

## MODEL ROUTE

<b>School:</b>	School of Engineering Technology & Applied Sciences - AMAT	<b>Program Number:</b>	3713				
<b>Program Title:</b>	Mechanical Engineering Technology - Design (PTY)	<b>Credential:</b>	<input type="checkbox"/> Certificate	<input type="checkbox"/> Graduate Certificate			
			<input type="checkbox"/> Diploma	<input checked="" type="checkbox"/> Advanced Diploma			
			<input type="checkbox"/> Degree				
<b>Delivery Mode:</b>	<input type="checkbox"/> Non Co-Op <input checked="" type="checkbox"/> Co-Op <input type="checkbox"/> Fast Track	<b>Duration:</b>	<input type="checkbox"/> 2 Semesters	<input type="checkbox"/> 3 Semesters			
			<input type="checkbox"/> 4 Semesters	<input type="checkbox"/> 6 Semesters			
			<input type="checkbox"/> 8 Semesters	<input checked="" type="checkbox"/> 9 Semesters			
<b>Intake:</b>	<b>Fall 2024 &amp; Winter 2025</b>						
<b>Course Code</b>	<b>Course Title</b>	<b>Pre-Requisite (Course Code)</b>	<b>Lab Hours</b>	<b>Lecture Hours</b>	<b>Total Weekly Hours</b>	<b>Weeks (14)</b>	<b>Total Hours</b>
<b>Semester 1</b>	<b>Fall 2024 &amp; Winter 2025</b>						
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
<b>Total</b>							<b>336</b>
<b>Semester 2</b>	<b>Winter 2025 &amp; Summer 2025</b>						
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
<b>Total</b>							<b>336</b>
<b>Semester 3</b>	<b>Fall 2025</b>						
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
<b>Total</b>							<b>308</b>
<b>Semester 4</b>	<b>Winter 2026</b>						
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

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**Intake:** **Fall 2024 & Winter 2025**

Course Code	Course Title	Pre-Requisite (Course Code)	Lab Hours	Lecture Hours	Total Weekly Hours	Weeks (14)	Total Hours
MATH-232	Integral Calculus	MATH-231 (C grade)	0	4	4	14	56
ENGL-250	Report Writing in a Technical Environment	COMM-170/171	0	2	2	14	28
<b>Total</b>							<b>294</b>

Semester 5	Fall 2026						
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 <span style="color: red;">♦</span>	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
<b>Total</b>							<b>336</b>

COOP Work Terms							
Winter 2027	COOP-222	Professional Technology Year					
Summer 2027	COOP-331	Professional Technology Year					
Fall 2027	COOP-332	Professional Technology Year					

Semester 6	Winter 2028						
MT-300	FEA Applications	(MT-153 & MT-335) or FT Code	3	0	3	14	42
MT-323 <span style="color: red;">♦</span>	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
<b>Total</b>							<b>322</b>
<b>Total Program Hours:</b>							<b>1932</b>

**Notes:**  
 Minimum Program GPA of 2.00 is required for graduation

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◆ This course may be offered in one of the following modalities: Online, Hybrid, or Blended							
* Minimum C grade required for Technologist graduation							
<b>Scheduled Breaks:</b>							
Fall 2024 intake has scheduled breaks in Summer 2025 and Summer 2026							
Winter 2025 intake has a scheduled break in Summer 2026							
<b>Signature:</b>	<i>Donald Wang</i>		April 12, 2022				
	AMAT Chair		Revised Date				