

Course Outcomes for EXTC Engineering

After successfully completing the course students will be able to

1. Understand fundamental underlying principles of computer networking.
2. Describe and analyze the hardware, software, components of a network and their interrelations.
3. Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies.
4. Have a basic knowledge of the use of cryptography and network security.
5. Have a basic knowledge of installing and configuring networking applications.
6. Specify and identify deficiencies in existing protocols, and then go on to select new and better protocols.

Program Outcomes for Computer Network (BTETC602)

1. The graduates will possess the knowledge of differential equations, vector calculus, complex variable, matrix theory, probability theory, physics, chemistry and electrical & electronics engineering
2. The graduate will demonstrate an ability to identify, formulate and solve Electronics & Telecommunication engineering problems
3. The graduates will have an ability to design electronic circuits and systems, analyze and interpret data.
4. The graduates will have an ability to design digital and analog systems and components
5. The graduates will possess the knowledge of advanced and emerging topics in the fields of Electronics, Signal Processing and Communication
6. The graduates will demonstrate the skills to use modern engineering tools, software and equipment's to analyze and solve real-life problems
7. The graduate will have broad understanding of the impact of Electronics and Telecommunication field in economic, environmental and social context and also will be aware of the contemporary issues
8. The graduates will possess communication skills necessary to communicate engineering ideas. The skills set include verbal, written and listening skills.
9. The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.
10. The graduates will demonstrate the awareness of professional and ethical responsibilities
11. The graduates will develop self-confidence and ability for lifelong learning.

Assessment of Course Outcomes through MSE

Course Outcomes	Program Outcomes										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	-	High	Low	Medium	Medium	High	Low	-	-	-	Medium
CO2	-	High	Medium	High	High	High	Low	-	-	-	Low
CO3	-	High	Medium	Medium	Medium	High	Low	-	-	-	Medium
CO4	-	High	Low	Medium	High	High	Low	-	-	-	Low
CO5	-	High	High	High	High	High	High	-	-	-	Medium
CO6	-	High	High	High	High	High	High	-	-	-	Medium

MSE Question Numbers	Q.1 /5	Q.2 /5	Q.3 / 5	Q.4 / 5	Q.5 / 5
Relevant Course Outcomes	CO1, CO2	CO1, CO3,CO2	CO1, CO5, CO2,CO6	CO1,CO6,C O5	CO1,CO3,CO2,CO5
Enrolment Number					
1930331372001	4	NA	2	4	2
1930331372002	4	NA	3	4	2
1930331372003	4	4	NA	4	3
1930331372004	4	NA	3	4	4
1930331372005	4	NA	4	4	4
1930331372006	4	5	NA	5	4
1930331372007	4	NA	2	4	4
1930331372008	4	3	NA	4	4
1930331372010	2	NA	NA	3	1
1930331372011	3	NA	NA	2	1
1930331372012	4	3	NA	4	4
1930331372013	4	NA	2	4	4
1930331372014	4	NA	NA	3	3
1930331372015	4	NA	2	4	4
1930331372016	2	NA	NA	3	2
1930331372031	3	NA	NA	3	3
1930331372032	3	NA	NA	3	3
1930331372033	4	NA	NA	4	3
1930331372053	4	NA	NA	3	3
1930331372054	4	NA	NA	3	3
1930331372055	4	3	NA	4	3
1930331372056	3	NA	NA	3	3
1930331372058	4	2	NA	3	2
1930331372060	2	2	NA	2	2
1930331372061	3	2	NA	3	2

1930331372063	3	NA	2	3	2
1930331372064	2	1	NA	2	2
1930331372065	2	2	NA	2	1
1930331372066	4	NA	2	4	4
1930331372067	4	NA	NA	4	4
1930331372068	3	3	NA	3	NA
1930331372069	4	3	NA	4	3
1930331372076	3	NA	1	3	3
1930331372077	4	NA	NA	3	3
1930331372078	4	2	NA	4	2
1930331372081	4	4	NA	5	4
1930331372082	4	2	NA	4	4
1930331372083	4	NA	NA	4	3
1930331372084	4	NA	NA	4	3
1930331372087	4	1	NA	3	2
1930331372088	1	NA	NA	NA	NA
1930331372090	1	NA	NA	1	NA
1930331372091	4	NA	1	4	4
1930331372093	2	2	NA	3	1
1930331372096	2	NA	NA	2	NA
1930331372098	4	NA	NA	4	3
1930331372099	4	NA	NA	3	3
1930331372100	4	1	NA	4	3
1930331372102	4	4	NA	4	4
1930331372103	4	NA	NA	4	3
1930331372104	4	2	NA	4	3
1930331372105	3	NA	NA	3	1
1930331372106	2	NA	NA	2	NA
1930331372107	3	NA	1	3	2
1930331372108	4	NA	2	4	4
1930331372109	3	0	0	3	2
1930331372111	4	NA	NA	4	3
1930331372112	4	5	NA	5	5
1930331372115	3	NA	NA	3	3
1930331372116	3	NA	NA	3	3
1930331372117	4	NA	2	4	NA
103033201811372 10074	3	NA	1	2	1
103033201811372 10129	2	NA	NA	2	NA
2030331372001	4	NA	NA	4	4
2030331372002	4	4	NA	4	4
2030331372003	4	NA	1	4	3
2030331372004	3	2	NA	3	2
2030331372005	4	4	NA	5	5
2030331372006	3	1	NA	3	2

2030331372007	3	NA	2	3	NA
2030331372008	2	1	NA	3	NA
2030331372009	3	1	NA	3	3
2030331372010	4	NA	5	5	5
2030331372011	2	NA	2	3	1
2030331372012	2	1	NA	3	1
2030331372013	2	2	2	3	NA
2030331372014	3	1	2	3	NA
2030331372015	4	2	NA	4	2
2030331372016	3	NA	1	3	NA
2030331372017	2	1	NA	3	NA
2030331372018	3	NA	NA	3	3
2030331372019	3	3	NA	3	2
2030331372020	2	NA	1	3	NA
2030331372021	2	NA	NA	3	1
2030331372022	3	1	NA	3	2
Average	3.28235	2.28571	1.91667	3.38095238	2.83098592
Percentage	65.65	45.72	38.34	67.62	56.6

*NA = Not Attempted

Python Programming (BTETPE405E)

Course Outcomes

- CO1. Experience with an interpreted Language.
- CO2. To build software for real needs.
- CO3. Prior Introduction to testing software

Program Outcomes

Engineering Graduate will be able to –

- PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Course Outcomes & Program Outcomes Mapping Table

Course Outcomes	Programme Outcomes				
	PO1	PO2	PO4	PO5	PO6
CO1	High	High	Low	High	Low
CO2	High	Medium	High	High	Low
CO3	---	Low	Medium	High	---

Assessment of Course Outcomes through Assignments

Assignment number	Relevant Course Outcomes	Number of students completed assignment	Total Number of students	%percentage
1	CO1, CO2	26	28	92.8
2	CO1, CO2	27	28	96.4
3	CO1, CO2	19	28	67.8
4	CO1	20	28	71.4
5	CO1	15	28	53.5
6	CO1, CO2, CO3	18	28	64.2
7	CO1, CO2, CO3	22	28	78.5

Assessment of Course Outcomes

Course Outcomes	Assessment Tool	Contribution to Programme outcomes in %					Attainment level of course outcomes (%)	Achievement (Goal: 70%) In Yes/No
		PO1	PO2	PO4	PO5	PO6		
CO1	MSE Q.1	55.7	55.7	55.7	55.7	55.7	70.9	Yes
	MSE Q.2	36.3	36.3	36.3	36.3	36.3		
	MSE Q.3	92	92	92	92	92		
	Assignment1	92.8	92.8	92.8	92.8	92.8		
	Assignment2	96.4	96.4	96.4	96.4	96.4		
	Assignment3	67.8	67.8	67.8	67.8	67.8		
	Assignment4	71.4	71.4	71.4	71.4	71.4		
	Assignment5	53.5	53.5	53.5	53.5	53.5		
	Assignment6	64.2	64.2	64.2	64.2	64.2		
Assignment7	78.5	78.5	78.5	78.5	78.5			
CO2	MSE Q.1	55.7	55.7	55.7	55.7	55.7	72.9	Yes
	MSE Q.2	36.3	36.3	36.3	36.3	36.3		
	MSE Q.3	92	92	92	92	92		
	Assignment1	92.8	92.8	92.8	92.8	92.8		
	Assignment2	96.4	96.4	96.4	96.4	96.4		
	Assignment3	67.8	67.8	67.8	67.8	67.8		
	Assignment6	64.2	64.2	64.2	64.2	64.2		
Assignment7	78.5	78.5	78.5	78.5	78.5			
CO3	MSE Q.3	92	92	92	92	92	78.2	Yes
	Assignment6	64.2	64.2	64.2	64.2	64.2		
	Assignment7	78.5	78.5	78.5	78.5	78.5		

DIP (BTETC 603)

Program Outcomes:

PO1	The graduates will possess the knowledge of differential equations, vector calculus, complex variable, matrix theory, probability theory, physics, chemistry and electrical & electronics engineering
PO2	The graduate will demonstrate an ability to identify, formulate and solve Electronics & Telecommunication engineering problems
PO3	The graduates will have an ability to design electronic circuits and systems, analyze and interpret data.
PO4	The graduates will have an ability to design digital and analog systems and components
PO5	The graduates will possess the knowledge of advanced and emerging topics in the fields of Electronics, Signal Processing and Communication
PO6	The graduates will demonstrate the skills to use modern engineering tools, software and equipments to analyze and solve real-life problems
PO7	The graduate will have broad understanding of the impact of Electronics and Telecommunication field in economic, environmental and social context and also will be aware of the contemporary issues
PO8	The graduates will possess communication skills necessary to communicate engineering ideas. The skills set include verbal, written and listening skills.
PO9	The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.
PO10	The graduates will demonstrate the awareness of professional and ethical responsibilities
PO11	The graduates will develop self confidence and ability for lifelong learning

Course Outcomes:

After completion of this course students will be able to

1. Review the fundamental concepts of digital image processing system.
2. Analyze images in the frequency domain using various transforms.
3. Categories various compression techniques.
4. Interpret image segmentation and representation techniques.

Course outcomes and Programme outcomes mapping table

Course Outcomes	Programme Outcomes										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
CO2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>
CO3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CO4	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Assessment of Course Outcomes through MSE

Sr. No.	Relevant Course Outcomes	CO1, CO2	CO1, CO3	CO2, CO4	CO3, CO4	CO2, CO3	
	ROLL NO	Q.1/4	Q.2/4	Q.3/4	Q.4/4	Q.5/4	Total (20)
1	PRN:10303320181137210074	4	2	2	1		9
2	PRN:10303320181137210129	2	2	2	2	1	9
3	PRN:1930331372001	2	1	2		1	6
4	PRN:1930331372002	1	2	2	1	2	8
5	PRN:1930331372003	4	2	1	2	3	12
6	PRN:1930331372004	4	2	1	0	3	10
7	PRN:1930331372005	4	2	3	2	3	14
8	PRN:1930331372006	4	2	1	2	3	12
9	PRN:1930331372007	1	2	2	1	2	8
10	PRN:1930331372008	3	2	3	2	1	11
11	PRN:1930331372010	1	1	1	1		4
12	PRN:1930331372011				1		1
13	PRN:1930331372012	2	2	2	2	1	9
14	PRN:1930331372013	2	2	2	2	1	9
15	PRN:1930331372014	2		1			3
16	PRN:1930331372015	2	1	1	2	1	7
17	PRN:1930331372016	2	2	2		0	6
18	PRN:1930331372031	1	2	2	2		7
19	PRN:1930331372032		1	2	2	2	7
20	PRN:1930331372033	2	2	2	2	1	9
21	PRN:1930331372053		1		1	1	3
22	PRN:1930331372054	2		1		2	5
23	PRN:1930331372055		1	2	2	2	7
24	PRN:1930331372056	1	2	2		1	6
25	PRN:1930331372058	3	2	3	2	1	11
26	PRN:1930331372060	1	2	2	1	2	8
27	PRN:1930331372061	2			2	2	6
28	PRN:1930331372063	2	2	2	2	1	9
29	PRN:1930331372064	2			2	2	6
30	PRN:1930331372065		2		2	2	6
31	PRN:1930331372066	4	4	2	4	2	16
32	PRN:1930331372067	2	2	2	2	1	9
33	PRN:1930331372068	2	2	2	2	1	9
34	PRN:1930331372069	3	2	3	2	1	11
35	PRN:1930331372076	2	1	2	2		7
36	PRN:1930331372077		2	1	2	2	7

37	PRN:1930331372078	1	2	2	1	2	8
38	PRN:1930331372081	2	4	3	4	2	15
39	PRN:1930331372082	3	2	3	2	3	13
40	PRN:1930331372083	3	2	3	2	3	13
41	PRN:1930331372084	1	2	2	1	2	8
42	PRN:1930331372087	2			2	2	6
43	PRN:1930331372088	3		1	2	1	7
44	PRN:1930331372090		1		1	1	3
45	PRN:1930331372091	4	2	1	0	3	10
46	PRN:1930331372093	1	2	2	1	2	8
47	PRN:1930331372096	4	2	1	3	0	10
48	PRN:1930331372098	4	1	2	2	3	12
49	PRN:1930331372099	1	2	2	1	2	8
50	PRN:1930331372100	2	1	2	1	1	7
51	PRN:1930331372102	4	4	4	3	1	16
52	PRN:1930331372103	4	2	1	0	3	10
53	PRN:1930331372104	2	2	2	2	1	9
54	PRN:1930331372105	1	2	2	1	2	8
55	PRN:1930331372106	1	1	1	1	1	5
56	PRN:1930331372107	1	1	1	1	1	5
57	PRN:1930331372108	2	2	2	2	1	9
58	PRN:1930331372109	2	1	2	1	1	7
59	PRN:1930331372111	1	2	2	1	2	8
60	PRN:1930331372112	4	2	1	1	3	11
61	PRN:1930331372115	4	3	1	0	2	10
62	PRN:1930331372116	3	2	3	2	1	11
63	PRN:1930331372117	0	2	1	4	3	10
64	PRN:2030331372001	2	1	2	1	1	7
65	PRN:2030331372002	1	2	1	2	1	7
66	PRN:2030331372003	1	1	2		1	5
67	PRN:2030331372004	1	1		1	1	4
68	PRN:2030331372005	4	2	3	2	3	14
69	PRN:2030331372006	1	2	2	1	2	8
70	PRN:2030331372007	1	1	1	1	1	5
71	PRN:2030331372008	1	1		1	1	4
72	PRN:2030331372009		2	2		2	6
73	PRN:2030331372010	1	2	4	0	3	10
74	PRN:2030331372011	2			2	2	6
75	PRN:2030331372012	1	0	1	0		2
76	PRN:2030331372013	1	1	1	1	1	5
77	PRN:2030331372014	2	1	1	1		5
78	PRN:2030331372015	3	2	3	2	3	13
79	PRN:2030331372016	2	2				4
80	PRN:2030331372017	1	1	1			3
81	PRN:2030331372018		1		1		2
82	PRN:2030331372019	4	2	1	0	3	10

83	PRN:2030331372020	1	1	2	2		6
84	PRN:2030331372021	2	2	2	2	1	9
85	PRN:2030331372022	1	1	1	1	1	5
Average		2.13	1.76	1.85	1.55	1.7	7.93
%		53.25	44	46.25	38.75	42.50	40

Assessment of Course Outcomes

Course Outcomes	Assessment Tool	Contribution to Programme outcomes in %				Attainment level of course outcomes (%)	Achievement (Goal: 70%) In Yes/No
		PO1	PO2	PO3	PO5		
CO1	MSE Q.1	53.25	53.25	53.25	53.25	82.09	Yes
	MSE Q.2	44	44	44	44		
	CA1	96.80	96.80	96.80	96.80		
	CA2	98.50	98.50	98.50	98.50		
	Assignment1	100	100	100	100		
	Assignment2	100	100	100	100		
CO2	MSE Q.1	53.25	53.25	53.25	53.25	76.75	Yes
	MSE Q.3	46.25	46.25	46.25	46.25		
	MSE Q.5	42.50	42.50	42.50	42.50		
	CA1	96.80	96.80	96.80	96.80		
	CA2	98.50	98.50	98.50	98.50		
	Assignment1	100	100	100	100		
CO3	Assignment2	100	100	100	100	74.36	Yes
	MSE Q.2	44	44	44	44		
	MSE Q.4	38.75	38.75	38.75	38.75		
	MSE Q.5	42.50	42.50	42.50	42.50		
	CA1	96.80	96.80	96.80	96.80		
	CA2	98.50	98.50	98.50	98.50		
	Assignment1	100	100	100	100		
CO4	Assignment2	100	100	100	100	80.05	Yes
	MSE Q.3	46.25	46.25	46.25	46.25		
	MSE Q.4	38.75	38.75	38.75	38.75		
	CA1	96.80	96.80	96.80	96.80		
	CA2	98.50	98.50	98.50	98.50		
	Assignment1	100	100	100	100		
Assignment2	100	100	100	100			

Probability Theory and Random Processes

(BTEXPE506A)

Program Outcomes:

PO1	The graduates will possess the knowledge of differential equations, vector calculus, complex variable, matrix theory, probability theory, physics, chemistry and electrical & electronics engineering
PO2	The graduates will be able to Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	The graduates will have an ability to design electronic circuits and systems, analyze and interpret data.
PO4	The graduates will have an ability to design digital and analog systems and components
PO5	The graduates will possess the knowledge of advanced and emerging topics in the fields of Electronics, Signal Processing and Communication
PO6	The graduates will demonstrate the skills to use modern engineering tools, software and equipments to analyze and solve real-life problems
PO7	The graduate will have broad understanding of the impact of Electronics and Telecommunication field in economic, environmental and social context and also will be aware of the contemporary issues
PO8	The graduates will possess communication skills necessary to communicate engineering ideas. The skills set include verbal, written and listening skills.
PO9	The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.
PO10	The graduates will demonstrate the awareness of professional and ethical responsibilities
PO11	The graduates will develop self confidence and ability for lifelong learning

Course Outcomes:

At the end of this course students will demonstrate the ability to

1. Understand representation of random signals
2. Investigate characteristics of random processes
3. Make use of theorems related to random signals
4. To understand propagation of random signals in LTI systems

Course outcomes and Programme outcomes mapping table

Course Outcomes	Programme Outcomes										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
CO2	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
CO3			<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
CO4	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Assessment of Course Outcomes through MSE

Sr. No.	Relevant Course Outcomes	CO1, CO2	CO1, CO2, CO3	CO1, CO2	CO3, CO4	CO4	CO4	Total (20)
	ROLL NO	Q.1/4	Q.2/4	Q.3/4	Q.4/4	Q.5/4	Q.6/4	
1	PRN:10303320181137210137	2	2		2			6
2	PRN:T2030331372001		1					1
3	PRN:T2030331372002	2	3	3	3		4	15
4	PRN:T2030331372003	1	1	1				3
5	PRN:T2030331372005	2	2	1				5
6	PRN:T2030331372006		1	2		1	1	5
7	PRN:T2030331372007	1	2	3		1	1	8
8	PRN:T2030331372008	3	4	2				9
9	PRN:T2030331372009	4	3	3	3		4	17
10	PRN:T2030331372010	4	3	3	4		4	18
11	PRN:T2030331372011		1	2		1	1	5
12	PRN:T2030331372012		2	4	2		1	9
13	PRN:T2030331372013				4			4
14	PRN:T2030331372014	1	2	3		1	1	8
15	PRN:T2030331372015	2	2	2	2	1		9
16	PRN:T2030331372016		2	2		2		6
17	PRN:T2030331372017	1	2	3		1	1	8
18	PRN:T2030331372018	2	3	3		3	4	16
19	PRN:T2030331372019		3	3	3		4	13
20	PRN:T2030331372020		3	2	3		4	12
21	PRN:T2030331372021	2	2		2			6
22	PRN:T2030331372022					1		1
23	PRN:T2030331372023			2	2		2	6
24	PRN:T2030331372025		2	3	2	2	4	13
25	PRN:T2030331372026	3	4	2		1		10
26	PRN:T2030331372028	3	4	2		1		10
27	PRN:T2030331372029		2	3		1	1	7

28	PRN:T2030331372030	1	2	3		1	1	8
29	PRN:T2030331372031	3	4	2		1		10
30	PRN:T2030331372033	4	4	4	4		4	20
31	PRN:T2030331372034	2	2		2	3		9
32	PRN:T2030331372035	2	3	2	3		4	14
33	PRN:T2030331372038			2	2		2	6
34	PRN:T2030331372039	2	1			2	2	7
35	PRN:T2030331372041		2				2	2
36	PRN:T2030331372042	2	1	2	3	2		10
37	PRN:T2030331372044	2	2	3	3		4	14
38	PRN:T2030331372045	2	3	2	2		4	13
39	PRN:T2030331372046	2	3	3	2		4	14
40	PRN:T2030331372049							0
41	PRN:T2030331372050		2		1	1		4
42	PRN:T2030331372051	1	3	3	3		4	14
43	PRN:T2030331372052	1		4	4		1	10
44	PRN:T2030331372053	2	3		3	3	4	15
45	PRN:T2030331372054		4	2	1			7
46	PRN:T2030331372055	2	2	1	2	2		9
47	PRN:T2030331372056	1	1	1	1			4
48	PRN:T2030331372060	4	1	2	1	2		10
49	PRN:T2030331372061	1	1	1		1		4
50	PRN:T2030331372062		1	1	1		1	4
51	PRN:T2030331372064	2	2	1		2		7
52	PRN:T2030331372065		1	2		1	1	5
53	PRN:T2030331372067				1			1
54	PRN:T2030331372068	2	3		3	3	3	14
55	PRN:T2030331372069	3	3		3	3	4	16
56	PRN:T2030331372070	2	4		4	3	4	17
57	PRN:T2130331372501	1	2		1	1		5
58	PRN:T2130331372502	1	2		1	1		5
59	PRN:T2130331372503	2	2		2			6
60	PRN:T2130331372504	2	2	1	2	2		9
61	PRN:T2130331372506	1						1
62	PRN:T2130331372507		2	2	1	2	2	9
63	PRN:T2130331372508	2	1	1	1	2		7
64	PRN:T2130331372509							0
65	PRN:T2130331372511		1			1		2
66	PRN:T2130331372512	1		1		1		3
67	PRN:T2130331372513	1	1	1	2			5
68	PRN:T2130331372514	1	2		1	1		5
69	PRN:T2130331372515	1		1	1			3
70	PRN:T2130331372516	2	3		3	3	2	13
71	PRN:T2130331372517							10
72	PRN:T2130331372518							0
73	PRN:T2130331372519	1	2		1	1		5

74	PRN:T2130331372520	1	2		1	1		5
75	PRN:T2130331372521			1	1			2
76	PRN:T2130331372522		1					1
77	PRN:T2130331372523			1				1
78	PRN:T2130331372524							0
79	PRN:T2130331372525	1						1
80	PRN:T2130331372526							0
81	PRN:T2130331372527						1	1
82	PRN:T2130331372528					1		1
83	PRN:T2130331372529			1				1
84	PRN:T2130331372530			1				1
85	PRN:T2130331372531							0
86	PRN:T2130331372532	2	2	1	2	3	0	10
87	PRN:T2130331372533			1				1
88	PRN:T2130331372534							0
89	PRN:T2130331372535	1						1
90	PRN:T2130331372536			1				1
91	PRN:T2130331372538			1				1
92	PRN:T2130331372539	1	1	1		1		4
93	PRN:T2130331372541	1	1	1		1		4
94	PRN:T2130331372542		2	2	1		2	7
Average		1.83	2.17	1.97	2.13	1.60	2.52	6.7
%		45.75	54.25	49.25	53.25	40	63	33.50

Assessment of Course Outcomes

Course Outcomes	Assessment Tool	Contribution to Programme outcomes in %				Attainment level of course outcomes (%)		Achievement (Goal: 70%) In Yes/No
		PO1	PO2	PO5	PO6			
CO1	MSE Q.1	45.75	45.75	45.75	45.75	45.75	73.21	Yes
	MSE Q.2	54.25	54.25	54.25	54.25	54.25		
	MSE Q.3	49.25	49.25	49.25	49.25	49.25		
	CA1	94.1	94.1	94.1	94.1	94.1		
	CA2	97.8	97.8	97.8	97.8	97.8		
	Assignment2	98.12	98.12	98.12	98.12	98.12		
CO2	MSE Q.1	45.75	45.75	45.75	45.75	45.75	73.53	Yes
	MSE Q.2	54.25	54.25	54.25	54.25	54.25		
	MSE Q.3	49.25	49.25	49.25	49.25	49.25		
	CA1	94.1	94.1	94.1	94.1	94.1		
	CA2	97.8	97.8	97.8	97.8	97.8		
	Assignment1	100	100	100	100	100		
CO3	MSE Q.2	54.25	54.25	54.25	54.25	54.25	82.92	Yes
	MSE Q.4	53.25	53.25	53.25	53.25	53.25		
	CA1	94.1	94.1	94.1	94.1	94.1		
	CA2	97.8	97.8	97.8	97.8	97.8		

	Assignment1	100	100	100	100	100		
	Assignment2	98.12	98.12	98.12	98.12	98.12		
CO4	MSE Q.4	53.25	53.25	53.25	53.25	53.25	78.04	Yes
	MSE Q.5	40	40	40	40	40		
	MSE Q.6	63	63	63	63	63		
	CA1	94.1	94.1	94.1	94.1	94.1		
	CA2	97.8	97.8	97.8	97.8	97.8		
	Assignment1	100	100	100	100	100		
	Assignment2	98.12	98.12	98.12	98.12	98.12		

Python Programming

(BTETOE605E)

Course Outcomes

- CO4. Experience with an interpreted Language.
- CO5. To build software for real needs.
- CO6. Prior Introduction to testing software

Program Outcomes

Engineering Graduate will be able to –

- PO13. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO14. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO15. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO16. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO17. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO18. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO19. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO20. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO21. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO22. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO23. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO24. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Course Outcomes & Program Outcomes Mapping Table

Course Outcomes	Programme Outcomes				
	PO1	PO2	PO4	PO5	PO6
CO1	High	High	Low	High	Low
CO2	High	Medium	High	High	Low
CO3	---	Low	Medium	High	---

Assessment of Course Outcomes through MSE

MSE Question Numbers	Set 01 (Q1,Q2)	Set 02(Q3,Q4)	Set 03(Q5)	Total Marks / 20
Relevant Course Outcomes	CO1, CO2	CO1, CO2	CO1,CO2, CO3	
Enrollment Number				
PRN:2030331372019	4	5	-	9
PRN:1930331372068	5	-	5	11
PRN:2030331372006	7	2	8	17
PRN:2030331372012	6	4	3	12
PRN:2030331372020	3	7	3	13
PRN:2030331372001	3	3	-	6
PRN:2030331372016	5	5	7	17
PRN:2030331372017	-	5	5	10
PRN:2030331372021	2	2	2	6
PRN:2030331372010	-	4	2	6
PRN:1930331372015	5	1	5	11
PRN:1930331372061	2	1	-	3
PRN:1930331372063	5	5	3	13
PRN:2030331372007	5	5	7	17
PRN:1930331372001	10	-	9	19
PRN:2030331372015	-	10	9	19
PRN:2030331372022	5	5	5	15
PRN:1930331372058	6	4	4	14
PRN:2030331372003	2	2	-	4
PRN:1930331372003	-	5	5	10

	MSE SET 3	46	46	46	46	46	46		
	Assignment1	96.9	96.9	96.9	96.9	96.9	96.9		
	Assignment2	100	100	100	100	100	100		
	Assignment3	96.9	96.9	96.9	96.9	96.9	96.9		
	Assignment4	100	100	100	100	100	100		
	Assignment5	100	100	100	100	100	100		
	Assignment6	96.9	96.9	96.9	96.9	96.9	96.9		
	Assignment7	96.9	96.9	96.9	96.9	96.9	96.9		
CO2	MSE SET 1	42.8	42.8	42.8	42.8	42.8	42.8	77.2	Yes
	MSE SET 2	41.25	41.25	41.25	41.25	41.25	41.25		
	MSE SET 3	46	46	46	46	46	46		
	Assignment1	96.9	96.9	96.9	96.9	96.9	96.9		
	Assignment2	100	100	100	100	100	100		
	Assignment3	96.9	96.9	96.9	96.9	96.9	96.9		
	Assignment6	96.9	96.9	96.9	96.9	96.9	96.9		
	Assignment7	96.9	96.9	96.9	96.9	96.9	96.9		
CO3	MSE Q.3	-	46	46	46	-	46	79.9	Yes
	Assignment6	-	96.9	96.9	96.9	-	96.9		
	Assignment7	-	96.9	96.9	96.9	-	96.9		

