

MODEL ROUTE

School:	School of Engineering Technology & Applied Sciences - AMAT	Program Number:	3713				
Program Title:	Mechanical Engineering Technology - Design (PTY)	Credential:	<input type="checkbox"/> Certificate <input type="checkbox"/> Diploma <input type="checkbox"/> Degree	<input type="checkbox"/> Graduate Certificate <input checked="" type="checkbox"/> Advanced Diploma			
Delivery Mode:	<input type="checkbox"/> Non Co-Op <input checked="" type="checkbox"/> Co-Op <input type="checkbox"/> Fast Track	Duration:	<input type="checkbox"/> 2 Semesters <input type="checkbox"/> 4 Semesters <input type="checkbox"/> 8 Semesters	<input type="checkbox"/> 3 Semesters <input type="checkbox"/> 6 Semesters <input checked="" type="checkbox"/> 9 Semesters			
Intake:	Fall 2022 & Winter 2023						
Course Code	Course Title	Pre-Requisite (Course Code)	Lab Hours	Lecture Hours	Total Weekly Hours	Weeks (14)	Total Hours
Semester 1	Fall 2022 & Winter 2023						
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		0	3	3	14	42
COMM-160/161	College Communications 1		0	3	3	14	42
GNEED	General Education Elective		0	3	3	14	42
Total							336
Semester 2	Winter 2023 & Summer 2023						
MT-121 *	Applied Statics	PHYS-100	0	4	4	14	56
MT-153	CAD II	MT-106 or (MT-151 & MT-152)	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	0	3	3	14	42
GNEED-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 2023						
MT-201	CAD/CAM Programming	MT-103 & MATH-170/140	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	1	3	4	14	56
MATH-231 *	Diff. Calc. & Analyt. Geometry	MATH-180	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 2024						
MT-224 *	Applied Dynamics	MT-121	0	4	4	14	56
MT-225	Hydraulics & Pneumatics		2	2	4	14	56
MT-228	Tool Design	MT-153	2	2	4	14	56
MT-257	Quality Assurance		1	2	3	14	42
MATH-232	Integral Calculus	MATH-231	0	4	4	14	56
ENGL-250	Report Writing in a Technical Environment	COMM-170/171	0	2	2	14	28
Total							294

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Intake: **Fall 2022 & Winter 2023**

Course Code	Course Title	Pre-Requisite (Course Code)	Lab Hours	Lecture Hours	Total Weekly Hours	Weeks (14)	Total Hours
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Semester 5							
Fall 2024							
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-221	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

COOP-222	Professional Technology Year						
COOP-331	Professional Technology Year						
COOP-332	Professional Technology Year						

Semester 6							
Winter 2026							
MT-300	FEA Applications	MT-153 & MT-335	3	0	3	14	42
MT-323 ♦	Instrumentation & Control	MT-256 & 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
GNEED	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

* Minimum C grade required for Technologist graduation

Signature:	<i>Donald Wang</i>		April 12, 2022
	AMAT Chair		Revised Date