



**Bachelor of Science in Mechatronics Engineering (BSMEXE)**  
 Curriculum for A.Y. 2016-2017

Course Code	Course Title	Credit/s	Hour/s		Pre-Requisite/s	Co-Requisite/s
			Lec	lab		
<b>FIRST YEAR - FIRST SEMESTER</b>						
Chem 102	General Chemistry	4	3	3		
Math 104	Advanced Algebra	5	5	0		
Math 108	Plane and Spherical Trigonometry	3	3	0		
Eng 100	English Plus	0	3	0	For EPT Non-Passers	
Eng 101	Advanced Grammar and Composition	3	3	0	For EPT Passers	
Fil 101	Komunikasyon sa Akademikong Filipino	3	3	0		
Hum 101	Introduction to Humanities: Art Appreciation	3	3	0		
PE 101	Physical Fitness, Gymnastics and Aerobics	2	2	0		
SS 101	General Psychology	3	3	0		
		<b>26</b>	<b>25</b>	<b>3</b>		
<b>FIRST YEAR - SECOND SEMESTER</b>						
Chem 103	Chemistry Calculation with Organic Chemistry	3	3	0	Chem 102	
Draw 101	Engineering Drawing	1	0	3		
Math 109	Solid Mensuration	3	3	0	Math 104, Math 108	
Math 110	Analytic Geometry	3	3	0	Math 104, Math 108	
Eng 102	Study and Thinking Skills	3	3	0	Eng 101	
Fil 102	Pagbasa at Pagsulat Tungo sa Pananaliksik	3	3	0	Fil 101	
Hum 102	Introduction to Philosophy	3	3	0		
PE 102	Rhythmic Activities	2	2	0	PE 101	
SS 102	Philippine History	3	3	0		
		<b>24</b>	<b>23</b>	<b>3</b>		
<b>FIRST YEAR - SUMMER</b>						
Math 114	Differential Calculus	5	5	0	Math 109, Math 110	
		<b>5</b>	<b>5</b>	<b>0</b>		
<b>SECOND YEAR - FIRST SEMESTER</b>						
CAD 201	Computer Aided Drafting	1	0	3	Draw 101	
Math 115	Integral Calculus	5	5	0	Math 114	
Phy 106	Physics 1	5	4	3	Math 114	Math 115
Eng 106	Technical Communication	3	3	0	Eng 102	
NSTP 101	National Service Training Program 1	3	3	0		
PE 103	Individual and Dual Sports	2	2	0	PE 101	
SS 103	Society and Culture with Responsible Parenthood	3	3	0		
		<b>22</b>	<b>20</b>	<b>6</b>		
<b>SECOND YEAR - SECOND SEMESTER</b>						
Comp 201	Computer Fundamentals and Programming	3	2	3	2nd Year Standing	
Phy 107	Physics 2	5	4	3	Phy 106, Math 115	
Hum 104	Logic	3	3	0		
NSTP 102	National Service Training Program 2	3	3	0	NSTP 101	
PE 104	Team Sports	2	2	0	PE 101	
SS 104	Life and Works of Rizal	3	3	0		
SS 106	Politics and Governance with Philippine Constitution	3	3	0		
		<b>22</b>	<b>20</b>	<b>6</b>		
<b>THIRD YEAR - FIRST SEMESTER</b>						
ECE 301	Electronics Devices and Circuits	4	3	3	Phy 107	
EE 301	Electrical Circuits 1	4	3	3	Phy 107	
Math 120	Differential Equations	3	3	0	Math 115	
IE 307	Engineering Economy	3	3	0	3rd Year Standing	
ME 330	Thermodynamics	3	3	0	Phy 107	
Mech 301	Statics of Rigid Bodies	3	3	0	Math 115, Phy 106	
MSE 301	Fundamentals of Material Science and Engineering	3	3	0	Chem 103	
		<b>23</b>	<b>21</b>	<b>6</b>		

THIRD YEAR - SECOND SEMESTER						
ECE 303	Electronic Circuit Analysis and Design	4	3	<u>3</u>	ECE 301	
ECE 323	Fundamentals of Communication Systems	3	3	0	ECE 301	
EE 324	Circuits 2	4	3	<u>3</u>	EE 301, MexE 301	
MexE 301	Advanced Engineering Mathematics for MexE	3	3	0	Math 120	
Math 121	Probability and Statistics	3	3	0	Math 115	
Mech 302	Dynamics of Rigid Bodies	2	2	0	Mech 301	
Mech 303	Mechanics of Deformable Bodies	3	3	0	Mech 301	
		<b>22</b>	<b>20</b>	<b>6</b>		
THIRD YEAR - SUMMER						
MexE 302	MexE Shop Practice	3	2	<u>3</u>	ECE 303, Mech 303	
EnE 301	Environmental Engineering	2	2	0	Chem 103	
IE 309	Safety Management	1	1	0	3rd Year Standing	
		<b>6</b>	<b>5</b>	<b>3</b>		
FOURTH YEAR - FIRST SEMESTER						
ECE 408	Industrial Electronics	4	3	<u>3</u>	ECE 303	
ECE 409	Digital Principles and Logic Design	4	3	<u>3</u>	ECE 303	
ECE 424	Signals and Systems Analysis	3	3	0	ECE 323	
MexE 403	Pneumatics and Electro-Pneumatics	3	2	<u>3</u>	EE 301, ME 330	
MexE 404	Hydraulics and Electro-Hydraulics	3	2	<u>3</u>	EE 301, ME 330	
MexE 405	Mechanism and Dynamics of Machines	3	2	<u>3</u>	Mech 302, Mech 303	
MexE 406	Vibration Engineering for MexE	3	3	0	MexE 301, Mech 302	
CS 421	Algorithms and Data Structures	3	2	<u>3</u>	Comp 201	
		<b>26</b>	<b>20</b>	<b>18</b>		
FOURTH YEAR - SECOND SEMESTER						
ECE 427	Embedded Systems	3	2	<u>3</u>	Comp 201, ECE 409	
EE 426	Energy Conversion	4	3	<u>3</u>	EE 324	
ICE 406	Control Systems Engineering	3	2	<u>3</u>	MexE 301, ECE 424	
ICE 408	Actuators and Sensors Engineering	3	2	<u>3</u>	EE 324, ECE 408	
MexE 407	PLC Hardware and Programming	3	2	<u>3</u>	ECE 409, MexE 403, MexE 404	
MexE 408	MexE Research 1	3	3	0	Eng 106, Math 121	
MexE 409	CAD / CAM / CNC	3	2	<u>3</u>	CAD 201, MexE 405	
MexE 410	Electromechanical Machine Design	3	2	<u>3</u>	EE 324, MexE 405	MexE 409
		<b>25</b>	<b>18</b>	<b>21</b>		
FIFTH YEAR - FIRST SEMESTER						
MexE 511	MexE Research 2	3	3	0	Graduating Standing	
MexE 512	MexE Practice with Comprehensive Examination	1	0	3	Graduating Standing	
MexE 513	Mechatronics Systems Design	3	2	<u>3</u>	ECE 427, MexE 407, MexE 410	MexE 516
MexE 514	Field Trips and Seminars for MexE	2	0	6	5th Year Standing	
MexE 515	Real Time Systems	3	3	0	CS 421, ECE 427	
MexE 516	Robotics Technology	3	3	0	ICE 408	
IE 530	Engineering Management	3	3	0	5th Year Standing	
IE 532	Technopreneurship	3	3	0	5th Year Standing	
		<b>21</b>	<b>17</b>	<b>12</b>		
FIFTH YEAR - SECOND SEMESTER						
OJT 500	Internship Training	10	0	0	Regular Standing	
		<b>10</b>	<b>0</b>	<b>0</b>		