



# GALGOTIAS UNIVERSITY

## B.Tech. in Electrical and Electronics Engineering Programme Structure

School/Dept.		DEECE	Program Name				B.Tech. EEE	
semester		I	Program Chair: Dr. Mohammad Rashid Ansari					
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	C1UC122B	Engineering Mathematics-I	3	0	1	0	4	5
2	E2UC102C	Programming for Problem Solving using C	2	0	1	1	4	5
3	G2UA120B	Basic Electrical & Electronics Engineering	3	0	1	0	4	5
4	C1UB129T	Chemical and Biological Materials	3	0	0	0	3	3
5	G3UB101B	Engineering Design and Prototyping	3	0	1	0	4	5
6	L1UB120T	Yoga	2	0	0	0	0	2
			Total Credits				19	
School/Dept.		DEECE	Program Name				B.Tech. EEE	
semester		II						
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	C1UC222B	Engineering Mathematics-II	3	0	1	0	4	5
2	G2UC101B	Introduction to Digital Systems	2	0	1	0	3	4
3	E2UC201C	OOPS using Python	2	0	1	1	5	4
4	C1UC224T	Discrete Mathematics	3	0	0	0	3	3
5	O1UA104B	Communication Skills for Engineers	2	0	1	0	3	4
6	C1UD124B	Semi-conductor and Opto Electronic Devices	3	0	1	0	4	5
7	C1UB120T	Environmental Impact Analysis	2	0	0	0	0	2
			Total Credits				22	
School/Dept.		DEECE	Program Name				B.Tech. EEE	
semester		III						
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	C1UC321T	Functions of Complex variables and Transforms	3	0	0		3	3
2	G2UC301C	Electronic Devices and Circuits	3	0	1	1	5	5
3	G2UB301B	Network Analysis and Synthesis	3	0	1		4	5
4	G2UC302T	Signals and Systems	3	0	0		3	3
5	G2UC303T	Electromagnetic Field Theory	3	0	0		3	3
6	G1UA306B	Design Thinking-1	1	0	1	0	2	3
7	K1UC320B	Communication Competency & Aptitude Building-1	1	0	1		2	3
			Total Credits				22	
School/Dept.		DEECE	Program Name				B.Tech. EEE	
semester		IV						
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	C1UC420T	Probability and Stochastic Processes	3	0	0		3	3
2	G2UB407T	Control Systems	3	0	0		3	3
3	G2UB402B	Electrical Machine-I	3	0	1		4	5
4	G2UB406T	Fundamentals of Power Systems	3	0	0		3	4

5	G2UB405C	Electrical Measurement and Instrumentation	3	0	1	1	5	5
6	O1UA421B	Communication Competency & Aptitude Building-2	1	0	1		2	3
7	*****	Capsule Course-1(Analog Circuit Design (Spice Tool) )	0	0	1	0	1	2
			<b>Total Credits</b>				21	
<b>School/Dept.</b>		<b>DEECE</b>	<b>Program Name</b>				<b>B.Tech. EEE</b>	
<b>semester</b>		<b>V</b>						
<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>S</b>	<b>Credits</b>	<b>Hours</b>
1	G2UB501B	Electrical Machine-II	3	0	1		4	5
2	G2UB502T	Power System Analysis	3	0	0		3	3
3	G2UB503C	Power Electronics	3	0	1	1	5	5
4	G2UB504B	Microcontroller and Embedded System	3	0	1		4	5
5	Provided by ER	Design Thinking-2	1	0	1	0	2	3
6	E2UC521B	Python and Data Structures	3	0	1		4	5
7	*****	Capsule Course-2 (Introduction to Arduino)	0	0	1	0	1	2
			<b>Total</b>				23	
<b>School/Dept.</b>		<b>DEECE</b>	<b>Program Name</b>				<b>B.Tech. EEE</b>	
<b>semester</b>		<b>VI</b>						
<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>S</b>	<b>Credits</b>	<b>Hours</b>
1	O1UA602B	Campus 2 Corporate Training	1	0	1		2	3
2	G2UC502C	Digital Signal Processing	3	0	1		4	5
3	*****	Program Elective-I	3	0	0		3	3
4	*****	Open Elective-I	3	0	0		3	3
5	G2UB601T	Renewable Energy	3	0	0	0	3	3
6	G2UB604C	Electric Drives	3	0	1	1	5	5
7	*****	Capsule Course-3(Introduction to MATLAB and Simulink)	0	0	1	0	1	2
			<b>Total Credits</b>				21	
<b>School/Dept.</b>		<b>DEECE</b>	<b>Program Name</b>				<b>B.Tech. EEE</b>	
<b>semester</b>		<b>VII</b>						
<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>S</b>	<b>Credits</b>	<b>Hours</b>
1	*****	Program Elective-II	3	0	0		3	3
2	*****	Program Elective-III (Optional with capsule course)	3	0	0		3	3
3	BEE01T4001	Sensors and Actuators	3	0	0		3	3
4	*****	Open Elective-II	3	0	0		3	3
5	BEE02P4007	Industrial Internship (Min. 4 weeks)	0	0	0	1	1	0
6	BEE02P4008	Capstone Design Phase-I	0	0	0	7	7	0
			<b>Total Credits</b>				20	
<b>School/Dept.</b>		<b>DEECE</b>	<b>Program Name</b>				<b>B.Tech. EEE</b>	
<b>semester</b>		<b>VII</b>						
<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>S</b>	<b>Credits</b>	<b>Hours</b>
1	BEE02P4006	Capstone Design phase - II	0	0	0	18	18	0
2	*****	Industrial Internship-II (To be completed during 8 Semester only with min 3 to max. 6 months)	0	0	1	1	2	0
			<b>Total Credits</b>				20	
<b>Total Credits of All Semesters</b>			<b>168</b>					

**Programme Elective Basket**

School/Dept.		DEECE	Program Name				B.Tech. EEE	
Elective Basket		Instrumentation and Control Engineering	Program Chair: Dr. Mohammad Rashid Ansari					
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	G2UB611T	Advanced Control System	2	1	0	0	3	3
2	G2UB612T	Industrial Automation and Control	3	0	0	0	3	3
3	G2UB613T	Industrial Instrumentation and Automation	3	0	0	0	3	3
4	G2UB614T	Power System Operation and Control	3	0	0	0	3	3
5	G2UB615T	Digital Control	2	1	0	0	3	3
6	G2UB616T	Automation and Robotics	3	0	0	0	3	3
7	G2UB617T	Introduction to PLC and SCADA	2	1	0	0	3	3
School/Dept.		DEECE	Program Name				B.Tech. EEE	
Elective Basket		Power Engineering						
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	G2UB621T	Power System Equipments	3	0	0	0	3	3
2	G2UB601T	Power Quality	3	0	0	0	3	3
3	G2UB622T	FACTS and HVDC	3	0	0	0	3	3
4	G2UB623T	Energy Storage Systems	3	0	0	0	3	3
5	G2UB623T	Electrical and Hybrid Vehicle	3	0	0	0	3	3
6	G2UB624T	Modeling and Analysis of Electrical Machines	3	0	0	0	3	3
7	G2UB625T	Hydrogen Energy	3	0	0	0	3	3
8	G2UB626T	Smart grid cyber-security	3	0	0	0	3	3
9	G2UB627T	Energy efficient system.	3	0	0	0	3	3
10	G2UB628T	Introduction to Microgrid	3	0	0	0	3	3
11	G2UB629T	Power Plant Engineering	3	0	0	0	3	3
12	G2UB620T	Power System Deregulation	3	0	0	0	3	3
School/Dept.		DEECE	Program Name				B.Tech. EEE	
Elective Basket		Energy Engineering						
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	G2UB630T	Energy Assessment and Audit	2	1	0	0	3	3
2	G2UB631T	Utilization of Electrical Energy and Traction System	3	0	0	0	3	3
3	G2UB632T	Power Electronics applications in Renewable Energy	3	0	0	0	3	3
4	G2UB633T	Special Electrical Machine	3	0	0	0	3	3
5	G2UB634T	Energy Modelling Simulation Using MATLab	3	0	0	0	3	3
School/Dept.		DEECE	Program Name				B.Tech. EEE	
Elective Basket		Renewable Energy Engineering						
S. No.	Course Code	Course Title	L	T	P	S	Credits	Hours
1	G2UB635T	Solar PV Techniques & Installation	3	0	0	0	3	3
2	G2UB636T	Energy Storage Systems for EV	3	0	0	0	3	3
3	G2UB637T	Waste to Energy	3	0	0	0	3	3
4	G2UB638T	Impact of Energy Systems on Environments	3	0	0	0	3	3
5	G2UB639T	Energy Scenario and its Policy	2	1	0	0	3	3

<b>6</b>	G2UB602T	Battery Management System	3	0	0	0	3	3
<b>School/Dept.</b>		<b>DEECE</b>	<b>Program Name</b>				<b>B.Tech. EEE</b>	
<b>Elective Basket</b>		<b>Processing and Computing Techniques</b>						
<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>S</b>	<b>Credits</b>	<b>Hours</b>
<b>1</b>	G2UB640T	Machine learning	3	0	0	0	3	3
<b>2</b>	G2UB641T	Image Processing using MATLAB	3	0	0	0	3	3
<b>3</b>	G2UB642T	Introduction to Scilab and its applications	3	0	0	0	3	3
<b>4</b>	G2UB643T	Human Computer Interface	3	0	0	0	3	3
<b>5</b>	G2UB645T	Soft Computing	3	0	0	0	3	3
<b>6</b>	G2UB646T	Neural Networks and Fuzzy Control	3	0	0	0	3	3
<b>7</b>	G2UB647T	Deep Learning Algorithms	3	0	0	0	3	3
<b>8</b>	G2UB648T	Cloud Computing	3	0	0	0	3	3
<b>9</b>	G2UB649T	Neural Networks and Deep Learning Algorithms	3	0	0	0	3	3
<b>School/Dept.</b>		<b>DEECE</b>	<b>Program Name</b>				<b>B.Tech. EEE</b>	
<b>Elective Basket</b>		<b>IoT Technology</b>						
<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>S</b>	<b>Credits</b>	<b>Hours</b>
<b>1</b>	G2UB651T	Introduction to IoT and its Applications	3	0	0	0	3	3
<b>2</b>	G2UB652T	Virtual Reality	3	0	0	0	3	3
<b>3</b>	G2UB653T	Raspberry Pi and its applications	2	1	0	0	3	3
<b>4</b>	G2UB654T	Introduction to Arduino programming and its applications	2	1	0	0	3	3