Smart Manufacturing Engineering Technology (MF) Year 1 - ALL Year 1 Year 1 2nd Semester 1st Semester Summer Math and Sciences, Humanities, Engineering Technology Humanities and Engineering Technology Math and Sciences, Humanities, Engineering Technology L B T CH CR L B T CH CR L B T CH CR Course No. Course Course PHYS1011 Physics I 3 0 0 3 3 CHEM1011 Chemistry I 3 0 0 3 3 HUM1012 Emirates Society & Culture 3 0 0 3 3 0 3 0 3 1 PHYS1012 Physics I Lab 0 3 0 3 1 CHEM1012 Chemistry I Lab EMME-1001 3 0 0 3 3 2 0 2 4 3 ENGL1012 Academic English II MATH1001 Precalculus MATH-1020 Calculus II Mechanical Workshop 0 2 0 2 1 HUM1011 ENG1003 Islamic Culture 3 0 0 3 3 2 2 0 4 3 MATH-1010 ICT1011 Introduction to Programming & Problem Solving Calculus I ENGL1001 English Skills * 2 2 0 4 3 EMEE-1001 Electric Circuits I 3 0 0 3 3 3 0 0 3 3 Academic English I ENGL1011 Arabic Communication Skills HUM1013 14 5 0 19 16 9 0 1 10 9 16 7 2 25 17 Total Total **Total**

Year 2 - ALL			Year 2					Year 2		
	1st Semester			2nd Semester					Summer	
	Engineering Fundamentals & Technology			Engineering Fundamentals & Technology					Work Application/On Campus Trair	ning
No.	Course	L B T CH CR	No.	Course	L B	T CH	[CR	No.	Course	L B T CH
EMIS-2101	Introduction to Artificial Intelligent Systems	2 2 0 4 3	EMIS-2003	Control System Technologies	2 2	0 4	3	EMIS-2090	Instrumentation & Process Control OCT	0 3 0 3
ENG1002	Engineering Drawing	1 2 0 3 2	EMEE-2203	Electrical Machines	2 0	0 2	2	EMIS-2091	Pneumatics and Hydraulics Systems OCT	0 3 0 3
EMIS-2102	Introduction to Mechatronics	2 2 0 4 3	EMEE-2204	Electrical Machines Lab	0 3	0 3	1	EMMF-2090	3D Printing Technologies OCT	0 3 0 3
EMET-2001	Health Safety and Environment	2 0 0 2 2	EMIS-2204	Pneumatics and Hydraulics Systems	2 2	0 4	3	EMMF-2091	CAD/CAM Technologies OCT	0 3 0 3
ABCD-XXXX	Specialization Electives I	2 2 0 4 3	EMIS-2005	Intr. to Programming: C++	1 2	0 3	2	EMMF-2092	FabLab Technologies OCT	0 3 0 3
ABCD-XXXX	Specialization Electives II	2 2 0 4 3	ABCD-XXXX	Specialization Electives III	2 2	0 4	3	EMMF-2093	Metal Fabrication Technology OCT	0 3 0 3
			ABCD-XXXX	Specialization Electives IV	2 2	0 4	3			
	Total	11 10 0 21 16		Total	11 13	0 24	17		Total	0 18 0 18

Year 3 - Manuf	acturing				Year 3						Year 3		
	1st Semester					2nd Semester						Summer	
	Manufacturing Technology					Manufacturing Technology						Work Application/On Campus Training	
No.	Course	L	T CH	I CR	No.	Course	L	ВТ	CH	CR	No.	Course	L B T CH C
EMIS-3101	Intro to Applied Machine Learning	2 2	2 0 4	3	EMET-3001	Engineering Design & Project Planning	1	2 0) 3	2	EMMF-3090	CNC Technologies OCT	0 3 0 3 1
MATH-2015	Applied Mathematics	2 2	2 0 4	3	EMMF-3202	Sensors and Control Systems in Manufacturing	2	2 0) 4	3	EMMF-3091	Advanced FabLab OCT	0 3 0 3 1
EMMF-3101	Manufacturing Planning & Control	2 2	2 0 4	3	EMET-3080	Capstone Project **	1	4 0) 5	3	EMMF-3092	Fibre Composite Manufacturing Technologies OCT	0 3 0 3 1
ENGL2011	Public Speaking	1 (1 2	1	EMMF-3203	Computer Integrated Manufacturing	2	2 0) 4	3	EMMF-3093	Automation in Manufacturing Process OCT	0 3 0 3 1
ENGL2012	Literature Review	1 (1 2	1							EMMF-3094	Precision Machining Technology OCT	0 3 0 3 1
ENGL2013	Report Writing	1 (1 2	1							EMMF-3095	Mould Design Technology OCT	0 3 0 3 1
EMME-3005	Applied Industrial Maintenance	3 (0 3	3									
	Total	12 6	3 21	15		Total	6	10 0) 16	11		Total	0 18 0 18 6

Year 4 - Manuf	acturing		Year 4						
	1st Semester			2nd Semester				Summer	
	Manufacturing Technology			Manufacturing Technology				On the Job Training	
No.	Course	L B T CH CR	No.	Course	L B	T CH CR	No.	Course	L B T CH CR
EMMF-4101	Advanced CAD/ CAE	2 2 0 4 3	EMET-4095	Graduation Project II	1 4	0 5 3			
EMET-4090	Graduation Project I **	1 4 0 5 3	EMMF-4203	Biomimetics: Sustainable Materials and Manufacturing	2 2	0 4 3			
EMMF-4102	Advanced Manufacturing Processes & Technology	2 2 0 4 3	EMMF-4204	Technology of Non-Metallic Materials Processing	2 2	0 4 3	EMET-4099	On-Job-Training (Internship) (12 Wks.)	0 0 30 30 6
HUM3011	Creativity, Innovation and Entrepreneurship	3 0 0 3 3	EMET-4001	Business Startup and Management	2 0	0 2 2	EMIE 1-4099	On-Job-Training (Internsinp) (12 wks.)	0 0 30 30 0
			ABCD-XXXX	Technical Elective I	2 2	0 4 3			
	Total	8 8 0 16 12		Total	9 10	0 19 14		Total	0 0 30 30 6

ENGL-1001	Number of credits(3) is not counted for Graduation requirements						
EMET-4090**	Graduation Project 1 is equivalent to EMET-3080 for HD						
	Specialization Electives I, II, III and IV						-
	Mechanical, Manufacturing, Electrical and Intelligent Systems						-
EMME-2101	Materials Science	2	2	0	4	3	Mechanical, Mechanical (Minor AI), Manufacturing - Elective I
EMEE-2101	Digital Logic Design	2	2	0	4	3	Intelligent Systems, Electrical, Electrical (Minor AI) - Elective I
EMME-2102	Fluid Mechanics	2	2	0	4	3	Mechanical, Mechanical (Minor AI) - Elective II
ENG2013	Fluid Flow & Heat Transfer	2	2	0	4	3	Intelligent Systems, Manufacturing - Elective II
EMEE-2102	Electrical Circuit II	2	2	0	4	3	Electrical, Electrical (Minor AI) - Elective II
EMMF-2201	Manufacturing Processes	2	2	0	4	3	Mechanical, Mechanical (Minor AI), Manufacturing - Elective III
EMEE-2205	Electronic Devices I	2	2	0	4	3	Intelligent Systems, Electrical, Electrical (Minor AI) - Elective III
EMME-2201	Engineering Thermodynamics	2	2	0	4	3	Mechanical, Mechanical (Minor AI), Manufacturing - Elective IV
EMIS-2206	Data structure and algorithms	2	2	0	4	3	Intelligent Systems - Elective IV
EMEE-2207	Introduction to Power Systems	2	2	0	4	3	Electrical, Electrical (Minor AI) - Elective IV
	Technical Electives I						
No.	Course	L	В	P	CH	CR	
EMMF-4205	Fixture and Tool Design	2	2	0	4	3	
EMMF-4206	Process Tolerance Design and Analysis	2	2	0	4	3	
EMMF-4207	Manufacture and Assembly Design	2	2	0	4	3	
EMIS-4103	Applied Robotics Systems	2	2	0	4	3	

NOTES:

Diploma

Subject	Credit Hours	Percent
Subject	Cicuit Hours	(%)
Humanities	15	20%
Math & Science	11	15%
ICT/programming	8	11%
Engineering	35	47%
OCT/OJT	6	8%
Total	75	100.0%

Advanced / Higher Diploma

Muvanecu / Higher Dipionia								
		Percent						
Subject	Credit Hours	(%)						
Humanities	18	16%						
Math & Science	20	18%						
ICT/programming	14	13%						
Engineering	46	42%						
OCT/OJT	12	11%						
Total	110	100.0%						

Applied Bachelor

Tippine Euclies								
Subject	Credit Hours	Percent						
Subject	Credit Hours	(%)						
Humanities	21	15%						
Math & Science	20	14%						
ICT/programming	17	12%						
Engineering	66	46%						
OCT/OJT	18	13%						
Total	142	100.0%						

	CR
iploma	75
ligher Diploma	110
pplied Bachelor	142