

STUDY PLAN**PROGRAMME: BACHELOR OF MECHATRONICS ENGINEERING WITH HONOURS****TYPE: FULL TIME****BATCH: 261 AND ABOVE**

SEMESTER 1 (17 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	ECEE 1301	Electric Circuits	3		
2	MECA 1340	Engineering Mechanics	3		
3	GENE 1201	Computer Aided Drawing (CAD)	2		
4	MCTB 1371	Introduction to Programming	3		
5	MATH 1311	Engineering Mathematics	3		
6	UNGS 1213	Tawhidic Epistemology and Islamic Worldview	2		
7	CCUB 1000	Usrah	1		
			17		

SEMESTER 2 (17 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 1201	Mechatronics Workshop	2	MCTB 1371 (BMCT) / ECEE 1352 (BMFG) / ECEE 1302 (BEEE)	
2	ECEE 1101	Electrical Engineering Lab 1	1	ECEE 1301	ECEE 1303
3	ECEE 1303	Electronics	3	ECEE 1301	
4	MFGB 1203	Workshop Technology	2	GENE 1201	
5	MECA 1240	Thermal Science	2		
6	MATH 1322	Vector Calculus	3	MATH 1311	
7	LEED 1201	Academic English for Sustainability	2	LEED 1011/1012/1013/1014/Exit EPT	
8	MPUG 3122 / UNGS 3122	Falsafah dan Cabaran Semasa (for Malaysian) /Philosophy and Contemporary Challenges (for non-Malaysian)	2		
			17		

SEMESTER 3 (17 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 2311	Electrical Machines	3	ECEE 1301	
2	MCTB 2331	Mechanisms and Machine Design	3	MECA 1340	
3	MCTB 2312	Digital Systems Design and Microprocessors	3	ECEE 1303	
4	MATH 2312	Differential Equations	3	MATH 1311	
5	MCTB 2231	Fundamentals of Fluid Mechanics	2	MECA 1340	
6	MPUG 3112 / MPUG 3142	Aspirasi Negara Bangsa (for Malaysian) / Malaysian Citra (for Non-Malaysian)	2		
7	LQAD 1113 / LQAD 1131	Arabic for Understanding Ibadah I / Arabic for Effective Communication I*	1/1	TQTD 1001 / None*	
			17		

*for Non-Muslim Only

SEMESTER 4 (15 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 2102	Mechatronics Lab 1	1	MCTB 2231 MECA 1240 MCTB 2331	
2	MCTB 2314	Signal and System Analysis	3	MATH 1322 ECEE 1303	
3	MCTB 2315	Instrumentation and Measurement	3	ECEE 1303	
4	MATH 2331	Statistics and Numerical Methods	3	MATH 1311	
5	MCTB 2232	System Dynamics	2	MATH 1322	
6	MCTB 2203	Mechatronics Interfacing Lab	2	MCTB 1201 MCTB 2312	
7	LQAD 2123 / LQAD 2232	Arabic for Understanding Ibadah II / Arabic for Effective Communication II*	1 / 2*	LQAD 1113 / LQAD 1131*	
			15/16*		

*for Non-Muslim Only

SEMESTER 5 (17 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 3351	Control Systems 1	3	MCTB 2232	
2	MCTB 3331	Engineering Design and Reliability	3	MATH 2331	
3	MCTB 3352	Industrial Automation	3	MCTB 2315	
4	MCTB 3371	Computational Intelligence	3	MATH 1311	
5	MCTB 3332	Fundamentals of Robotics	3	MCTB 2232	
6	LMBD 3204 / MPUG 3162 / MPUG 3152	Bahasa Melayu Kerjaya (Sains dan Teknologi) (for Malaysian) / Bahasa Melayu Komunikasi (Nusantara) / Bahasa Melayu Komunikasi (Others)	2		
			17		

SEMESTER 6 (15.5 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 3104	Mechatronics Lab 2	1	MCTB 2315 MCTB 3351 MCTB 2312	
2	GENE 3342	Project Management and Engineering Economics	3	MATH 1311	
3	MCTB 3353	Control Systems 2	3	MCTB 3351	
4	MCTB 3391	Integrated Design Project	3	MCTB 2203 MCTB 3331	
5	MCTB 43XX	Engineering Elective - 1	3		
6	TQTD 1002	Tilawah Al-Qur'an 1 (for Muslim)	0.5	TPT/TQTD 1001	
7	CCLF 2000	Leadership and Family Management	1	CCUB 1000	
8	CCSS 3000	Skill	1	CCUB 1000	
			15.5/15*		

*for Non-Muslim Only

SHORT SEMESTER (5 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 3510	Engineering Industrial Training	5	90 CHrs	
			5		

SEMESTER 7 (16.5 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 4105	Mechatronics Lab 3	1	MCTB 3332 MCTB 3352	
2	MCTB 4398	Final Year Project 1	3	MCTB 3352	
3	GENE 4302	Engineering Ethics, Safety and Sustainability	3	UNGS 2380	
4	MCTB 43XX	Engineering Elective-2	3		
5	MCTB 4311	Digital Signal Processing	3	MCTB 2314	
6	MCTB 4312	Power Electronics	3	MCTB 2311	
7	TQTD 2002	Tilawah Al-Qur'an 2 (for Muslim)	0.5	TPT/TQTD 1002	
			16.5/16*		

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SEMESTER 8 (16 CH)					
No	Course Code	Course Title	Cr Hrs	Pre-requisite	Co-requisite
1	MCTB 4399	Final Year Project 2	3	MCTB 3510 MCTB 4398	
2	MCTB 43XX	Engineering Elective - 3	3		
3	MCTB 43XX	Engineering Elective -4	3		
4	MCTB 43XX	Engineering Elective - 5	3		
5	GENE 4210	Technology Entrepreneurship	2	MCTB 3391	
6	MPUG 3132	Integrity and Anti-Corruption	2		
			16		