

## MODEL ROUTE

<b>School:</b>	School of Engineering Technology & Applied Sciences - AMAT	<b>Program Number:</b>	3720				
<b>Program Title:</b>	Aerospace Manufacturing Engineering - Technology (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>						
AMET-111	Aerospace Fundamentals		2	1	3	14	42
AMET-112	CAM/CNC 1		2	0	2	14	28
AMET-113	Aerospace CAD 1		3	0	3	14	42
AMET-115	Electric Circuits & Systems		2	2	4	14	56
AMET-411	Student Support and Success		0	1	1	14	14
COMM-160/161	College Communications 1		0	3	3	14	42
GNED	General Education Elective		0	3	3	14	42
MATH-170	Technology Math 2		0	3	3	14	42
<b>Total</b>							<b>308</b>
<b>Semester 2</b>	<b>Winter 2025 &amp; Summer 2025</b>						
AMET-114	Machine Shop		2	0	2	14	28
AMET-121	Electronics & Digital Systems	AMET-115	2	2	4	14	56
AMET-122	CAM/CNC 2	AMET-112	3	0	3	14	42
AMET-123	Aerospace CAD 2	AMET-113	3	0	3	14	42
AMET-124 ♦	Material Properties & Manufacturing Processes		1	2	3	14	42
AMET-125 ♦	Aerospace Engineering	AMET-111 & (MATH-170 or MATH-140)	0	4	4	14	56
COMM-170/171	College Communications 2	COMM-160/161	0	3	3	14	42
MATH-180	Technology Math 3	MATH-170	0	3	3	14	42
<b>Total</b>							<b>350</b>
<b>Semester 3</b>	<b>Fall 2025</b>						
AMET-211	Quality Concepts 1	MATH-140 or MATH-170	0	2	2	14	28
AMET-212	CAM/CNC 3	AMET-112	3	0	3	14	42
AMET-213	Aerospace CAD 3	AMET-123	3	0	3	14	42
AMET-214	Aerospace Hydraulics & Pneumatics	AMET-411	2	2	4	14	56
AMET-215	Aerospace Composites	AMET-124	3	1	4	14	56
AMET-216	UAV	AMET-121	2	2	4	14	56
AMEG-212 ♦	Ethics in Technology and the Environment		0	2	2	14	28
GNED-500	Global Citizenship: From Social Analysis to Social Action		0	3	3	14	42
<b>Total</b>							<b>350</b>
<b>Semester 4</b>	<b>Winter 2026</b>						
AMET-221	Avionics	AMET-121	2	2	4	14	56
AMET-222	CAM/CNC 4	AMET-212	3	0	3	14	42
AMET-223	GDT Applications & Tool Design	AMET-213	3	0	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
AMET-224	Quality Concepts 2	AMET-211 & (MATH 170 or MATH-180)	2	2	4	14	56
AMET-226	Fabrication & Assembly	AMET-114	3	1	4	14	56
GNED	General Education Elective		0	3	3	14	42
MATH-285	Calculus	MATH-180	0	4	4	14	56
<b>Total</b>							<b>350</b>

**Semester 5** **Fall 2026**

AMET-311	Machine Design for Aerospace	AMET-125 & MATH-285	0	4	4	14	56
AMET-313	Manufacturing Process Design & Management	AMET-213	4	0	4	14	56
AMET-314	UAV Project	AMET-216	4	0	4	14	56
AMET-315	Project Management & PLM	AMET-224 & AMET-213	4	0	4	14	56
AMET-316	Automation & Integration	AMET-121 & MATH-285	2	2	4	14	56
AMET-324	FEA Applications for Aerospace	MATH-285	4	0	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
<b>Total</b>							<b>350</b>

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

**Semester 6** **Winter 2028**

AMET-312	Thermodynamics & Heat Transfer	AMET-125 & MATH-285	2	2	4	14	56
AMET-321	Advanced Manufacturing	AMET-313	2	2	4	14	56
AMET-322	Aerospace Management and Operations	AMET-315	2	2	4	14	56
AMET-325	Advanced Aerospace Project	AMET-311 & AMET-313	4	0	4	14	56
AMET-326	Aerospace Systems	AMET-312	2	2	4	14	56
ENGL-250	Report Writing in a Technical Environment	COMM-170/171	0	2	2	14	28
<b>Total</b>							<b>308</b>

**Total Program Hours: 1750**

**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  
 (C) = Co-requisite; (P) = Pre-requisite

<b>Signature:</b>	<i>Donald Wang</i>		February 12, 2024
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	AMAT Chair		Revised Date				