

ELECTROMECHANICAL SYSTEMS STUDY PLAN

SPECIALIZATION: Mechanical Engineering Technology - Applied Bachelor (AB) (Minor AI)

| STUDENT NAME: | | | | | | | STUDENT NUMBER: | | | | | | |
|--|---|-----|-------|--|-------|--------|--|--|-----|-------|-------------------------------------|-------|--------|
| ADPOLY GENERAL REQUIREMENTS (AB: 30 C.H.) | | | | | | | SPECIALIZATION REQUIREMENTS (AB: 65 C.H.+ 12 C.H for OCT's + 6 C.H for Graduation Projects + 6 C.H for OJT + 18 C.H for Minor AI) = Total 107 C.H. | | | | | | |
| Subj Code & NO. | COURSE TITLE | C.H | SEM. | PRE- REQUISITE | SIT * | SEM AY | Subj Code & NO. | COURSE TITLE | C.H | SEM. | PRE- REQUISITE | SIT * | SEM AY |
| MATH1001 | Precalculus | 3 | 1,2,3 | MPE≥70, EmSAT≥1500 | | | EMME-1001 | Statics | 3 | 1,2,3 | PHYS-1011, MATH-1001 | | |
| ICT1011 | Introduction to Programming and Prob. Solv. | 3 | 1,2,3 | N/A | | | EMEE-1001 | Electric Circuits I | 3 | 1,2,3 | PHYS-1011, MATH-1001 | | |
| ENGL-1001 | English Skills * | 0 | 1,2,3 | EmSAT≥1300, IELTS ≥ 6.0 (Bands≥5.5) | | | EMIS-2101 | Introduction to Artificial Intelligent Systems | 3 | 1 | ICT-1011, MATH-1001 | | |
| ENGL1011 | Academic English I | 3 | 1,2,3 | ENGL1001; or EmSAT≥1300, IELTS ≥ 5.5 (Bands≥5.0) | | | EMIS-2102 | Introduction to Mechatronics | 3 | 1 | ICT-1011, EMEE-1001 | | |
| ENGL1012 | Academic English II | 3 | 1,2,3 | ENGL-1011 | | | EMME-2101 | Materials Science | 3 | 1 | CHEM1011 | | |
| HUM1011 | Islamic Culture | 3 | 1,2,3 | N/A | | | EMME-2102 | Fluid Mechanics | 3 | 1 | EMME-1001 | | |
| HUM1012 | Emirates Society & Culture | 3 | 1,2,3 | N/A | | | EMMF-2201 | Manufacturing Processes | 3 | 2 | EMME-2101 | | |
| HUM1013 | Arabic Communication Skills | 3 | 1,2,3 | N/A | | | EMME-2201 | Engineering Thermodynamics | 3 | 1,2,3 | CHEM1011 | | |
| ENGL2011 | Public Speaking | 1 | 1,2,3 | ENGL-1012 | | | EMIS-2003 | Control System Technologies | 3 | 1,2,3 | MATH-1001, PHYS-1011 | | |
| ENGL2012 | Literature Review | 1 | 1,2,3 | ENGL-1012 | | | EMEE-2203 | Electrical Machines | 2 | 2 | EMEE-1001, Coreq: EMEE-2204 | | |
| ENGL2013 | Report Writing | 1 | 1,2,3 | ENGL-1012 | | | EMEE-2204 | Electrical Machines Lab | 1 | 2 | Coreq: EMEE-2203 | | |
| MATH1011 | Calculus I | 3 | 1,2,3 | MATH1001; or MPE≥70%, Math-EmSAT≥1500 | | | EMIS-2204 | Pneumatics and Hydraulics Systems | 3 | 2 | ENG-1002, EMEE-1001 | | |
| HUM3011 | Creativity, Innovation and Entrepreneurship | 3 | 1,2,3 | Student should complete 60 credit hours | | | EMIS-2005 | Intr. to Programming: C++ | 2 | 1,2,3 | ICT-1011 | | |
| PROGRAM GENERAL REQUIREMENTS (AB: 23 C.H.) | | | | | | | EMME-3005 | Applied Industrial Maintenance | 3 | 1,2,3 | EMEE-2092 OR EMME-2091 OR EMMF-2091 | | |
| EMET-2001 | Health Safety and Environment | 2 | 1,2,3 | ENGL-1012 | | | EMME-3101 | Dynamics | 3 | 1 | EMME-1001, MATH1001 | | |
| ENG1003 | Mech. Workshop | 1 | 1,2,3 | N/A | | | EMME-3102 | Strength of Materials | 3 | 1 | EMME-2101 | | |
| CHEM1011 | Chemistry I | 3 | 1,2,3 | Coreq: CHEM-1012 | | | EMME-3203 | Kinematics of Machinery | 3 | 2 | EMME-3101 | | |
| CHEM1012 | Chemistry I Lab | 1 | 1,2,3 | Coreq: CHEM-1011 | | | EMME-3204 | Machine Design I | 3 | 2 | EMME-3102 | | |
| PHYS1011 | Physics I | 3 | 1,2,3 | Coreq: MATH-1001, PHYS-1012 | | | EMME-4203 | Machine Design II | 3 | 2 | EMME-3204 | | |
| PHYS1012 | Physics Lab | 1 | 1,2,3 | Coreq: MATH-1001, PHYS-1011 | | | EMME-4101 | Heat Transfer | 3 | 1 | EMME-2102, EMME-2201 | | |
| ENG1002 | Engineering Drawings | 2 | 1,2,3 | N/A | | | EMME-4102 | Thermodynamics II | 3 | 1 | EMME-2201 | | |
| MATH1012 | Calculus II | 3 | 1,2,3 | MATH-1011 | | | EMME-4204 | HVAC System Design | 3 | 2 | EMME-4101, EMME-2102 | | |
| MATH2015 | Applied Mathematics | 3 | 1,2,3 | MATH-1012 | | | ABCD-XXXX | Technical Elective I | 3 | 2 | SEE THE ELECTIVE TABLE (1) | | |
| EMET-3001 | Engineering Design & Project Planning | 2 | 1,2 | ENG-1002, ENGL-2012 | | | EMIS-3101 | Intro to Applied Machine Learning | 3 | 1 | EMIS-2101 | | |
| EMET-4001 | Business Startup and Management | 2 | 1,2,3 | EMET-3001 | | | EMIS-4103 | Applied Robotics Systems | 3 | 1 | EMIS-2003, MATH2015 | | |
| | | | | | | | EMIS-3102 | Intro to Computational Intelligence | 3 | 1 | EMIS-2101 | | |
| | | | | | | | EMIS-4101 | Intelligent System Design | 3 | 1 | EMIS-3102 | | |
| On-Campus-Training (OCT) - (AB: 12 C.H.) (ALL OCTs are MANDATORY) | | | | | | | | | | | | | |
| | | | | | | | EMIS-2090 | Instrumentation & Process Control OCT | 1 | 1,2,3 | EMIS-2003 | | |
| Capstone Project (AB: 6 C.H.) - Completion of 105 C.H. | | | | | | | EMIS-2091 | Pneumatics and Hydraulics Systems OCT | 1 | 2,3 | EMIS-2204 | | |
| EMET-4090 | Graduation Project I ** | 3 | 1,2 | Completion of 105 C.H, EMET-3001, ENGL-2012, ENGL-2013 | | | EMME-2090 | Thermo-Fluid OCT | 1 | 1,2,3 | EMME-2102, EMME-2201 | | |
| EMET-4095 | Graduation Project II | 3 | 1,2 | EMET-4090 | | | EMME-2091 | Pump and Compressors OCT | 1 | 1,2,3 | EMME-2102 | | |
| On-Job-Training (Internship) (AB: 3 C.H.) - Completion of 110 C.H. | | | | | | | EMMF-2090 | 3D Printing Technologies OCT | 1 | 1,2,3 | ENG1002 | | |
| EMET-4099 | On-Job-Training (Internship) (14 Wks.) | 6 | 1,2,3 | Completion of 110 C.H | | | EMMF-2091 | CAD/CAM Technologies OCT | 1 | 1,2,3 | EMMF-2201, ENG1002 | | |
| COMPULSARY SPECIALIZATION ELECTIVES (AB: 3 C.H.) - Table (1) | | | | | | | EMIS-3091 | Systems Modeling & Simulation OCT | 1 | 1,2,3 | EMME-3101 | | |
| EMIS-4103 | Applied Robotics Systems | 3 | 1 | EMIS-2003, MATH2015 | | | EMME-3090 | Automobile Body - Interior OCT | 1 | 1,2,3 | EMME-3005, Coreq: EMME-3091 | | |
| EMEE-4204 | Renewable Energy Systems | 3 | 1,2,3 | EMEE-4102 OR EMME-4102 | | | EMME-3091 | Automobile Body - Exterior OCT | 1 | 1,2,3 | EMME-3005, Coreq: EMME-3090 | | |
| EMME-4005 | Vibration and Noise Control | 3 | 1,2,3 | EMME-3101, MATH2015 | | | EMME-3092 | Automobile Engine OCT | 1 | 1,2,3 | EMME-2201, EMME-3090, EMME-3091 | | |
| | | | | | | | EMMF-2092 | FabLab Technologies OCT | 1 | 1,2,3 | EMMF-2201, ENG1002 | | |
| | | | | | | | EMIS-3095 | Payload System Design OCT | 1 | 1,2,3 | EMME-3203 | | |