MECH 3492		
	the following 5 courses. Choo e courses will be offered in alt		maining 2 TEs from the same stream, other years.	MECH 4680	Energy Conservation and Utilization	4	MECH 2202		
MECH 3520	Aerodynamics	4	MECH 2150, MECH 3492	MECH 4692	Renewable Energy	4	MECH 2202, MECH 2262, P or C MECH 3460		
<u>MECH 4182</u>	Aerospace Structures: Analysis and Design	4	MECH 3502	<u>MECH 4694</u>	Advanced Topics in Heat Transfer	4	MECH 3460		
<u>MECH 4192</u>	Aerospace Materials and Manufacturing Processes	4	MECH 3542	<u>MECH 4702</u>	Design of Thermal Systems	4	MECH 2202		
MECH 4200	Gas Turbine Propulsion Systems	4	MECH 2202, MECH 3520	MECH 4822	Numerical Heat Transfer in Fluid Flow	4	MECH 3132, MECH 2150, MECH 3460, MECH 3492		
MECH 4452	Aircraft Performance, Dynamics and Design	4	MECH 3520	Manufacturii	ng Stream				
Materials Stream				other TEs, or the	Choose 3 from the following 10 courses. Choose the remaining 2 TEs from the other TEs, or thesis. Some courses will be offered in alternating years.				
Choose 3 from the following 5 courses. Choose the or thesis. Some courses will be offered in alternation				MECH 3550	Robotics and Computer	4	MECH 2112		
	Aerospace Materials and). 		Numerical Control Introduction to	4			
<u>MECH 4192</u>	Manufacturing Processes	4	MECH 3542	MECH 3562	Optimization	4	MECH 2112, STAT 2220		
MECH 4350	Topics in Engineering Material 1	4	Instructor Approval	<u>MECH 3570</u>	Manufacturing Automation	4	MECH 3550		
MECH 4360	Topics in Engineering Materials 2	4	Instructor Approval	MECH 3582	Manufacturing Planning and Quality Control	4	MECH 2112		

University Manitoba Price Faculty of Engineering Department of Mechanical Engineering

THE OTT TOLO	Corrosion of Metals and Alloys	4	MECH 3542	MECH 3592	Simulation Modeling and Facility Planning	4	MECH 2112
	Fracture and Failure of Engineering Materials	4	MECH 3542	MECH 4192	Aerospace Materials and Manufacturing Processes	4	MECH 3542
				MECH 4240			
* Confirm topics	titles with your student	or or see the Dept. website for a list	MECH 4330	Contemporary Topics in Manufacturing Engineering	4	Depends on the topic title at the time	
C	f Technical Elective off	for the current year	MECH 4342	Contemporary Topics in Manufacturing Engineering	4	Depends on the topic title at the time	
http	os://umanitoba.ca/engir	neering	/mechanical/advising				

INDIGENOUS KNOWLEDGE COURSE

Students are required to take at least one of the courses from the list of Indigenous Knowledges courses. ENG 4100* may be used to meet this requirement when the course content satisfies the requirements for an Indigenous course. Students admitted to Civil Engineering in Fall 2021 who have completed two complementary studies elective courses (or 6 credit hours) prior to admission to the program, may use one of those courses in place of the Indigenous knowledge course. Prerequisites must be met for all courses.

Crs #	Course Title	Credit Hours
INDG 1200	Indigenous Peoples in Canada (6)	6 hrs
	NOTE: INDG 1200 is a spanned course offered both fall and winter. If you register in the fall the system will automaically register you in the winter term.	
ENG 4100*	Contemporary Topics in Eng. Practice (4) (see note above)	4 hrs
INDG 1220	Indigenous Peoples in Canada Part 1 (3)	3 hrs
INDG 1240	Indigenous Peoples in Canada Part 2 (3)	3 hrs
INDG 2012/ HIST 2010	Indigenous History in Canada (3)	3 hrs
INDG 2020/ HIST 2020	The Metis in Canada (3)	3 hrs
POLS 2802	Introduction to Indigenous Politics (3)	3 hrs
POLS 3870	Politics of Indigenous-Settler Relations (3)	3 hrs