

MODEL ROUTE							
School:	School of Engineering Technology & Applied Sciences - AMAT	Program Number:	3713				
Program Title:	Mechanical Engineering Technology - Design (PTY)	Credential:	☐ Certificate ☐ Diploma ☐ Degree	☐ Graduate Certificate ☒ Advanced Diploma			
Delivery Mode:	☐ Non Co-Op ☒ Co-Op ☐ Fast Track	Duration:	☐ 2 Semesters ☐ 4 Semesters ☐ 8 Semesters	☐ 3 Semesters ☐ 6 Semesters ☒ 9 Semesters			
Intake:	Fall 2025						
Course Code	Course Title	Pre-Requisite (Course Code)	Lab Hours	Lecture Hours	Total Weekly Hours	Weeks (14)	Total Hours
Semester 1	Fall 2025						
MT-102	Properties of Material		1	2	3	14	42
MT-103	Machine Shop		3	1	4	14	56
MT-106	CAD I/Blueprint Reading		3	2	5	14	70
PHYS-100	Physics		0	3	3	14	42
MATH-170	Technology Math 2	MATH-140 or Test Score	0	3	3	14	42
COMM-160/161	College Communications 1		0	3	3	14	42
GNED	General Education Elective		0	3	3	14	42
Total							336
Semester 2	Winter 2026						
MT-121 *	Applied Statics	PHYS-100	0	4	4	14	56
MT-153	CAD II	MT-106 or (MT-151 & MT-152) or FT Code	4	0	4	14	56
MT-237 ♦	Manufacturing Processes		0	3	3	14	42
MT-256	Applied Electricity	MATH-140 or MATH-170	2	2	4	14	56
MATH-180 *	Technology Math 3	MATH-170 or FT Code	0	3	3	14	42
GNED-500	Global Citizenship: From Social Analysis to Social Action		0	3	3	14	42
COMM-170/171	College Communications 2	COMM-160/161	0	3	3	14	42
Total							336
Semester 3	Fall 2026						
MT-201	CAD/CAM Programming	(MT-103 & MATH-170/140) or FT Code	4	0	4	14	56
MT-204 *	Strength of Materials	MT-121 & MATH 170	1	3	4	14	56
MT-318 *	Fluid Mechanics 1	MATH-170 or MT-204 or FT Code	1	3	4	14	56
MATH-231 *	Diff. Calc. & Analyt. Geometry	MATH-180 (C grade)	0	4	4	14	56
MATH-316	Statistics	MATH-170	2	2	4	14	56
AMEG-212 ♦	Applied Ethics in Technology & the Environment		0	2	2	14	28
Total							308
Semester 4	Winter 2027						
MT-224 *	Applied Dynamics	MT-121 or FT Code	0	4	4	14	56
MT-225	Hydraulics & Pneumatics		2	2	4	14	56
MT-228	Tool Design	MT-153 or FT Code	2	2	4	14	56
MT-257	Quality Assurance		1	2	3	14	42
MATH-232	Integral Calculus	MATH-231 (C grade)	0	4	4	14	56

MODEL ROUTE							
School:	School of Engineering Technology & Applied Sciences - AMAT		Program Number:	3713			
Program Title:	Mechanical Engineering Technology - Design (PTY)		Credential:	☐ Certificate ☐ Diploma ☐ Degree	☐ Graduate Certificate ☒ Advanced Diploma		
Delivery Mode:	☐ Non Co-Op ☒ Co-Op ☐ Fast Track		Duration:	☐ 2 Semesters ☐ 4 Semesters ☐ 8 Semesters	☐ 3 Semesters ☐ 6 Semesters ☒ 9 Semesters		
Intake:	Fall 2025						
Course Code	Course Title	Pre-Requisite (Course Code)	Lab Hours	Lecture Hours	Total Weekly Hours	Weeks (14)	Total Hours
ENGL-250	Report Writing in a Technical Environment	COMM-170/171	0	2	2	14	28
Total							294
Semester 5	Fall 2027						
MT-258	Project: Design & Construction	(MT-153 & MT-204) or FT Code	4	0	4	14	56
MT-305	Dynamics of Machines & Mechanisms	MT-224	0	3	3	14	42
MT-309	Thermodynamics 1	ESET-221 or MT-318	1	3	4	14	56
MT-335	Machine Design 1	MT-204 or FT Code	0	4	4	14	56
MT-338	Fluid Mechanics 2	MT-318	1	3	4	14	56
MTID-311 ♦	Operational Excellence		0	4	4	14	56
COOP-721	Employment Preplacement	Minimum C-grade in COMM 170/171, minimum CGPA. & minimum of Year 1 & 2 courses required for COOP-221 & subsequent PTY work-placements	0	1	1	14	14
Total							336
Semester 3C	Winter 2028						
COOP-222	Co-Op Work Placement 1	P: COOP-721					
Semester 4C	Summer 2028						
COOP-331	Co-Op Work Placement 2	P: COOP-721					
Semester 5C	Fall 2028						
COOP-332	Co-Op Work Placement 3	P: COOP-721					
Semester 6	Winter 2029						
MT-300	FEA Applications	(MT-153 & MT-335) or FT Code	3	0	3	14	42
MT-323 ♦	Instrumentation & Control	(MT-256 or FT Code) & MT-318	1	2	3	14	42
MT-324	Advanced Project: Design & Construction	MT-258	6	0	6	14	84
MT-339	Thermodynamics 2	MT-309	0	4	4	14	56
MT-342	Machine Design 2	MT-335	0	4	4	14	56
GNED	General Education Elective		0	3	3	14	42
Total							322
Total Program Hours:							1932
Notes:							
Minimum Program GPA of 2.00 is required for graduation							
♦ This course may be offered in one of the following modalities: Online, Hybrid, or Blended							

MODEL ROUTE									
School:	School of Engineering Technology & Applied Sciences - AMAT			Program Number:		3713			
Program Title:	Mechanical Engineering Technology - Design (PTY)			Credential:		☐ Certificate ☐ Diploma ☐ Degree		☐ Graduate Certificate ☒ Advanced Diploma	
Delivery Mode:	☐ Non Co-Op ☒ Co-Op ☐ Fast Track			Duration:		☐ 2 Semesters ☐ 4 Semesters ☐ 8 Semesters		☐ 3 Semesters ☐ 6 Semesters ☒ 9 Semesters	
Intake:	Fall 2025								
Course Code	Course Title	Pre-Requisite (Course Code)	Lab Hours	Lecture Hours	Total Weekly Hours	Weeks (14)	Total Hours		
* Minimum C grade required for Technologist graduation									
Scheduled Breaks:									
Fall 2025 intake has a scheduled break in Summer 2026 and Summer 2027									
Signature:	<i>Donald Wang</i>					April 12, 2022			
	AMAT Chair					Revised Date			