

## Electromechanical Study Plan

### Specialization: Instrumentation and Control Engineering

STUDENT NAME:

STUDENT NUMBER:

ADPOLY GENERAL REQUIREMENTS (D: 39 C.H, HD: 47 C.H, AB: 50 C.H.)						PROGRAM REQUIREMENTS (D: 31 C.H, HD: 54 C.H, AB: 71 C.H.)					
Subj Code & NO.	COURSE TITLE	C.H	SEM.	PRE- REQUISITE 1	SIT *	Subj Code & NO.	COURSE TITLE	C.H	SEM.	PRE- REQUISITE 1	SIT *
PHYS111	Physics I	3	1,2,3	N/A		EMEM101	Statics	3	1,2,3	PHYS111, MATH100	
PHYS111P	Physics Lab	1	1,2,3	Coreq: PHYS111		EMEE205	Introduction to Circuit Simulation	3	1	PHYS112	
ENG114	Industrial Safety & Professional Ethics	2	1,2,3	N/A		EMEE201	Digital Logic Design	3	1,2,3	PHYS112	
ENG120P	Mech. Workshop	1	1,2,3	N/A		EMEC203	Instr. & Measurement	2	1,2	PHYS112	
ICT110	Introduction to Programming & Problem Solving	3	1,2,3	N/A		EMEE204	Electric Circuits	3	1,2,3	PHYS112	
ENGL120	English Skills	0	1,2,3	EmSAT≥1300, IELTS≥6.0 (Bands ≥5.5)		EMEX101	Intr. to Programming: C++	2	1,2,3	ICT110	
MATH100	Precalculus	4	1,2,3	N/A		EMEC201	Control System Technologies I	3	1,2,3	EMEC203	
ENGL121	Academic English I	3	1	prereq: ENGL120; coreq: ENGL121P		EMEE202	Electronic Devices	3	1,2	EMEE204	
CHEM111	Chemistry I	3	1,2,3	N/A		EMEC202	Programmable Logic Controllers	3	2	EMEE201, EMEX101	
CHEM111P	Chemistry I Lab	1	1,2,3	Coreq: CHEM111		EMEE203	Electrical Machines	3	1,2	EMEE204	
PHYS112	Physics II	3	1,2,3	PHYS111		EMEX202	Pneumatics and Hydraulics Systems	3	1,2	ENG113, PHYS112	
PHYS112P	Physics II Lab	1	1,2,3	Coreq: PHYS112		EMEM201	Dynamics	3	1,2	EMEM101, MATH111	
ENGL122	Academic English II	3	2	prereq: ENGL121; coreq: ENGL122P		EMEX303	Health Safety and Environment	3	1,2	ENG114, ENGL114	
HUM111	Islamic Culture	3	1,2,3	N/A		EMEC301	Motor Drives and Control	3	1	EMEC201	
ENG113	Engineering Drawing	2	1,2,3	N/A		EMEM205	CAD/CAM Technologies	3	1,2,3	ENG113	
HUM112	Emirates Society & Culture	3	1,2,3	N/A		EMEX302	Quality Management	2	1,2	ENGL114	
ENGL211	Public Speaking	1	3	ENGL122		EMEC303	Control System Technologies II	3	2	EMEC201	
ENGL212	Literature Review	1	4	ENGL211		EMEE207	Embedded Systems	3	1,2	EMEE204, EMEX101	
ENGL213	Report Writing	1	5	ENGL212		EMEC304	Digital Control System	3	2	EMEC201	
MATH 111	Calculus I	3	1,2,3	MATH100		EMEC306	Oil and Gas Metering Systems	3	1	EMEC201	
MATH112	Calculus II	3	1,2,3	MATH111		EMEX301	Adv. Eng. Math	3	1,2	MATH112	
HUM403	Personal Development Planning	2	2,3	N/A		EMEC401	Feedback Control Systems	3	1	EMEC303	
HUM402	Creativity, Innovation & Entrepreneurship	3	1,2,3	N/A		EMEX401	Engineering Economics	2	1,2	MATH111	
<b>GRADUATION PROJECT (HD: 3 C.H., AB: 6 C.H.)</b> Requires completion of a minimum of 116 C.H.						EMEC305	Distributed Control System	3	2	EMEC303	
EMEC390	Graduation Project I	3	1,2	EMEC303		EMEC404	Scada	3	2	EMEC202, EMEC303	
EMEC490	Graduation Project II	3	1,2	EMEC390		<b>OJT (AB: 6 C.H., Not required for Diploma and Higher Diploma)</b> OJT requires completion of a minimum of 90 C.H.					
<b>OCT TRAINING (D: 10 C.H., HD: 10 C.H., AB: 10 C.H.)</b>						EMEX495	OJT	6	1,2	Completion of 90 C.H.	
EMEX286	Hydraulics OCT	1	1,2,3	EMEX202							
EMEX287	SCADA OCT	1	1,2,3	EMEC202, EMEC201							
EMEX289	Electronic Applications OCT	1	1,2,3	EMEE202							
EMEX292	Compressors OCT	1	1,2,3	EMEX202							
EMEX293	PCB OCT	1	1,2,3	EMEE204							
EMEX294	AC Machines OCT	1	1,2,3	EMEE203							
EMEX295	Process Control OCT	1	1,2,3	EMEC201							
EMEX296	Robotics OCT	1	1,2,3	EMEX101							
EMEX298	PLC OCT	1	1,2,3	EMEC202							
EMEX299	Pneumatics OCT	1	1,2,3	EMEX202							
<b>ELECTIVE REQUIREMENTS (Choose 6 C.H. from Technical Elective Basket and 3 C.H. from Science Elective Basket)</b>											
<b>Technical Elective Basket (Choose 6 C.H.) Offered upon student request</b>						<b>Science Elective Basket (Choose 3 C.H.)</b>					
EMEC410	Intelligent Instrumentation and Asset Management Systems	3	1,2	EMEC303		CHEM411	Environmental Science and Analyses	3	1,2	CHEM111	
EMEC411	Instrumentation in Hazardous Areas	3	1,2	N/A		PET120	Petroleum Geology	3	1,2,3	N/A	
EMEC412	Hazards and Plant Safety Engineering	3	1,2	N/A		AES761	Applied Technical Chemistry	3	1,2	CHEM111	
EMEX304	Integrated Automation	3	1	EMEC202		CHEM112	Chemistry II	3	1,2,3	CHEM111	
EMEE306	Electronic Devices II	3	1	EMEE202							

\*Course Situation:



Total Credit Hours:- D: 80 C.H., HD: 117 C.H., AB: 152 C.H., Science and Maths: 28 C.H.

Key	Diploma
	Higher Diploma
	Applied Bachelor