Study Plan Guide – BSc. In Mechatronics Engineering – Dual Study Program

First Year		
First semester Courses (17 CH)	**Second Semester Courses (17 CH)**	**Summer Semester Courses (5 CH)**
CHEM103 General Chemistry **CS116** Computing Fundamentals **CS1160** Computing Fundamentals Lab **ENGL101** English III **GERL101** German I **MATH101** Calculus I **PHYS103** Physics I	**IE0121** Probability and Statistics **ARB100** Arabic **ENGL102** English IV **GERL102** German II **MATH102** Calculus II **PHYS104** Physics II **PHYS106** General Physics Lab	**ME0111-DS** Computer-Aided Engineering Drawing **DS101** Dual Study Practical I

Second Year		
First Semester Courses (18 CH)	**Second Semester Courses (18 CH)**	**Summer Semester Courses (5 CH)**
MECH0216 Statics and Strength of Materials **CE211** Digital Systems **CE2110** Digital Systems Lab **ENE211** Electrical Circuits I **ENGL201** English V **GERL201** German III **MATH205** Differential Equations	**ME0214** Electronics for Mechatronics **MECH0215** Dynamics **MECH0223** Thermofluids **ENE213** Electrical Circuits I Lab **ENGL202** English VI **GERL202** German IV **MATH203** Applied Math for Engineers	**IE0281-DS** Technical Writing and Engineering Ethics **DS201** Dual Study Practical II

Third Year		
First Semester Courses (16 CH)	**Second Semester Courses (17 CH)**	**Summer Semester Courses (3 CH)**
ME0312 Microcontrollers and IoT **ME0313** Microcontrollers and IoT lab **ME0344** Control Systems I **ME0348** Sensors **MECH0321** Thermofluids Lab **GERL301** German V **ME0224** Computer Aided MATH for ME	**ME0345** Control and Vibration Lab **ME0354** Actuators **ME0355** Sensors and Actuators Lab **BM371** Numerical Methods for Engineers **BM3710** Numerical Methods for Engineers Lab **CE331** Signals and Systems **GERL302** German VI **ME0548** Control Systems II	**IE0361-DS** Engineering Economics **DS301** Dual Study Practical III

Fourth Year (in Germany)	
First Semester Courses (12 CH)	**Second Semester Courses (12 CH)**
Four elective courses at German Partner University	**ME0491** International Internship

Fifth Year	
First Semester Courses (18 CH)	**Second Semester Courses (15 CH)**
ME0522 Hydraulics and Pneumatics **ME0523** Hydraulics and Pneumatics Lab **ME0571** Machine Intelligence I **ME0577** Automation and Industry 4.0 **ME0578** Automation and Industry 4.0 lab **ME0591** Graduation Project I **NE101** National Education **IE0141** Engineering Workshop **ENE312** Power Electronics	**ME0561** Mechatronics Systems Design and interfacing **ME0562** Mechatronics Systems Design and Interfacing lab **ME0572** Machine Intelligence II **ME0592** Graduation Project II **ENE314** Power Electronics Lab **MILS100** Military Science **ME0551** Robotics