ELECTROMECHANICAL SYSTEMS STUDY PLAN

SPECIALIZATION: Smart Manufacturing Engineering Technology - Applied Bachelor (AB)

Total Credits Hours = 142 C.H.

STUDENT NAME: **STUDENT NUMBER:**

ADPOLY GENERAL REQUIREMENTS (AB: 30 C.H)

Subj Code & NO.	COURSE TITLE	C.H	SEM.	PRE- REQUISITE	SIT *	SEM AY
MATH1001	Precalculus	3	1,2,3	MPE≥70, EmSAT≥1500		
ICT1011	Introduction to Programming and Prob. Solv.	3	1,2,3	N/A		
ENGL-1001	English Skills *	0	1,2,3	EmSAT≥1300, IELTS ≥ 6.0 (Bands≥5.5)		
ENGL1011	Academic English I	3	1,2,3	ENGL1001; or EmSAT≥1300, IELTS ≥ 5.5 (Bands≥5.0)		
ENGL1012	Academic English II	3	1,2,3	ENGL-1011		
HUM1011	Islamic Culture	3	1,2,3	N/A		
HUM1012	Emirates Society & Culture	3	1,2,3	N/A		
HUM1013	Arabic Communication Skills	3	1,2,3	N/A		
ENGL2011	Public Speaking	1	1,2,3	ENGL-1012		
ENGL2012	Literature Review	1	1,2,3	ENGL-1012		
ENGL2013	Report Writing	1	1,2,3	ENGL-1012		
MATH-1010	Calculus I	3	1,2,3	MATH1001; or MPE≥70%, Math-EmSAT≥1500		
HUM3011	Creativity, Innovation and Entrepreneurship	3	1,2,3	ENGL-2013		

PROGRAM GENERAL REQUIREMENTS (AB: 23 C.H)

EMET-2001	Health Safety and Environment	2	1,2,3	ENGL-1012		
ENG1003	Mech. Workshop	1	1,2,3	N/A		
CHEM1011	Chemistry I	3	1,2,3	**Coreq**: CHEM-1012		
CHEM1012	Chemistry I Lab	1	1,2,3	**Coreq**: CHEM-1011		
PHYS1011	Physics I	3	1,2,3	**Coreq**:MATH-1001, PHYS-1012		
PHYS1012	Physics Lab	1	1,2,3	**Coreq**:PHYS-1011		
ENG1002	Engineering Drawings	2	1,2,3	N/A		
MATH-1020	Calculus II	3	1,2,3	MATH-1010		
MATH2015	Applied Mathematics	3	1,2,3	MATH-1020		
EMET-3001	Engineering Design & Project Planning	2	1,2	ENG-1002, ENGL-2012		
EMET-4001	Business Startup and Management	2	1,2,3	EMET-3001		

Capstone Project (AB: 6 C.H.) - Completion of 105 C.H.

EMET-4090	Graduation Project I **	3	1,2	Completion of 105 C.H, EMET-3001, ENGL-2012, ENGL-2013		
EMET-4095	Graduation Project II	3	1,2	EMET-4090		

On-Job-Training (Internship) (AB: 3 C.H.) - Completion of 110 C.H.

EMET-4099	On-Job-Training (Internship) (14 Wks.)	6	1,2,3	Completion of 110 C.H		

COMPULSARY SPECALIZATION ELECTIVES (AB: 3 C.H.) - Table (1)

EMMF-4205	Fixture and Tool Design	3	2	EMMF-3094, EMMF-4101		
EMMF-4206	Process Tolerance Design and Analysis	3	2	EMMF-3094, EMMF-4102		
EMMF-4207	Manufacture and Assembly Design	3	2	EMMF-4102		
EMIS-4103	Applied Robotics Systems	3	1	EMIS-2003, MATH2015		

SPECIALIZATION REQUIREMENTS
(AB: 65 C.H+ 12 C.H for OCTs + 6 C.H for Graduation Projects + 6 C.H for OJT) = Total 89 C.H.

Subj Code & NO.	COURSE TITLE	C.H	SEM.	PRE- REQUISITE	SIT *	SEM AY
EMME-1001	Statics	3	1,2,3	PHYS-1011, MATH-1001		
EMEE-1001	Electric Circuits I	3	1,2,3	PHYS-1011, MATH-1001		
EMIS-2101	Introduction to Artificial Intelligent Systems	3	1	ICT-1011, MATH-1001		
EMIS-2102	Introduction to Mechatronics	3	1	ICT-1011, EMEE-1001		
EMME-2101	Materials Science	3	1	CHEM1011		
ENG-2013	Fluid Flow & Heat Transfer	3	1,2,3	MATH-1010, CHEM-1011		
EMMF-2201	Manufacturing Processes	3	2	EMME-2101, ENG1002, ENG1003		
EMME-2201	Engineering Thermodynamics	3	1,2,3	CHEM1011, MATH1001, PHYS1011		
EMIS-2003	Control System Technologies	3	1,2,3	EMIS-2102		
EMEE-2203	Electrical Machines	2	2	EMEE-1001, **Coreq:** EMEE-2204		
EMEE-2204	Electrical Machines Lab	1	2	**Coreq:** EMEE-2203		
EMIS-2204	Pneumatics and Hydraulics Systems	3	2	ENG-1002, EMEE-1001		
EMIS-2005	Intr. to Programming: C++	2	1,2,3	ICT-1011		
EMIS-3101	Intro to Applied Machine Learning	3	1	EMIS-2101, MATH-1020		
EMME-3005	Applied Industrial Maintenance	3	1,2,3	EMEE-2092 OR EMME-2091 OR EMMF-2092		
EMMF-3101	Manufacturing Planning & Control	3	1	EMMF-2201, EMIS-2090		
EMMF-3202	Sensors and Control Systems in Manufacturing	3	2	EMMF-3101		
EMMF-3203	Computer Integrated Manufacturing	3	2	EMMF-2090, EMMF-2091		
EMMF-4101	Advanced CAD/ CAE	3	1	EMMF-3203		
EMMF-4102	Advanced Manufacturing Processes & Technology	3	1	EMMF-3203, EMMF-3091		
EMMF-4203	Biomimetics: Sustainable Materials and Manufacturing	3	2	EMME-2101, EMMF-3092		
EMMF-4204	Technology of Non-Metallic Materials Processing	3	1	EMME-2101, EMMF-3092, EMMF-2091		
ABCD-XXXX	Technical Elective I	3	*	SEE THE ELECTIVE TABLE (1)		

On-Campus-Training (OCT) - (AB: 12 C.H.) (ALL OCTs are MNADATORY)

EMIS-2090	Instrumentation & Process Control OCT	1	1,2,3	EMIS-2003, EMEE-2091		
EMIS-2091	Pneumatics and Hydraulics Systems OCT	1	1,2,3	EMIS-2204		
EMMF-2090	3D Printing Technologies OCT	1	1,2,3	ENG1002		
EMMF-2091	CAD/CAM Technologies OCT	1	1,2,3	MATH1001, ENG1002		
EMMF-2092	FabLab Technologies OCT	1	1,2,3	EMMF-2201, ENG1002, ENG1003		
EMMF-2093	Metal Fabrication Technology OCT	1	1,2,3	EMMF-2201, ENG1002, ENG1003		
EMMF-3090	CNC Technologies OCT	1	1,2,3	EMMF-2091		
EMMF-3091	Advanced FabLab OCT	1	1,2,3	EMMF-2092		
EMMF-3092	Fibre Composite Manufacturing Technologies OCT	1	1,2,3	EMMF-2201, EMMF-3101		
EMMF-3093	Automation in Manufacturing Process OCT	1	1,2,3	EMIS-2090, EMMF-3202		
EMMF-3094	Precision Machining Technology OCT	1	1,2,3	EMMF-2091, EMMF-2093		
EMMF-3095	Mould Design Technology OCT	1	1,2,3	EMMF-2093, EMMF-2091		

SIT * (Course Situation) :		
	☑	Pass
	☒	Fail
	R	Currently Registered
	S	Suggested to Register

NOTES:	
ENGL-1001 *	Number of credits(3) is not counted for Graduation requirements
EMET-4090**	Graduation Project 1 is equivalent to EMET-3080 for HD

Students can select the specialization at end of 3rd Semester of 1st year

Total Credits Hours: Applied Bachelor 142 C.H.		
Total Credits Hours	142	
Completed Credit Hours	0	
Remaining Credit Hours	0	
Expected Graduation: Semester/ Academic Year	------	------

Advisor Name: ..... **Students Signature** .....

Advisor Signature ..... **Date / Time** **Friday, March 24, 2023** **10:47 AM**