DEPARTMENT MECHATRONICS ENGINEERING

LIST OF COURSES

LEVEL 100

First Semester

S/No.	Course Code	Course Title	Credit Unit
1	CHM 1231	Inorganic Chemistry	2
2	CHM 1241	Organic Chemistry	2
3	CSC 1201	Introduction to Computer Science	2
4	GSP 1201	Use of English	2
5	MTH 1301	Elementary Mathematics I	3
6	PHY 1170	Physics Practical I	1
7	PHY 1210	Mechanics	2
8	PHY 1220	Electricity and Magnetism	2
9	STA 1311	Probability I	3
			19

Second Semester

S/No.	Course Code	Course Title	Credit Unit
1	CHM 1251	Physical Chemistry	2
2	CHM 1261	Practical chemistry	2
3	GSP 1202	Use of Library, Study Skills & ICTs	2
4	MTH 1302	Elementary Mathematics II	3
5	MTH 1303	Elementary Mathematics III	3
6	PHY 1180	Physics Practical II	1
7	PHY 1230	Behavior of Matter	2
			15

LEVEL 200

First Semester

S/No.	Course Code	Course Title	Credit Unit
1	EGR 2204	Workshop Practice	2
2	EGR 2205	Thermodynamics	2
3	EGR 2206	Material Science	2
4	EGR 2207	Principles of Electrical Engineering I	2
5	EGR 2301	Engineering Mathematics I	3
6	EGR 2304	Laboratory A	3
7	EGR 2306	Applied Mechanics	3
8	GSP 2204	Foundation of Nigerian Culture, Government and Economy	2
9	GSP 2206	Peace and Conflict	2
10	EGR 2104	Introduction to Mechatronics Engineering	1
			22

Second Semester

S/No.	Course Code	Course Title	Credit Unit
1	EGR 2101	Engineer in Society I	1
2	EGR 2102	SWEP	1
3	EGR 2103	Experimental Methods and Analysis	1
4	EGR 2201	Fluid Mechanics	2
5	EGR 2202	Solid Mechanics	2
6	EGR 2203	Engineering Drawing	2
7	EGR 2208	Principles of Electrical Engineering I	2
8	EGR 2302	Engineering Mathematics II	3
9	EGR 2305	Laboratory B	3
10	EGR 2313	Computer Programming	3
11	GSP 2205	Logic and Philosophy	2
			22

Note:

Direct Entry Students are to register GSP 2201 (Use of English) and GSP 2202 (Use of Library, Study Skills & ICTs) in the level 200 first and second semesters respectively

LEVEL 300

First Semester

S/No.	Course Code	Course Title	Credit Unit
1	EGR 3101	Engineer in Society II	1
2	EEP 3201	Entrepreneurship and Innovation Studies	2
3	EGR 3301	Engineering Mathematics I	3
4	MCS 3201	Mechanical Engineering Design	2
5	MCS 3202	Materials Technology	2
6	MCS 3208	Fluid Mechanics II	2
7	MCS 3203	Computer Software Engineering I	2
8	MCS 3307	Electronics I	3
9	MCS 3301	Control engineering I	3
10	MCS 3209	Principles of Mechatronics Systems	2
11	MCS 3305	Laboratory I	3
12	MCS 3210	Electromagnetic theory	2
			27

Second Semester

S/No.	Course Code	Course Title	Credit Unit
1	EGR 3102	Technical Writing and Presentation	1
2	EGR 3203	SIWES I	2
3	EGR 3311	Computer Applications	3
4	EGR 3302	Engineering Mathematics	3
5	MCS 3302	Heat and Mass Transfer	3
6	MCS 3304	Electromechanical Devices	3

7	MCS 3303	Manufacturing Technology	3
8	MCS 3207	Elect. Circuit Theory	2
9	MCS 3306	Laboratory II	3
10	MCS 3205	Signals and Systems	2
11	MCS 3211	Introduction to Digital Electronics	2
			27

LEVEL 400

First Semester

S/No.	Course code	Course Title	Credit unit
1	EGR 4101	Engineer In Society III	1
2	EGR 4201	Engineering statistics	2
3	MCS 4206	Control Engineering II	2
4	MCS 4203	Sensors and actuators	2
5	MCS 4204	Measurement and Instrumentation	2
6	MCS 4202	Computer Hardware Engineering	2
7	MCS 4303	Electronics II	3
8	MCS 4302	Mechanics of Machines	3
9	MCS 4305	Laboratory III	3
10	EEP 4201	Business creation and growth	2
11	MCS 4201	Introduction to Robotics	2
12	MCS 4205	Group Project	2
			26

Second Semester

S/No.	Course Code	Course Title	Credit Unit
1	EGR 4401	SIWES II	4

LEVEL 500

First Semester

S/No.	Course Code	Course Title	Credit Units
1	MEC 5405	Engineering Management	4
2	MCS 5202	Control Engineering III	2
3	MCS 5303	Digital signal processing	3
4	MCS 5305	Microcomputers and microprocessor systems	3
5	MCS 5203	Process automation	2
6	MCS 5307	Automation Laboratory	3
7	MCS 5601	Final year project	6
			23

Second Semester

S/No.	Course code	Course Title	Credit Units
1	MCS 5302	Automation and Robotics	3
2	MCS 5304	MEMS & VLSI	3
3	MCS 5205	Computer software engineering II	2
4	MCS 5306	Systems modeling and simulation	3
5	MCS 5301	Power Electronics and drive	3
6	MCS 5212	Computer aided manufacturing	2
7		Two electives	4
			20

ELECTIVES (Students are required to select two electives, in the second semester)

MCS	5207	Machine Vision	2
MCS	5208	Micro-fabrication Technology	2
MCS	5209	Mobile Robotics	2
MCS	5210	Control Engineering III	2
MCS	5211	Microcontrollers and embedded systems	2
MCS	5212	Computer Aided Product Modeling	2
MCS	5213	Renewable Energy Resources	2