



**BRAINWARE UNIVERSITY**  
**SCHOOL OF ENGINEERING**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**  
**Diploma in Robotics & Automation - 2024**

**Mandatory Induction Program (Duration: 3 weeks)**

- Physical activity
- Creative Arts
- Universal Human Values
- Literary
- Proficiency Modules
- Lectures by Eminent People
- Visits to local Areas
- Familiarization to Department/Branch & Innovations

**SEMESTER – I**

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	DBS00001	Mathematics-I	3	0	0	40	60	100	3	BS
2	DBS00002	Applied Physics-I	2	1	0	40	60	100	3	BS
3	DBS00003	Applied Chemistry	3	0	0	40	60	100	3	BS
4	DES00001	Introduction to IT Systems	2	0	0	40	60	100	2	ES
5	DHS00001	Communication Skills in English	2	0	0	40	60	100	2	HS
6	DBS09006	Applied Physics-I Lab	0	0	2	20	30	50	1	BS
7	DBS09007	Applied Chemistry Lab	0	0	2	20	30	50	1	BS
8	DES09010	Introduction to IT Systems Lab	0	0	2	20	30	50	1	ES
9	DES09009	Engineering Graphics	0	0	3	40	60	100	1.5	ES
10	DES09007	Engineering Workshop Practice	0	0	3	40	60	100	1.5	ES
<b>TOTAL</b>			<b>12</b>	<b>1</b>	<b>12</b>	<b>340</b>	<b>510</b>	<b>850</b>	<b>19</b>	



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**SEMESTER – II**

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	DBS00004	Mathematics-II	3	1	0	40	60	100	4	BS
2	DBS00005	Applied Physics-II	2	1	0	40	60	100	3	BS
3	DES00002	Fundamentals of Electrical and Electronics Engineering	3	0	0	40	60	100	3	ES
4	DES00003	Engineering Mechanics	3	1	0	40	60	100	4	ES
5	DES00004	Computer Programming	3	0	0	40	60	100	3	ES
6	DBS09008	Applied Physics-II Lab	0	0	2	20	30	50	1	BS
7	DES09008	Fundamentals of Electrical and Electronics Engineering Lab	0	0	2	20	30	50	1	ES
8	DES09005	Engineering Mechanics Lab	0	0	2	20	30	50	1	ES
9	DES09006	Computer Programming Lab	0	0	2	20	30	50	1	ES
10	DHS09002	Communication Skills in English Lab	0	0	2	20	30	50	1	HS
11	DAU00001	Environmental Sciences	2	0	0	0	0	0	0	AU
<b>TOTAL</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>300</b>	<b>450</b>	<b>750</b>	<b>22</b>	

**SEMESTER – III**

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	DEC30101	Principles of Electronic Communication	3	0	0	40	60	100	3	PC
2	DEC30102	Electronic Devices and Circuits	3	0	0	40	60	100	3	PC
3	DEC30103	Digital Electronics	3	0	0	40	60	100	3	PC
4	DEC30104	Electronic Measurements and Instrumentation	3	0	0	40	60	100	3	PC
5	DEC30105	Robotic Control System	3	1	0	40	60	100	4	PC
6	DEC39106	Principles of Electronic Communication Lab	0	0	2	20	30	50	1	PC
7	DEC39107	Electronic Devices and Circuits Lab	0	0	2	20	30	50	1	PC
8	DEC39108	Digital Electronics Lab	0	0	2	20	30	50	1	PC
9	DEC39109	Electronic Measurements and Instrumentation Lab	0	0	2	20	30	50	1	PC
10	DEC39110	Electronics System Design using Tinkercad Lab	0	0	2	20	30	50	1	PC
<b>TOTAL</b>			<b>15</b>	<b>1</b>	<b>10</b>	<b>300</b>	<b>450</b>	<b>750</b>	<b>21</b>	



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**SEMESTER – IV**

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	DEC40111	Microprocessor and Microcontroller	3	0	0	40	60	100	3	PC
2	DEC40112	Robotic Fundamentals	3	1	0	40	60	100	4	PC
3	DEC40113	Introduction to IOT	3	1	0	40	60	100	4	PC
4	DEC40201	A. AI in Robotics B. Medical Robotics C. Wireless Communication and 5G Technology for Robotics	4	0	0	40	60	100	4	PE
5	DHS00003	Entrepreneurship and Start-ups	3	0	0	40	60	100	3	HS
6	DEC49114	Microprocessor and Microcontroller Lab	0	0	2	20	30	50	1	PC
7	DEC49115	Robotics Lab	0	0	2	20	30	50	1	PC
8	DAU00003	Essence of Indian Knowledge and Tradition	2	0	0	0	0	0	0	AU
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>4</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>20</b>	

**SEMESTER – V**

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	DEC50116	Embedded System	3	0	0	40	60	100	3	PC
2	DEC50117	Sensor and Actuator Devices	2	0	0	40	60	100	2	PC
3	DEC50202	A. Privacy and Security in IoT B. Signal Processing for Robotics C. Mobile Robotics	4	0	0	40	60	100	4	PE
4	DEC50203	A. Mobile Application Development for IOT B. Programming for IOT C. Mechatronics D. Automation System Design	4	0	0	40	60	100	4	PE
5	DEC50301	A. Java Programing B. Python Programming C. Object oriented programming using C++	2	0	0	40	60	100	2	OE
6	DEC59118	Embedded System Lab	0	0	2	20	30	50	1	PC
7	DEC59119	Sensor and Actuator Devices Lab	0	0	2	20	30	50	1	PC
8	DEC59302	A. Java Programing Lab B. Python Programming Lab C. Object oriented programming using C++ Lab	0	0	2	20	30	50	1	OE
9	DEC58101	Internship	0	0	0	0	100	100	2	PROJ
<b>TOTAL</b>			<b>15</b>	<b>0</b>	<b>6</b>	<b>260</b>	<b>490</b>	<b>750</b>	<b>20</b>	



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**SEMESTER – VI**

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	DEC60120	Industrial Robotics and Automation	3	0	0	40	60	100	3	PC
2	DEC60303	A. Optical Communication and Networking B. Renewable Energy C. Image Processing	3	0	0	40	60	100	3	OE
3	DEC60304	A. Industrial Electronics B. Computer Networks C. Engineering Economics & Accountancy	3	0	0	40	60	100	3	OE
4	DEC69121	Industrial Robotics and Automation Lab	0	0	2	20	30	50	1	PC
5	DEC68102	Project	0	0	0	40	60	100	6	PROJ
6	DEC68103	Grand Viva-Voce	0	0	0	0	100	100	4	PROJ
7	DAU00002	Indian Constitution	2	0	0	0	0	0	0	AU
<b>TOTAL</b>			<b>11</b>	<b>0</b>	<b>2</b>	<b>180</b>	<b>370</b>	<b>550</b>	<b>20</b>	