

# **Abu Dhabi Polytechnic**

## **Aircraft Engineering Technology**

### **Higher Diploma**

#### **Curriculum and Study Plan**

## Aircraft Engineering Technology Higher Diploma Program (AET)

### Curriculum

Degree Requirements	Total Credit Hours: 128 Credit Hours
ADPoly General Requirements	27
Humanities and Social Science Requirements	12
Program Major Requirements (compulsory)	65
Program Minor Requirements	24

ADPoly General Requirements				27 Credit Hours
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
MATH 100	Precalculus	Admissions		4
MATH 111	Calculus I	MATH 100		3
PHYS 111	Physics I			3
PHYS 111P	Physics I Lab			1
PHYS 103	Aviation Physics		PHYS111	4
ICT 110	Intro to Programming & Problem Solving			3
ENGL 111	English Communication Skills			3
ENGL 112	Technical English			3
ENGL 116	English for Aviation			3

Humanities and Social Science Requirements			12 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
HUM 110	Lifelong Learning Skills		3
HUM 111	Islamic Culture		3
HUM 112	Emirates Society and Culture		3
HUM 402	Creativity/Innovation and Entrepreneurship		3

Program Major Requirements (compulsory)			65 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
AVN 110	Electrical Engineering I	MATH 100	3
AVN 110P	Electrical Engineering I Lab		1
AVN 211	Electrical Engineering II	AVN 110	3
AVN 211P	Electrical Engineering II lab	AVN 110P	1
AVN 219	Electronics I	AVN 110	3
AVN 229	Digital Techniques I	AVN 219	3
AVSC 210	Human Factors		3
AME 212	Advanced Materials and Hardware		3
AME 214	Advanced Aerodynamics	PHYS 111	3
AME 214P	Advanced Aerodynamics Lab	PHYS 111	1
AME 218	Advanced Maintenance Practices I		3
AME 218P	Advanced Maintenance Practices I Lab		2
AME 227	Advanced Maintenance Practices II	AME 212	4
AME 228	Advanced Maintenance Practices III	AME 212	3
AME 318P	Advanced Maintenance Practices III lab	AME 212	1
AME 237	Advanced Maintenance Practices IV	AME 212	3
AME 237P	Advanced Maintenance Practices IV lab		2
AME 238	Advanced Maintenance Practices V	AME 212	3
AME 238P	Advanced Maintenance Practices V lab		2
AME 226	Advanced Materials and Hardware II	PHYS 111	3
AVSC 220	Aviation Legislation-EASA		3
AVSC 225	Aviation Legislation-GCAA		3
AVN 236	Digital Techniques II	AVN 229	3
AVN 110	Electrical Engineering I	MATH 100	3
AVN 110P	Electrical Engineering I Lab		1
AVN 211	Electrical Engineering II	AVN 110	3
AVN 211P	Electrical Engineering II lab	AVN 110P	1
AVN 219	Electronics I	AVN 110	3

Program Major Requirements (compulsory)			65 Credit Hours
AVN 229	Digital Techniques I	AVN 219	3
AVSC 210	Human Factors		3
AME 212	Advanced Materials and Hardware		3
AME 214	Advanced Aerodynamics	PHYS 111	3
AME 214P	Advanced Aerodynamics Lab	PHYS 111	1
AME 218	Advanced Maintenance Practices I		3
AME 218P	Advanced Maintenance Practices I Lab		2
AME 227	Advanced Maintenance Practices II	AME 212	4
AME 228	Advanced Maintenance Practices III	AME 212	3
AME 318P	Advanced Maintenance Practices III lab	AME 212	1
AME 237	Advanced Maintenance Practices IV	AME 212	3
AME 237P	Advanced Maintenance Practices IV lab		2
AME 238	Advanced Maintenance Practices V	AME 212	3
AME 238P	Advanced Maintenance Practices V lab		2
AME 226	Advanced Materials and Hardware II	PHYS 111	3
AVSC 220	Aviation Legislation-EASA		3
AVSC 225	Aviation Legislation-GCAA		3
AVN 236	Digital Techniques II	AVN 229	3
AVSC 260	Engineering Project		3
AME 340	On the Job Training/Internship		3

Program Minor Requirements-Aeromechanical			24 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
AME 310	Turbine Engines I	AME 214	3
AME 315	Propellers	AME 214	3
AME 314	Aircraft Structures and Systems I	AME 214	3
AME 316	Aircraft Structures and Systems II	AME 214	3
AME 317	Aircraft Structures and Systems III	PHYS 103	3
AME 317P	Aircraft Structures and Systems III Lab		1
AME 323	Aircraft Structures and Systems IV	AVN 211	3
AME 323P	Aircraft Structures and Systems IV Lab	AVN 211	1
AME 325	Turbine Engines II	AME 310	3
AME 325P	Turbine Engines II Lab	AME 310	1

Program Minor Requirements-Avionics			24 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
AVN 237	Electronics II	AVN 219	3
AVN 317	Digital Techniques III	AVN 236	3
AVN 317P	Digital Techniques III Lab	AVN 236	1
AVN 314	Avionics Systems I	AVN 237	3
AVN 315	Avionics Systems II	AVN 314	3
AVN 316	Avionics Systems III	AVN 237	4
AVN 324	Avionics Systems IV	AVN 314	4
AME 326	Propellers and FADEC	AVN 314	3

## Aircraft Engineering Technology Higher Diploma Program (AET)

### Study Plan

1 <sup>st</sup> Year (Freshman)				
	Course Code	Course Title	Credit Hours	Prerequisite(s)
<b>Semester 1</b>	MATH 100	Precalculus	4	
	PHYS 111	Physics I	3	
	PHYS 111P	Physics I Lab.	1	
	ICT 110	Introd. to Progr. & Probl. Solving	3	
	ENGL 111	English Comm. Skills	3	
	HUM 110	Life-Long Learning Skills	3	
	<b>Total Credit Hours</b>			<b>17</b>
	Course Code	Course Title	Credit Hours	Prerequisite(s)
<b>Semester 2</b>	MATH 111	Calculus I	3	MATH 100
	PHYS 103	Aviation Physics	4	PHYS 111
	AVN 110	Electrical Engineering I (3 B)	3	Math 100
	AVN 110P	Electrical Engineering I Lab. (3 B)	1	
	ENGL 112	Technical English	3	
	AVSC 210	Human Factors (9 B)	3	
	<b>Total Credit Hours</b>			<b>17</b>
	Course Code	Course Title	Credit Hours	Prerequisite(s)
<b>Summer</b>	ENGL 116	English for Aviation	3	ENGL 111
	AVN 211	Electrical Engineering II (3 B)	3	AVN 110
	AVN 211P	Electrical Engineering II (3 B) Lab.	1	AVN 110P
	HUM 402	Creativity Innovation and Entrepreneurship	3	
<b>Total Credit Hours</b>			<b>10</b>	

2 <sup>nd</sup> Year (Sophomore)				
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)
	HUM 111	Islamic Culture	3	
	AME 212	Adv. Materials & Hardware I (6 B1)	3	PHYS 111
	AME 214	Adv. Aerodynamics (8 B1)	3	PHYS 111
	AME 214P	Adv. Aerodynamics Lab. (8 B1)	1	PHYS 111
	AVN 219	Electronics I (4 B)	3	AVN 210
	AME 218	Adv. Maint. Prac. I (7 B1)	3	
	AME 218P	Adv. Maint. Prac. I Lab. (7 B1)	2	
Total Credit Hours			18	
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AME 226	Adv. Materials & Hardware II (6 B1)	3	AME 212
	AME 227	Adv. Maint. Prac. II (7 B1)	4	AME 212
	AME 228	Adv. Maint. Prac. III (7 B1)	3	AME 212
	AME 228P	Adv. Maint. Prac. III Lab. (7 B1)	1	AME 212
	AME 314	Air. Struc. & Sys. I (11 B1)	3	AME 214
	AVN 229	Digital Techniques I (5 B)	3	AVN 219
Total Credit Hours			17	
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AVN 236	Digital Techniques II (5 B)	3	AVN 229
	AME 237	Adv. Maint. Prac. IV (7 B1)	3	AME 212
AME 237P	Adv. Maint. Prac. IV Lab. (7 B1)	2	AME 212	
Total Credit Hours			8	

3 <sup>rd</sup> Year (Junior)-Aeromechanical Track				
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AME 238	Adv. Maint. Pract. V (7 B1)	3	AME 212
	AME 238P	Adv. Maint. Pract. V Lab. (7 B1)	2	AME 212
	AME 310	Turbine Engines I (15 B1)	3	AME 214
	AME 316	Air. Struc. & Sys. II (11 B1)	3	AME 214
	AME 315	Propellers (17 B1)	3	AME 214
	AVSC 220	Aviation Legislation-EASA (10 B)	3	
<b>Total Credit Hours</b>			<b>17</b>	
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AME 317	Air. Struc. & Sys. III (11 B1)	3	PHYS 103
	AME 317P	Air. Struc. & Sys. III Lab. (11 B1)	1	PHYS 103
	AME 323	Air. Struc. & Sys. IV (11 B1)	3	AVN 211
	AME 323P	Air. Struc. & Sys. IV Lab. (11 B1)	1	AVN 211
	AME 325	Turbine Engines II (15 B1)	3	AME 310
	AME 325P	Turbine Engines II Lab. (15 B1)	1	AME 310
	AVSC 225	Aviation Legislation-GCAA	3	
<b>Total Credit Hours</b>			<b>15</b>	
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AVSC 260	Engineering Project	3	
	AME 340	OJT / Internship	3	
	HUM 112	Emirates Society & Culture	3	
<b>Total Credit Hours</b>			<b>9</b>	



3 <sup>rd</sup> Year (Junior)-Avionics Track				
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AME 238	Adv. Maint. Pract. V (7 B1)	3	AME 212
	AME 238P	Adv. Maint. Pract.V Lab. (7 B1)	2	AME 212
	AVN 237	Electronics II (4 B)	3	AVN 219
	AVN 315	Avionics Sys. II (13 B2)	3	AVN 314
	AVN 317	Digital Techniques III (5 B)	3	AVN 236
	AVN 317P	Digital Techniques III Lab. (5 B)	1	AVN 236
<b>Total Credit Hours</b>			<b>17</b>	
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AVN 316	Avionics Sys. III (13 B2)	4	AVN 314
	AVN 324	Avionics Sys. IV (13 B2)	4	AVN 314
	AVN 326	Prop. & FADEC (14 B2)	3	AVN 314
	AVSC 220	Aviation Legislation-EASA (10 B1)	3	
	AVSC 225	Aviation Legislation-GCAA	3	
<b>Total Credit Hours</b>			<b>15</b>	
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)
	AVSC 260	Engineering Project	3	
	AME 340	OJT / Internship	3	
	HUM 112	Emirates Society & Culture	3	
<b>Total Credit Hours</b>			<b>9</b>	