



2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

METHODOLOGY ADOPTED

The process of CO and PO attainment is decentralized and done at department level. The Program Assessment Committee (PAC) evaluates CO, PO and PSO attainment. The PAC report is sent to the Department Advisory Board (DAB) and remedies for poor CO, PO and PSO attainment are suggested.

PO's and PSO's are to be attained through Core Courses and other activities in which all students participate. Each course COs are mapped with POs and PSOs. The correlation is established between CO's and PO's on the scale of 1, 2 and 3; 3 being substantial, 2 being moderate and 1 being low. A mapping matrix is prepared in this regard for every course of the programme.

Calculation of PO attainment is based on Direct Attributes like

- CO direct attainment
- Final year

project Indirect

Attributes like

- Placement,
- Higher studies
- Student exit survey
- Professional societies
- Co-curricular activities
- LBS
- Survey of courses and other activities.

PO attainment is done for a batch. Course Performance History, course exit survey, LBS, Professional societies and co-curricular activities are considered for the last 3 years of that batch. Final year project, Placement, higher studies and student survey are considered for the final year of that batch.

Course Outcome Attainment: Calculation of CO attainment is based on Direct attributes like End semester Examination results, internal assessment tests in the ratio of 60:40 respectively. Indirect attributes like Presentations, Quiz, SEL feedbacks and other activities are used for calculation of COs. For calculations current year data is considered. Three attainment levels as 1, 2 and 3 are defined.

Our Institute has been accredited by the National Board of Accreditation. We have gone through 3 cycles of accreditation. Institute is recently accredited from the year 2016 to June 2022. Hence COs, POs and PSOs are always there. The attainment and evaluation process of CO, PO and PSO is defined for all the departments and is followed for attainment calculation and evaluation.

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Since 1962

Vivekanand Education Society's Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognised by Govt. of Maharashtra)

Dr. (Mrs.) J. M. Nair

M. Tech., Ph.D. (IIT-B)
Principal

Ref. No.: VESIT/ JMN/1325/2023-24

Date: 26/10/2023

TO WHOM SO IT MAY CONCERN

I, Dr. (Mrs.) Jayalekshmi M Nair, Principal (HOI), Vivekanand Education Society's Institute of Technology, do hereby state that the documents uploaded on NAAC portal are duly signed by Principal (HOI).

The additional documents uploaded on Institute's website (<https://vesit.ves.ac.in/>) are also authentic and does not need any extra validation.

Dr. (Mrs) Jayalekshmi M Nair
Principal

Vivekanand Education Society's Institute of Technology
Hashu Advani Memorial Complex,
Collector's Colony
Chembur, Mumbai, Maharashtra 400074



1. Bachelor of Electronics Engineering: CO-PO-PSO mapping and attainment Academic Year 2021-22

CO Attainment

SEM/ YEAR	COURSE CODE	SUBJECTS	Maximum Marks per Course				Expected Attainment per Course			
			SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR
			AVG% (50)	AVG% (50)	AVG% (60)	AVG% (60)	AVG% (50)	AVG% (50)	AVG %	AVG% (60)
SEM- III (AY 2019-20)	ELX301	Applied Mathematics III	80	20	25	-	40	10	15	-
	ELX302	Electronic Devices and	80	20	-	-	40	10	-	-
	ELX303	Digital Circuit Design	80	20	-	-	40	10	-	-
	ELX304	Electrical Network Analysis and	80	20	-	-	40	10	-	-
	ELX305	Electronics Instruments and Measurement	80	20	-	-	40	10	-	-
	ELXL301	Electronic Devices and Circuits I Laboratory	-	-	25	25	-	-	15	15
	ELXL302	Digital Circuit Design	-	-	25	25	-	-	15	15
	ELXL303	Electrical Network andL Measurement Laboratory	-	-	25	-	-	-	15	-
	ELXL304	Object Oriented Programming Methodology	-	-	25	25	-	-	15	15

SEM/ YEAR	COURSE CODE	SUBJECTS	Total Number of Students per class	No of Students Who Scored Above the Expected Attainment Level				Percentage of Students Above the Expected Attainment Level				Attainment Calculations and Formu								Avg Attainment per course
				SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR	SE	IA	TW	PR/ OR	SE	IA	TW	PR/ OR	
				AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%									
SEM- III (AY 2019-20)	ELX301	Applied Mathematics III	138	82	87	121	-	59.42	63.04	87.68	-	1	2	3	-	1	2	3	-	2
	ELX302	Electronic Devices and	138	105	124	-	-	76.09	89.86	-	-	3	3	-	-	3	3	-	-	3
	ELX303	Digital Circuit Design	138	97	82	-	-	70.29	59.42	-	-	3	1	-	-	3	1	-	-	2
	ELX304	Electrical Network Analysis and	138	106	117	-	-	76.81	84.78	-	-	3	3	-	-	3	3	-	-	3
	ELX305	Electronics Instruments and Measurement	138	116	124	-	-	84.06	89.86	-	-	3	3	-	-	3	3	-	-	3
	ELXL301	Electronic Devices and Circuits I Laboratory	138	-	-	131	129	-	-	94.93	93.48	-	-	3	3	-	-	3	3	3
	ELXL302	Digital Circuit Design	138	-	-	115	88	-	-	83.33	63.77	-	-	3	2	-	-	3	2	2.5
	ELXL303	Electrical Network andL Measurement Laboratory	138	-	-	131		-	-	94.93	-	-	-	3		-	-	3	-	3
	ELXL304	Object Oriented Programming Methodology	138	-	-	121	100	-	-	87.68	72.46	-	-	3	3	-	-	3	3	3



SEM/ YEAR	COURSE CODE	SUBJECTS	Maximum Marks per Course				Expected Attainment per Course			
			SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR
			AVG% (50)	AVG% (50)	AVG% (60)	AVG% (60)	AVG% (50)	AVG% (50)	AVG% (60)	AVG% (60)
SEM- IV (AY 2019-20)	ELX401	Applied Mathematics IV	80	20	25	-	40	10	15	-
	ELX402	Electronic Devices and Circuits II	80	20	-	-	40	10	-	-
	ELX403	Microprocessors and Applications	80	20	-	-	40	10	-	-
	ELX404	Digital System Design	80	20	-	-	40	10	-	-
	ELX405	Principles of Communication Engineering	80	20	-	-	40	10	-	-
	ELX406	Linear Control Systems	80	20	-	-	40	10	-	-
	ELXL401	Electronic Devices and Circuits II Laboratory	-	-	25	25	-	-	15	15
	ELXL402	Microprocessors and Applications Laboratory	-	-	25	25	-	-	15	15
	ELXL403	Digital System Design Laboratory	-	-	25	25	-	-	15	15
	ELXL404	Principles of Communication Engineering Laboratory	-	-	25	-	-	-	15	-

SEM/ YEAR	COURSE CODE	SUBJECTS	Total Number of Student	No of Students Who Scored Above the Expected Attainment Level				Percentage of Students Above the Expected Attainment Level				Attainment Calculations and Formulae applied								Avg Attainment per course
				SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR	SE	IA	TW	PR/ OR	SE	IA	TW	PR/ OR	
				AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%									
SEM- IV (AY 2019-20)	ELX401	Applied Mathematics IV	138	132	116	123	-	95.65	84.06	89.13	-	3	3	3	-	3	3	3	-	3
	ELX402	Electronic Devices and Circuits II	138	134	119	-	-	97.10	86.23	-	-	3	3	-	-	3	3	-	-	3
	ELX403	Microprocessors and	138	131	111	-	-	94.93	80.43	-	-	3	3	-	-	3	3	-	-	3
	ELX404	Digital System Design	138	136	116	-	-	98.55	84.06	-	-	3	3	-	-	3	3	-	-	3
	ELX405	Principles of Communication Engineering	138	135	124	-	-	97.83	89.86	-	-	3	3	-	-	3	3	-	-	3
	ELX406	Linear Control Systems	138	133	130	-	-	96.38	94.20	-	-	3	3	-	-	3	3	-	-	3
	ELXL401	Electronic Devices and Circuits II Laboratory	138	-	-	138	137	-	-	100.00	99.28	-	-	3	3	-	-	3	3	3
	ELXL402	Microprocessors and Applications Laboratory	138	-	-	138	117	-	-	100.00	84.78	-	-	3	3	-	-	3	3	3
	ELXL403	Digital System Design	138	-	-	136	125	-	-	98.55	90.58	-	-	3	3	-	-	3	3	3
	ELXL404	Principles of Communication Engineering Laboratory	138	-	-	138	-	-	-	100.00	-	-	-	3	-	-	-	-	-	3



SEM/ YEAR	COURSE CODE	SUBJECTS	Maximum Marks per Course				Expected Attainment per Course			
			SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR
			AVG% (50)	AVG% (50)	AVG% (60)	AVG% (60)	AVG% (50)	AVG% (50)	AVG% (60)	AVG% (60)
SEM- V (AY 2020-21)	ELX501	Micro-controllers and Applications	80	20	-	-	40	10	-	-
	ELX502	Digital Communication	80	20	-	-	40	10	-	-
	ELX503	Engineering	80	20	25	-	40	10	15	
	ELX504	Design with Linear Integrated Circuits	80	20	-	-	40	10	-	-
	ELXDLO5011	Data Base and Management	80	20	-	-	40	10	-	-
	ELXL501	Micro-controllers and Applications Laboratory	-	-	25	25	-	-	15	15
	ELXL502	Digital Communication	-	-	25	25	-	-	15	15
	ELXL503	Design with Linear Integrated Circuits Laboratory	-	-	25	25	-	-	15	15
	ELXL504	Business Communication & Ethics	-	-	50	-	-	-	30	-
	ELXLDLO5011	Data Base and Management System Laboratory	-	-	25	25	-	-	15	15



SEM/ YEAR	COURSE CODE	SUBJECTS	Total Number of Students per class	No of Students Who Scored Above the Expected Attainment Level				Percentage of Students Above the Expected Attainment Level				Attainment Calculations and Formulae applied								Avg Attainment per course
				SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR	SE	IA	TW	PR/ OR	SE	IA	TW	PR/ OR	
				AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%									
SEM- V (AY 2020-21)	ELX501	Micro-controllers and Applications	141	141	140	-	-	100.00	99.29	-	-	3	3	-	-	3	3	-	-	3
	ELX502	Digital Communication	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELX503	Engineering	141	140	141	141	-	99.29	100.00	100.00	-	3	3	3	-	3	3	3	-	3
	ELX504	Design with Linear Integrated Circuits	141	140	141	-	-	99.29	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELXDLO5011	Data Base and Management	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELXL501	Micro-controllers and Applications Laboratory	141	-	-	141	140	-	-	100.00	99.29	-	-	3	3	-	-	3	3	3
	ELXL502	Digital Communication	141	-	-	141	140	-	-	100.00	99.29	-	-	3	3	-	-	3	3	3
	ELXL503	Design with Linear Integrated Circuits Laboratory	141	-	-	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	3
	ELXL504	Business Communication & Ethics	141	-	-	141	-	-	-	100.00	-	-	-	3	-	-	-	3	-	3
	ELXLDLO5011	Data Base and Management System Laboratory	141	-	-	141	140	-	-	100.00	99.29	-	-	3	3	-	-	3	3	3

SEM/ YEAR	COURSE CODE	SUBJECTS	Maximum Marks per Course				Expected Attainment per Course			
			SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR
			AVG% (50)	AVG% (50)	AVG %	AVG% (60)	AVG % (50)	AVG % (50)	AVG %	AVG% (60)
SEM- VI (AY 2020-21)	ELX601	Embedded System and RTOS	80	20	-	-	40	10	-	-
	ELX602	Computer Communication Network	80	20	-	-	40	10	-	-
	ELX603	VLSI Design	80	20	-	-	40	10	-	-
	ELX604	Signals and systems	80	20	25	-	40	10	15	-
	ELXDLO6024	Computer Organization and Architecture	80	20	-	-	40	10	-	-
	ELXL601	Embedded System and RTOS Laboratory	--	-	25	25	-	-	15	15
	ELXL602	Computer Communication Network Laboratory	--	-	25	25	-	-	15	15
	ELXL603	VLSI Design Laboratory	-	-	25	25	-	-	15	15
	ELXLDLO6024	Computer Organization and Architecture Laboratory	-	-	25	25	-	-	15	15

SEM/ YEAR	COURSE CODE	SUBJECTS	Total Number of Students per class	No of Students Who Scored Above the Expected Attainment Level				Percentage of Students Above the Expected Attainment Level				Attainment Calculations and Formulae applied								Avg Attainment per course
				SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR	SE	IA	TW	PR/ OR	SE	IA	TW	PR/ OR	
				AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%									
SEM- VI (AY 2020-21)	ELX601	Embedded System and RTOS	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELX602	Computer Communication Network	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELX603	VLSI Design	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELX604	Signals and systems	141	141	141	141	-	100.00	100.00	100.00	-	3	3	3		3	3	3	-	3
	ELXDLO6024	Computer Organization and Architecture	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELXL601	Embedded System and RTOS Laboratory	141	-	-	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	3
	ELXL602	Computer Communication Network Laboratory	141	-	-	140	137	-	-	99.29	97.16	-	-	3	3	-	-	3	3	3
	ELXL603	VLSI Design Laboratory	141	-	-	134	138	-	-	95.04	97.87	-	-	3	3	-	-	3	3	3
	ELXLDLO6024	Computer Organization and Architecture Laboratory	141	-	-	137	140	-	-	97.16	99.29	-	-	3	3	-	-	3	3	3

SEM/ YEAR	COURSE CODE	SUBJECTS	Maximum Marks per Course				Expected Attainment per Course			
			SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR
			AVG % (50)	AVG% (50)	AVG% (60)	AVG% (60)	AVG% (50)	AVG %	AVG % (60)	AVG %
SEM- VII	ELX701	Instrumentation System Design	80	20	-	-	40	10	-	-
	ELX702	Power Electronics	80	20	-	-	40	10	-	-
	ELX703	Digital signal processing	80	20	-	-	40	10	-	-
	ELXDLO7032	Advance Networking Technologies	80	20	-	-	40	10	-	-
	ELXDLO7033	Robotics	80	20	-	-	40	10	-	-
	ILO7013	Management Information System	80	20	-	-	40	10	-	-
	ILO7015	Operation Research	80	20	-	-	40	10	-	-
	ILO7016	Cyber Security and Laws	80	20	-	-	40	10	-	-
	ELXL701	Instrumentation System Design Laboratory	-	-	25	25	-	-	15	15
	ELXL702	Power Electronics Laboratory	-	-	25	25	-	-	15	15
	ELXL703	Digital signal processing Laboratory	-	-	25	25	-	-	15	15
	ELXL704	Project -I	-	-	50	50	-	-	30	30
	ELXLDLO7032	Advance Networking Technologies Laboratory	-	-	25	25	-	-	15	15
	ELXLDLO7033	Robotics Laboratory	-	-	25	25	-	-	15	15

SEM/ YEAR	COURSE CODE	SUBJECTS	Total Number of Students per class	No of Students Who Scored Above the Expected Attainment Level				Percentage of Students Above the Expected Attainment Level				Attainment Calculations and Formulae applied								Avg Attainment per course
				SE(80)	IA(20)	TW	PR/OR	SE	IA	TW	PR/OR	SE	IA	TW	PR/ OR	SE	IA	TW	PR/ OR	
				AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%									
SEM- VII	ELX701	Instrumentation System Design	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELX702	Power Electronics	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELX703	Digital signal processing	141	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELXDLO7032	Advance Networking Technologies	72	72	72	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELXDLO7033	Robotics	69	69	69	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ILO7013	Management Information System	67	67	67	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ILO7015	Operation Research	5	4	5	-	-	80.00	100.00	-	-	3	3	-	-	1	3	-	-	2
	ILO7016	Cyber Security and Laws	69	69	69	-	-	100.00	100.00	-	-	3	3	-	-	3	3	-	-	3
	ELXL701	Instrumentation System Design Laboratory	141	-	-	138	141	-	-	97.87	100.00	-	-	3	3	-	-	3	3	3
	ELXL702	Power Electronics Laboratory	141	-	-	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	3
	ELXL703	Digital signal processing Laboratory	141	-	-	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	3
	ELXL704	Project -I	141	-	-	141	141	-	-	100.00	100.00	-	-	3	3	-	-	3	3	3
	ELXLDLO7032	Advance Networking Technologies Laboratory	72	-	-	72	70	-	-	100.00	97.22	-	-	3	3	-	-	3	3	3
	ELXLDLO7033	Robotics Laboratory	69	-	-	68	65	-	-	98.55	94.20	-	-	3	3	-	-	3	3	3

SEM/Y EAR	COURSE CODE	SUBJECTS	Maximum Marks per Course				Expected Attainment per Course			
			SE(80)	IA(20)	TW	PR/OR	SE(80)	IA(20)	TW	PR/OR
			AVG % (50)	AVG% (50)	AVG %	AVG% (60)	AVG% (50)	AVG % (50)	AVG % (60)	AVG % (60)
SEM- VIII	ELX801	Internet of Things	80	20	-	-	40	10	-	-
	ELX802	Analog and Mixed VLSI Design	80	20	-	-	40	10	-	-
	ELXDLO8042	MEMS Technology	80	20	-	-	40	10	-	-
	ELXDLO8044	Digital Image Processing	80	20	-	-	40	10	-	-
	ILO8021	Project Management	80	20	-	-	40	10	-	-
	ILO8022	Finance Management	80	20	-	-	40	10	-	-
	ILO8023	Entrepreneurship Development and Management	80	20	-	-	40	10	-	-
	ILO8029	Environmental Management	80	20	-	-	40	10	-	-
	ELXL801	Internet of Things Laboratory	-	-	25	25	-	-	15	15
	ELXL802	Analog and Mixed VLSI Design Laboratory	-	-	25	25	-	-	15	15
	ELXL803	Project - II	-	-	100	50	-	-	60	30
	ELXLDLO8042	MEMS Technology Laboratory	-	-	25	25	-	-	15	15
	ELXLDLO8044	Digital Image Processing Laboratory	-	-	25	25	-	-	15	15

SEM/Y EAR	COURSE CODE	SUBJECTS	Total Number of Students per class	No of Students Who Scored Above the Expected Attainment Level				Percentage of Students Above the Expected Attainment Level			Attainment Calculations and Formulae								Avg Attainment per course
				SE(80)	IA(20)	TW	PR/OR	SE(80)	TW	PR/OR	SE	IA	TW	PR/ OR	SE	IA	TW	PR/ OR	
				AVG%	AVG%	AVG%	AVG%	AVG%	AVG%	AVG%									
SEM- VIII	ELX801	Internet of Things	141	136	141	-	-	96.45	-	-	3	3	-	-	3	3	-	-	3
	ELX802	Analog and Mixed VLSI Design	141	140	121	-	-	99.29	-	-	3	3	-	-	3	3	-	-	3
	ELXDLO8042	MEMS Technology	100	98	99	-	-	98.00	-	-	3	3	-	-	3	3	-	-	3
	ELXDLO8044	Digital Image Processing	41	40	41	-	-	97.56	-	-	3	3	-	-	3	3	-	-	3
	ILO8021	Project Management	21	16	19	-	-	76.19	-	-	3	3	-	-	2	3	-	-	2.5
	ILO8022	Finance Management	55	53	54	-	-	96.36	-	-	3	3	-	-	3	3	-	-	3
	ILO8023	Entrepreneurship Development and Management	23	23	23	-	-	100.00	-	-	3	3	-	-	3	3	-	-	3
	ILO8029	Environmental Management	42	39	42	-	-	92.86	-	-	3	3	-	-	3	3	-	-	3
	ELXL801	Internet of Things Laboratory	141	-	-	138	137	-	97.87	97.16	-	-	3	3	-	-	3	3	3
	ELXL802	Analog and Mixed VLSI Design Laboratory	141	-	-	129	141	-	91.49	100.00	-	-	3	3	-	-	3	3	3
	ELXL803	Project - II	141	-	-	140	140	-	99.29	99.29	-	-	3	3	-	-	3	3	3
	ELXLDLO8042	MEMS Technology Laboratory	100	-	-	100	100	-	100.00	100.00	-	-	3	3	-	-	3	3	3
	ELXLDLO8044	Digital Image Processing Laboratory	41	-	-	41	41	-	100.00	100.00	-	-	3	3	-	-	3	3	3

CO-PO Mapping:

PO ATTAINMENT CALCULATIONS																	
BATCH 2021-22																	
AVERAGE PO MAPPING																	
	COURSE CODE	COURSE NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	ASSESSMENT
SEM- III (2019-20)	ELX301	Applied Mathematics III	3.00	3.00	2.00	2.00	-	-	-	-	-	-	-	2.00	1.00	2.00	2
	ELX302	Electronic Devices and Circuits I	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00	3
	ELX303	Digital Circuit Design	1.00	2.00	2.00	1.00	3.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	3.00	2.00	2
	ELX304	Electrical Network Analysis and Synthesis	3.00	3.00	2.25	2.75	3.00	2.00	2.25	2.00	2.00	2.00	1.00	3.00	3.00	2.25	3
	ELX305	Electronics Instruments and Measurement	2.50	2.00	2.25	2.00	2.50	1.25	1.00	1.00	2.00	2.00	2.00	2.00	3.00	2.00	3
	ELXL301	Electronic Devices and Circuits I Laboratory	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00	3
	ELXL302	Digital Circuit Design Laboratory	1.00	2.00	2.00	1.00	3.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	3.00	2.00	2.5
	ELXL303	Electrical Network andL Measurement Laboratory	2.71	2.57	2.29	2.43	2.86	1.71	1.71	1.57	2.00	2.00	1.43	2.57	3.00	2.14	3
	ELXL304	Object Oriented Programming Methodology Laboratory	3.00	2.17	2.83	2.33	2.33	2.33	2.67	1.17	2.00	1.83	2.33	2.17	2.33	2.17	3
SEM- IV (2019-20)	ELX401	Applied Mathematics IV	3.00	3.00	-	2.00	-	-	-	-	-	-	-	-	1.00	2.00	3
	ELX402	Electronic Devices and Circuits II	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00	3
	ELX403	Microprocessors and Applications	2.75	2.75	3.00	2.50	2.25	1.00	1.00	1.00	1.50	2.25	2.00	2.00	2.00	2.50	3
	ELX404	Digital System Design	1.00	2.00	2.00	1.00	3.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	3.00	2.00	3
	ELX405	Principles of Communication Engineering	3.00	2.00	2.20	1.80	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3
	ELX406	Linear Control Systems	2.50	2.50	2.00	2.00	1.83	1.00	1.33	1.00	2.00	2.00	1.67	1.50	2.00	2.00	3
	ELXL401	Electronic Devices and Circuits II Laboratory	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00	3
	ELXL402	Microprocessors and Applications	2.75	2.75	3.00	2.50	2.25	1.00	1.00	1.00	1.50	2.25	2.00	2.00	2.00	2.50	3
	ELXL403	Digital System Design Laboratory	1.00	2.00	2.00	1.00	3.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	3.00	2.00	3
	ELXL404	Principles of Communication Engineering	3.00	2.00	2.20	1.80	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3

SEM- V (2020-21)	ELX501	Micro-controllers and Applications	3.00	2.00	2.50	2.00	2.50	2.00	1.75	2.50	2.50	2.00	2.25	2.25	2.00	1.75	3
	ELX502	Digital Communication	2.00	3.00	3.00	3.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	3.00	2.00	3
	ELX503	Engineering Electromagnetics	2.75	2.25	2.25	3.00	2.25	2.50	2.00	2.50	2.50	2.50	2.25	2.50	2.50	3	
	ELX504	Design with Linear Integrated Circuits	3.00	3.00	2.75	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.50	3.00	3.00	2.75	3
	ELXDLO50	Data Base and Management System	2.50	2.50	2.25	2.75	2.00	2.50	2.25	2.50	2.00	3.00	2.25	2.25	1.75	2.00	3
	ELXL501	Micro-controllers and Applications	1.50	2.17	2.50	2.33	2.33	2.20	1.83	2.50	2.20	2.33	2.17	1.83	1.83	2.50	3
	ELXL502	Digital Communication Laboratory	3.00	2.00	2.50	2.00	2.50	2.00	1.75	2.50	2.50	2.00	2.25	2.25	2.00	1.75	3
	ELXL503	Design with Linear Integrated Circuits	1.50	2.17	2.50	2.33	2.33	2.20	1.83	2.50	2.20	2.33	2.17	1.83	1.83	2.50	3
	ELXL504	Business Communication & Ethics	3.00	3.00	2.75	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.50	3.00	3.00	2.75	3
	ELXLDLO5	Data Base and Management System	3.00	2.00	2.40	2.17	2.17	1.75	2.00	2.00	-	-	2.00	2.00	2.00	2.00	3
SEM- VI (2020-21)	ELX601	Embedded System and RTOS	3.00	2.75	2.75	1.50	2.00	1.25	1.00	2.00	1.25	1.25	2.25	2.00	2.75	1.00	3
	ELX602	Computer Communication Network	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	1.75	3.00	2.00	3.00	3
	ELX603	VLSI Design	2.75	2.75	3.00	2.75	2.75	2.75	-	-	-	-	2.75	3.00	3.00	2.00	3
	ELX604	Signals and systems	3.00	3.00	3.00	2.50	2.50	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00	3
	ELXDLO60	Computer Organization and Architecture	3.00	2.00	3.00	2.25	2.50	2.50	2.25	2.25	1.50	2.50	2.25	2.00	2.00	1.75	3
	ELXL601	Embedded System and RTOS Laboratory	3.00	2.75	2.75	1.50	2.00	1.25	1.00	2.00	1.25	1.25	2.25	2.00	2.75	1.00	3
	ELXL602	Computer Communication Network	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	1.75	3.00	2.00	3.00	3
	ELXL603	VLSI Design Laboratory	2.75	2.75	3.00	2.75	2.75	2.75	-	-	-	-	2.75	3.00	3.00	2.00	3
	ELXLDLO6	Computer Organization and Architecture	3.00	2.00	3.00	2.25	2.50	2.50	2.25	2.25	1.50	2.50	2.25	2.00	2.00	1.75	3
SEM- VII (2021-22)	ELX701	Instrumentation System Design	3.00	2.80	2.80	2.00	2.40	3.00	1.80	1.80	1.00	1.00	2.40	2.20	1.40	2.20	3
	ELX702	Power Electronics	2.80	2.80	2.20	2.20	2.00	2.00	1.80	1.80	1.80	2.80	2.00	1.80	2.00	2.80	3
	ELX703	Digital signal processing	3.00	3.00	3.00	3.00	2.00	2.00	2.00	1.50	1.50	1.50	2.25	2.25	2.00	3.00	3
	ELXDLO70	Advance Networking Technologies	3.00	2.67	2.67	2.33	1.83	1.17	1.17	1.00	1.17	1.17	1.17	1.50	1.67	2.50	3
	ELXDLO70	Robotics	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25	3
	ILO7013	Management Information System	1.00	2.20	1.00	2.00	2.40	-	-	1.20	1.00	2.00	1.00	2.00	-	1.00	3
	ILO7015	Operation Research	3.00	3.00	2.75	3.00	-	-	-	-	2.00	2.00	2.75	3.00	-	2.25	2
	ILO7016	Cyber Security and Laws	2.00	3.00	2.00	3.00	1.00	3.00	2.00	3.00	2.00	1.00	3.00	3.00	1.00	1.00	3
	ELXL701	Instrumentation System Design Laboratory	3.00	2.80	2.80	2.00	2.40	3.00	1.80	1.80	1.00	1.00	2.40	2.20	1.40	2.20	3
	ELXL702	Power Electronics Laboratory	2.80	2.80	2.20	2.20	2.00	2.00	1.80	1.80	1.80	2.80	2.00	1.80	2.00	2.80	3
	ELXL703	Digital signal processing Laboratory	3.00	3.00	3.00	3.00	2.00	2.00	2.00	1.50	1.50	1.50	2.25	2.25	2.00	3.00	3
	ELXL704	Project -I	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ELXLDLO7	Advance Networking Technologies	3.00	2.67	2.67	2.33	1.83	1.17	1.17	1.00	1.17	1.17	1.17	1.50	1.67	2.50	3
	ELXLDLO7	Robotics Laboratory	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25	3

SEM- VIII (2021-22)	ELX801	Internet of Things	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	3.00	3.00	2.00	3.00	3
	ELX802	Analog and Mixed VLSI Design	3.00	2.75	2.75	3.00	3.00	2.50	2.50	2.00	2.75	2.00	2.75	3.00	3.00	2.00	3
	ELXDLO80	MEMS Technology	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25	3
	ELXDLO80	Digital Image Processing	3.00	2.50	2.50	2.50	2.25	2.00	2.25	1.75	2.00	2.25	2.00	2.00	2.75	2.25	3
	ILO8021	Project Management	-	-	2.60	-	2.60	2.00	2.60	1.40	2.00	-	2.60	2.40	2.20	2.20	2.5
	ILO8022	Finance Management	1.00	-	-	1.00	1.00	-	3.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	3
	ILO8023	Entrepreneurship Development and	-	-	-	-	-	2.00	2.67	1.33	2.00	2.67	2.33	2.00	3.00	1.00	3
	ILO8029	Environmental Management	-	1.00	-	1.00	1.00	3.00	3.00	3.00	3.00	2.00	2.00	3.00	-	2.00	3
	ELXL801	Internet of Things Laboratory	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	3.00	3.00	2.00	3.00	3
	ELXL802	Analog and Mixed VLSI Design Laboratory	3.00	2.75	2.75	3.00	3.00	2.50	2.50	2.00	2.75	2.00	2.75	3.00	3.00	2.00	3
	ELXL803	Project - II	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3
	ELXLDLO8	MEMS Technology Laboratory	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25	3
	ELXLDLO8	Digital Image Processing Laboratory	3.00	2.50	2.50	2.50	2.25	2.00	2.25	1.75	2.00	2.25	2.00	2.00	2.75	2.25	3

PO Attainment (Direct)

	COURSE CODE	COURSE NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
SEM- III (2019-20)	ELX301	Applied Mathematics III	2.00	2.00	1.33	1.33	-	-	-	-	-	-	-	1.33	0.67	1.33
	ELX302	Electronic Devices and Circuits I	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00
	ELX303	Digital Circuit Design	0.67	1.33	1.33	0.67	2.00	0.67	0.67	0.67	1.33	1.33	0.67	0.67	2.00	1.33
	ELX304	Electrical Network Analysis and Synthesis	3.00	3.00	2.25	2.75	3.00	2.00	2.25	2.00	2.00	2.00	1.00	3.00	3.00	2.25
	ELX305	Electronics Instruments and Measurement	2.50	2.00	2.25	2.00	2.50	1.25	1.00	1.00	2.00	2.00	2.00	2.00	3.00	2.00
	ELXL301	Electronic Devices and Circuits I Laboratory	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00
	ELXL302	Digital Circuit Design Laboratory	0.83	1.67	1.67	0.83	2.50	0.83	0.83	0.83	1.67	1.67	0.83	0.83	2.50	1.67
	ELXL303	Electrical Network and Measurement Laboratory	2.71	2.57	2.29	2.43	2.86	1.71	1.71	1.57	2.00	2.00	1.43	2.57	3.00	2.14
	ELXL304	Object Oriented Programming Methodology Laboratory	3.00	2.17	2.83	2.33	2.33	2.33	2.67	1.17	2.00	1.83	2.33	2.17	2.33	2.17

SEM- IV (2019-20)	ELX401	Applied Mathematics IV	3.00	3.00	-	2.00	-	-	-	-	-	-	-	-	1.00	2.00
	ELX402	Electronic Devices and Circuits II	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00
	ELX403	Microprocessors and Applications	2.75	2.75	3.00	2.50	2.25	1.00	1.00	1.00	1.50	2.25	2.00	2.00	2.00	2.50
	ELX404	Digital System Design	1.00	2.00	2.00	1.00	3.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	3.00	2.00
	ELX405	Principles of Communication Engineering	3.00	2.00	2.20	1.80	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00
	ELX406	Linear Control Systems	2.50	2.50	2.00	2.00	1.83	1.00	1.33	1.00	2.00	2.00	1.67	1.50	2.00	2.00
	ELXL401	Electronic Devices and Circuits II Laboratory	3.00	3.00	3.00	3.00	3.00	2.00	2.00	1.00	3.00	2.00	3.00	3.00	3.00	3.00
	ELXL402	Microprocessors and Applications	2.75	2.75	3.00	2.50	2.25	1.00	1.00	1.00	1.50	2.25	2.00	2.00	2.00	2.50
	ELXL403	Digital System Design Laboratory	1.00	2.00	2.00	1.00	3.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	3.00	2.00
	ELXL404	Principles of Communication Engineering	3.00	2.00	2.20	1.80	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00
SEM- V (2020-21)	ELX501	Micro-controllers and Applications	3.00	2.00	2.50	2.00	2.50	2.00	1.75	2.50	2.50	2.00	2.25	2.25	2.00	1.75
	ELX502	Digital Communication	2.00	3.00	3.00	3.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	3.00	2.00
	ELX503	Engineering Electromagnetics	2.75	2.25	2.25	3.00	2.25	2.50	2.00	2.50	2.50	2.50	2.50	2.25	2.50	2.50
	ELX504	Design with Linear Integrated Circuits	3.00	3.00	2.75	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.50	3.00	3.00	2.75
	ELXDLO50	Data Base and Management System	2.50	2.50	2.25	2.75	2.00	2.50	2.25	2.50	2.00	3.00	2.25	2.25	1.75	2.00
	ELXL501	Micro-controllers and Applications	1.50	2.17	2.50	2.33	2.33	2.20	1.83	2.50	2.20	2.33	2.17	1.83	1.83	2.50
	ELXL502	Digital Communication Laboratory	3.00	2.00	2.50	2.00	2.50	2.00	1.75	2.50	2.50	2.00	2.25	2.25	2.00	1.75
	ELXL503	Design with Linear Integrated Circuits	1.50	2.17	2.50	2.33	2.33	2.20	1.83	2.50	2.20	2.33	2.17	1.83	1.83	2.50
	ELXL504	Business Communication & Ethics	3.00	3.00	2.75	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.50	3.00	3.00	2.75
	ELXLDLO5	Data Base and Management System	3.00	2.00	2.40	2.17	2.17	1.75	2.00	2.00	-	-	2.00	2.00	2.00	2.00
SEM- VI (2020-21)	ELX601	Embedded System and RTOS	3.00	2.75	2.75	1.50	2.00	1.25	1.00	2.00	1.25	1.25	2.25	2.00	2.75	1.00
	ELX602	Computer Communication Network	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	1.75	3.00	2.00	3.00
	ELX603	VLSI Design	2.75	2.75	3.00	2.75	2.75	2.75	-	-	-	-	2.75	3.00	3.00	2.00
	ELX604	Signals and systems	3.00	3.00	3.00	2.50	2.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00
	ELXDLO60	Computer Organization and Architecture	3.00	2.00	3.00	2.25	2.50	2.50	2.25	2.25	1.50	2.50	2.25	2.00	2.00	1.75
	ELXL601	Embedded System and RTOS Laboratory	3.00	2.75	2.75	1.50	2.00	1.25	1.00	2.00	1.25	1.25	2.25	2.00	2.75	1.00
	ELXL602	Computer Communication Network	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	1.75	3.00	2.00	3.00
	ELXL603	VLSI Design Laboratory	2.75	2.75	3.00	2.75	2.75	2.75	-	-	-	-	2.75	3.00	3.00	2.00
	ELXLDLO6	Computer Organization and Architecture	3.00	2.00	3.00	2.25	2.50	2.50	2.25	2.25	1.50	2.50	2.25	2.00	2.00	1.75

SEM- VII (2021-22)	ELX701	Instrumentation System Design	3.00	2.80	2.80	2.00	2.40	3.00	1.80	1.80	1.00	1.00	2.40	2.20	1.40	2.20
	ELX702	Power Electronics	2.80	2.80	2.20	2.20	2.00	2.00	1.80	1.80	1.80	2.80	2.00	1.80	2.00	2.80
	ELX703	Digital signal processing	3.00	3.00	3.00	3.00	2.00	2.00	2.00	1.50	1.50	1.50	2.25	2.25	2.00	3.00
	ELXDLO70	Advance Networking Technologies	3.00	2.67	2.67	2.33	1.83	1.17	1.17	1.00	1.17	1.17	1.17	1.50	1.67	2.50
	ELXDLO70	Robotics	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25
	ILO7013	Management Information System	1.00	2.20	1.00	2.00	2.40	-	-	1.20	1.00	2.00	1.00	2.00	-	1.00
	ILO7015	Operation Research	2.00	2.00	1.83	2.00	-	-	-	-	1.33	1.33	1.83	2.00	-	1.50
	ILO7016	Cyber Security and Laws	2.00	3.00	2.00	3.00	1.00	3.00	2.00	3.00	2.00	1.00	3.00	3.00	1.00	1.00
	ELXL701	Instrumentation System Design Laboratory	3.00	2.80	2.80	2.00	2.40	3.00	1.80	1.80	1.00	1.00	2.40	2.20	1.40	2.20
	ELXL702	Power Electronics Laboratory	2.80	2.80	2.20	2.20	2.00	2.00	1.80	1.80	1.80	2.80	2.00	1.80	2.00	2.80
	ELXL703	Digital signal processing Laboratory	3.00	3.00	3.00	3.00	2.00	2.00	2.00	1.50	1.50	1.50	2.25	2.25	2.00	3.00
	ELXL704	Project -I	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	ELXLDLO7	Advance Networking Technologies	3.00	2.67	2.67	2.33	1.83	1.17	1.17	1.00	1.17	1.17	1.17	1.50	1.67	2.50
	ELXLDLO7	Robotics Laboratory	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25
SEM- VIII (2021-22)	ELX801	Internet of Things	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	3.00	3.00	2.00	3.00
	ELX802	Analog and Mixed VLSI Design	3.00	2.75	2.75	3.00	3.00	2.50	2.50	2.00	2.75	2.00	2.75	3.00	3.00	2.00
	ELXDLO80	MEMS Technology	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25
	ELXDLO80	Digital Image Processing	3.00	2.50	2.50	2.50	2.25	2.00	2.25	1.75	2.00	2.25	2.00	2.00	2.75	2.25
	ILO8021	Project Management	-	-	2.17	-	2.17	1.67	2.17	1.17	1.67	-	2.17	2.00	1.83	1.83
	ILO8022	Finance Management	1.00	-	-	1.00	1.00	-	3.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00
	ILO8023	Entrepreneurship Development and	-	-	-	-	-	2.00	2.67	1.33	2.00	2.67	2.33	2.00	3.00	1.00
	ILO8029	Environmental Management	-	1.00	-	1.00	1.00	3.00	3.00	3.00	3.00	2.00	2.00	3.00	-	2.00
	ELXL801	Internet of Things Laboratory	2.25	2.75	2.75	3.00	2.25	2.50	2.25	2.00	1.75	1.50	3.00	3.00	2.00	3.00
	ELXL802	Analog and Mixed VLSI Design Laboratory	3.00	2.75	2.75	3.00	3.00	2.50	2.50	2.00	2.75	2.00	2.75	3.00	3.00	2.00
	ELXL803	Project - II	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	ELXLDLO8	MEMS Technology Laboratory	2.00	2.75	2.75	2.75	2.25	1.25	1.25	1.00	1.25	1.25	1.25	2.00	1.25	2.25
	ELXLDLO8	Digital Image Processing Laboratory	3.00	2.50	2.50	2.50	2.25	2.00	2.25	1.75	2.00	2.25	2.00	2.00	2.75	2.25
	AVG			2.52	2.53	2.54	2.35	2.35	1.95	1.85	1.69	1.90	1.89	2.05	2.21	2.23

PO-PSO attainment:

PO ATTAINMENT															
CBSGS R2016 BATCH 21-22 (2018-2022)															
PO		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
DIRECT ASSESMENT	Average from sem III to sem VIII (A)	2.52	2.53	2.54	2.35	2.35	1.95	1.85	1.69	1.90	1.89	2.05	2.21	2.23	2.23
INDIRECT ASSESMENT	Graduate Exit Survey	4.23	4.18	4.18	4.07	4.13	4.22	4.24	4.34	4.41	4.34	4.22	4.35	4.16	4.13
	Placements	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Higher Studies	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Cocurricular Activities	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Extra Curricular Activities	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Overall Average (B)	3.25	3.24	3.24	3.22	3.23	3.25	3.25	3.27	3.29	3.27	3.25	3.28	3.24	3.23
PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
80% DIRECT ASSESMENT	A	2.01	2.03	2.03	1.88	1.88	1.56	1.48	1.35	1.52	1.51	1.64	1.77	1.79	1.78
20% INDIRECT ASSESMENT	B	0.65	0.65	0.65	0.64	0.65	0.65	0.65	0.65	0.66	0.65	0.65	0.66	0.65	0.65
OVERALL ATTAINMENT		2.66	2.67	2.68	2.52	2.52	2.21	2.13	2.00	2.18	2.16	2.29	2.42	2.43	2.43

2. Bachelor of Computer Engineering: CO-PO-PSO mapping and attainment.

Course Outcome Attainment odd sem(2021-22)


Vivekanand Education Society's Institute Of Technology						
(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra						
Department of Computer Engineering						
Course/Lab Outcome Attainment Summary 2021-22 Odd sem						
SEM III		D7A		D7B		D7C
Subject	Faculty Name	CO Attainment	Faculty Name	CO Attainment	Faculty Name	CO Attainment
AMIII	Ravi Shankar	3	Dattaraya Game	2.97	Dattaraya Game	2.97
DSGT	Abha Tewari	2.93	Mannat D.	2.67	Sunita Suralkar	2.68
DS	Lifna CS	3	Richa sharma	2.67	Sujata khandaskar	2.65
DLCA	Indu Dokare	2.8	Sanjay M.	2.68	Pallavi Gangurde	2.62
CG	Ashwini Gaikwad	3	Abha Tewari	2.97	Richard Joseph	2.92
DLCA Lab	Ashwini	2.8	Sanjay	2.68	Pallavi	2.62

	Gaikwad		Mirchandani		G/Sanjay M/Prerna S	
CG Lab	PallaviS/Ash wini G	3	Abha Tewari	3	Richard Joseph/Prerna Solanke	2.95
Data structure Lab	Abha Tewari/Mann at D.	3	Sujata K./Richa Sharma	2.68	Sujata Khandaskar	2.65
OOPJ Lab	Mannat D.	2.97	Vidya Zope	2.98	Rupali Hande	2.92
SEM V		D12A		D12B		D12C
Subject	Faculty Name	CO Attainment	Faculty	CO Attainme nt	Faculty	CO Attainmen t
TCS	Dr. Sujata Khedekar	2.7	Vidya Zope	3	Rupali Hande	2.65
SE	Richa Sharma	2.7	Prerna Solanke	3	Sunita Suralkar	3
CN	Prashant kanade	3	Dr. Sharmila Sengupta	3	Nusrat Ansari	3
DWM	Dr. Gresha Bhatia	3	Dr. Dashrath Mane	3	Richard Joseph	2.7
PGM	Sanjay Mirchandani	3	Sanjay Mirchandani	3	Sanjay Mirchandani	3
IP	Geocey S.	2.7	Priya R L	2.98	Pallavi Saidhane	3

SE LAB	Sunita Suralkar/Richa Sharma	2.7	Prerna Solanke	2.95	Sunita Suralkar	3
CN LAB	Prashant Kanade	2.89	Rupali hande/Sunita Sahu	2.85	Nusrat Ansari/Sunita Sahu	2.95
DWM Lab	Dr. Gresha Bhatia	2.98	Dr. Dashrath Mane	2.98	Richard Joseph	2.7
BCE-II	Dr Geeta Ajit	3	Dr. Geeta Ajit	2.95	Dr. Sushil sir	3
Sem VII						
Subject	Faculty	D17A	Faculty	D17B	Faculty	D17C
DSIP	Dr. Sharmila Sengupta	2.9	Indu Dokare	3	Nusrat Ansari	3
MCC	Dr. Nupur Giri	3	Geocey Shejy	3	Pallavi Gangurde	3
AISC	Priya R L	2.9	Lifna CS	2.9	Sunita Sahu/veena trivedi	2.9
BDA	Dr. Rohini Temkar	2.9	Dr. Anjali Yeole	2.7	Dr. Sujata Khedekar	2.7
OR	Nilima Warke					2.7
MIS	Dr. Gresha Bhatia	3	Dr. Rohini Temkar	2.9	Prashant Kanade	3
BDA Lab	Dr. Rohini Temkar	2.9	Richa Sharma/Dr. Anjali Yeole	2.7	Dr. Sujata Khedekar	2.7

AISC Lab	Priya R L	2.9	Veena Trivedi	2.9	Sunita Sahu	2.9
Mob. App Dev Lab	Dr. Nupur Giri	3	Geocey Shejy	3	Pallavi Gangurde	3
DSIPLab	Dr.Sharmila Sengupta	3	Indu Dokare	3	Nusrat Ansari	3
CSL Lab			Dr. Rajani Mangala	2.7		

2. Course Outcome Attainment Even sem(2021-22)

 Vivekanand Education Society's Institute Of Technology (Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra) Department of Computer Engineering Course/Lab Outcome Attainment Summary 2021-22 even sem

Second Year						
Subject	Faculty name	D7A	Faculty name	D7B	Faculty name	D7C
AM-IV	Mr. Dattatraya S. Game	3.00	Mrs. Dattatraya S. Game	3.00	Netto Martia	3.00
AOA	Mrs. Rohini Temkar	3.00	Mrs. Sunita Suralkar	2.45	Mrs. Sujata Khandaskar	3.00
DBMS	Mrs. Pallavi Saidhane	2.80	Mrs. Vidya Zope	2.45	Mrs. Yugchhaya Galphat	2.68
OS	Mrs. Abha Tewari	3.00	Mrs. Mannat Daultani	3.00	Mr. Richard Joseph	2.45
Python lab	Mrs. Nusrat ansari	3.00	Mr. sanjay Mirchandani	2.70	Mrs. Mannat D.	2.68
MP	Mrs. Pallavi gangurde	1.81	Mrs. Nusrat Ansari	3.00	Mrs. Deepti Khimani	2.82
AOA Lab	Mrs. Rohini Temkar	2.93	Mrs. sunita Suralkar/Manisha M	2.70	Mrs. Sujata Khandaskar	2.93
DBMS Lab	Mrs. Pallavi Saidhane	3.00	Mrs. Purna saulanki	2.70	Mrs. Yugchhaya Galphat	2.98
OS Lab	Mrs. Abha Tewari	3.00	Mrs. Mannat D.	3.00	Mr. Richard Joseph	2.70
MP Lab	Mrs. Pallavi Gangurde	2.70	Mrs Nusrat Ansari	2.93	Mrs. Deepti khimani	2.83
Third Year						
Subject	Faculty name	D12A	Faculty name	D12B	Faculty name	D12C
SPCC	Rupali Hande/Priti Joshi	2.21	Pallavi S	2.8	Priti Joshi	2.24
CSS	Dr. Anjali Y	2.7	Veena Trivedi	2.9	Dr. Rohini TEMkar	2.7
MC	Dr. Prashant Kanade	2.7	Pallavi Gangurde	2.7	Dr. Sharmila Sengupta	3
AI	Dr. Sharmila SEngupta	2.7	Priya R L	3	Lifna CS	2.7
IOT	Indu D.	1.72	-		Indu D	3



QA	Geocey S	2.06	Sanjay M	2.7	Geocey S/Sanjay M	1.42
SPCC Lab	Rupali Hande/Priti Joshi	2.7	Pallavi S/Satish R	2.6	Priti Joshi	2.9
CSS Lab	Veena Trivedi	3	Veena Trivedi	2.8	Dr. Rohini TEMkar	2.7
MC Lab	YuggChaya D	2.94	Pallavi Gangurde	2.7	Indu D/Manisha Mathur	3
AI Lab	Dr. Sharmila SEngupta	2.7	Manisha Mathur	3	Lifna CS/Manisha Mathur	3
CC Lab	Ramesh Solanki	3	Indira B	2.67	Monali Rajput	2.7
Mini project Lab		3		3		3
Subject	Faculty name	D17A	Faculty name	D17B	Faculty name	D17C
HMI	Dr. Gresha Bhatia	2.7	Dr. Sujata Khedkar	3	Dr. Dashrath Mane	3
DC	Dr. Nupur Giri	2.7	Dr. Prashant Kanade	2.7	Geocey S	2.95
HMI Lab	Dr. Gresha Bhatia	2.7	Indu Dokare	3	Dr. Dashrath Mane	3
DC Lab	Dr. Nupur Giri	2.7	Dr. Prashant Kanade	2.7	Geocey S	3
CC Lab	Sunita Suralkar	2.7	Prerna S	2.7	Richard Joseph	2.7
NLP	Vidya Zope	2.7	Priya R L	3	Dr. Sujata Khedkar	3
NLP Lab	Vidya Zope	2.7	Priya R L	3	Abha Tewari	3
PRJ-II		3		3		3
PM	-		Asma Parveen	2.7	Asma Parveen	2.7
FM	Dr. M D Pattil	2.7	Dr. Dashrath M	3	Dr. Saylee Gargee	2.7
EM	-		Ashwini Sawant	2.7	-	

Computer Department PO Attainment for Batch 2021-22

Batch 2018-22: BE (2021-22) CO Attainment

BE CO														
Year	Courses	Program Outcome												
		SUB	PO1 (a)	PO2 (b)	PO3 (c)	PO4 (d)	PO5 (e)	PO6 (f)	PO7 (g)	PO8 (h)	PO9 (i)	PO10 (j)	PO11 (k)	PO12 (l)
BE	C413	HMI	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
	C414	DC	2.78	2.78	2.78	2.78	2.78			2.78	2.78	2.78	2.78	2.78
	C419	HMI Lab	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
	C420	DL Lab	2.8	2.8	2.8	2.8	2.8				2.8			2.8
	C421	CC Lab	2.7	2.7		2.7	2.7	2.7			2.7	2.7		
	C415	NLP	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
	C422	NLP Lab	3	3	3	3	3	3	3	3	3	3	3	3
	C423	PRJ-II	3	3	3	3	3	3	3	3	3	3	3	3
	C416	PM												
	C417	FM												
	C418	EM						2.7	2.7	2.7	2.7	2.7	2.7	2.7
			2.87	2.87	2.90	2.87	2.87	2.87	2.90	2.88	2.85	2.86	2.88	2.87

Batch 2018-22: TE (2020-21) CO Attainment

		TE CO												
Year	Courses	Program Outcome												
		SUB	PO1 (a)	PO2 (b)	PO3 (c)	PO4 (d)	PO5 (e)	PO6 (f)	PO7 (g)	PO8 (h)	PO9 (i)	PO10 (j)	PO11 (k)	PO12 (l)
TE	C301	MP	2.76	2.76	2.71	2.71	2.71	2.76	2.76	2.76	2.76	2.76	2.58	2.76
	C302	DBMS	2.88	2.91	2.91	2.91	2.9	2.87		2.84	2.9	2.91	2.91	2.91
	C303	CN	2.81	2.85	2.77	2.85	2.71	2.85	2.45	2.8	2.85	2.77	2.88	2.81
	C304	TCS	2.83	2.83			2.9							2.83
	C305	BCE						3	3	3	3	3	3	3
	C306	MP Lab	3	3	3	3	3	3	3	3	3	3	3	3
	C307	CN Lab	2.97	2.98	2.98	2.97	2.98			2.98	3	2.98	2.97	2.98
	C308	DB and INFO lab	3	3	3	3	3	3		3	3	3	3	3
	C309	WEB Design lab	2.97	2.98	2.97	2.98	2.97	2.97	2.97	2.97	3	2.97	2.97	2.97
	C310	AOA	2.98	2.98	2.98	2.98								2.98
	C311	AOS	2.84	2.68	2.68	2.76								

TE	CPC601	SE	3	3	3	3	3	3	3	3	3	3	3	3
	CPC602	SPCC	3	3	3		3					3		3
	CPC603	DWM	3	3	3	3	3			3	3	3		3
	CPC604	CSS	2.92	2.91	2.89		2.89	2.9		2.9		2.92		2.89
	CSDLO6011	ML	3	3	3	3	3	3	3				3	3
	CSL601	Software Engineering	3	3	3	3	3	3	3	3	3	3	3	3
	CSL602	System software Lab	3	3	3		3					3		3
	CSL603	DWM Lab	3	3	3	3	3			3	3	3		3
	CSL604	System Security Lab	2.93	2.93	2.93	2.93	2.93	2.93		2.93				2.93
	CSP605	Mini-Project	3	3	3	3	3	3	3	3	3	3	3	3
			2.94	2.94	2.94	2.94	2.94	2.93	2.93	2.95	2.96	2.95	2.95	2.95

Batch 2018-22: SE (2019-20) CO Attainment

Computer Department PO Attainment for Batch 2018-2022																
Academic Year	Year	Semester	Attainment Goal	Weightage	PO1 (a)	PO2 (b)	PO3 (c)	PO4 (d)	PO5 (e)	PO6 (f)	PO7 (g)	PO8 (h)	PO 9(i)	PO10 (j)	PO11(k)	PO12 (l)
2018-19	F.E.	PO Attainment through CO	50.00%	80.00%	2.44	2.39	2.45	2.42	2.56	2.37	2.26	2.19	2.45	2.29	2.92	2.33
2019-20	S.E.	PO Attainment through CO			2.90	2.90	2.97	2.93	2.85	3.00	3.00	3.00	2.96	2.92	3.00	2.91
2020-21	T.E.	PO Attainment through CO			2.94	2.94	2.94	2.94	2.94	2.93	2.93	2.95	2.96	2.95	2.95	2.95
2021-22	B.E.	PO Attainment through CO			2.87	2.87	2.90	2.87	2.87	2.87	2.90	2.88	2.85	2.86	2.88	2.87
Average PO Attainment through CO of F.E.,S.E., T.E., B.E. (2018-2022)(Direct assessment)					2.79	2.78	2.82	2.79	2.81	2.79	2.77	2.76	2.80	2.75	2.94	2.77
PO Attainment through Student Portfolio for batch (2019-2022)			75.00%	20.00%	3	3	3	3	3	3	3	3	3	3	3	3
PO Attainment through Student Exit Forms			60.00%		3	3	3	3	3	3	3	3	3	3	3	3
PO Attainment through Placements			90.00%		3	3	3	3	3	3	3	3	3	3	3	3
PO Attainment through Higher Education			15.00%		3	3		3					3			3
Indirect Attainment					3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Departmental PO Attainment for Batch 2018-2022			≥=70%		2.83	2.82	2.85	2.83	2.84	2.83	2.82	2.81	2.84	2.80	2.95	2.81
Departmental PO Attainment for Batch 2018-2022 Attainment Level- 2.84																

PSO Attainment:

Computer Department PSO Attainment for BE 2018-22 (CBSGS)						
Academic Year	Year	Semester	Attainment Goal	Weightage	PSO1	PSO2
2019-20	S.E.	PO Attainment through CO	50.00%	80.00%	2.90	2.90
2020-21	T.E.	PSO Attainment through CO			2.93	2.92
2021-22	B.E.	PSO Attainment through CO			2.85	2.85
Average PSO Attainment through B.E. (2017-21)(Direct Assessment)					2.89	2.89
PSO Attainment through Student Portfolio for batch (2018-2022)			75.00%	20.00%	3	3
PSO Attainment through Student Exit Forms			60.00%		3	3
PSO Attainment through Placements			90.00%		3	3
PSO Attainment through Higher Education			10.00%		3	3
Indirect Attainment					3	3
Departmental PSO Attainment for Batch 2018-2022 Attainment level- 2.78			>=70%		2.92	2.91
Departmental PSO Attainment for Batch 2018-2022 Attainment level-					2.91	

**3. Bachelor of Instrumentation Engineering: CO-PO-PSO mapping and attainment.
CO Attainment:**

CO Attained Values (2021-22)																		
CO-PO-PSO mapping																		
Sem III (R2019)																		
Sr. No.	Name of the course	CO code	CO attainment	Program Outcomes												Programme Specific Outcomes		
				PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO 2	PSO 3
1	Engineering Mathematics-I II	ISC 301.1	2.88	3	3	-	2	-	-	-	-	-	-	-	2	-	-	1
		ISC 301.2	2.88	3	3	-	2	-	-	-	-	-	-	-	2	-	-	1
		ISC 301.3	2.88	2	2	-	2	-	-	-	-	-	-	-	2	-	-	1
		ISC 301.4	2.88	2	2	-	2	-	-	-	-	-	-	-	2	-	-	1
		ISC 301.5	2.88	2	2	-	2	-	-	-	-	-	-	-	2	-	-	1
		ISC 301.6	2.88	2	2	-	2	-	-	-	-	-	-	-	2	-	-	1
		Program Outcome Attainment		2.88	2.88	-	2.88	-	-	-	-	-	-	-	-	2.88	-	-
2	Transducer I	ISC 302.1	4	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISC 302.2	4	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISC 302.3	4	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISC 302.4	4	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISC 302.5	4	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISC 302.6	3.44	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		Program Outcome Attainment		3.91	3.91	3.91	3.91	3.91	-	-	-	-	3.91	-	3.91	3.91	0	3.91
3	Analog	ISC 303.1	4	3	3	-	-	1	-	-	-	-	-	1	-	1	3	

	Electronics	ISC 303.2	4	3	3	-	-	1	-	-	-	-	-	1	-	1	3	
		ISC 303.3	4	3	3	-	-	1	-	-	-	-	-	1	-	1	3	
		ISC 303.4	4	3	3	-	-	1	-	-	-	-	-	1	-	1	3	
		ISC 303.5	4	3	3	-	-	1	-	-	-	-	-	1	-	1	3	
		ISC 303.6	3.14	3	3	-	-	1	-	-	-	-	-	1	-	1	3	
		Program Outcome Attainment		3.86	3.86	0	0	3.86	-	-	-	-	-	-	3.86	-	-	3.86
4	Digital Electronics	ISC 304.1	4	3	3	3	1	-	-	-	-	3	-	1	-	-	3	
		ISC 304.2	4	3	3	3	1	-	-	-	-	3	-	1	-	-	3	
		ISC 304.3	4	3	3	3	1	-	-	-	-	3	-	1	-	-	3	
		ISC 304.4	4	3	3	3	1	-	-	-	-	3	-	1	-	-	3	
		ISC 304.5	3.44	3	3	3	1	-	-	-	-	3	-	1	-	-	3	
		ISC 304.6	3.44	3	3	3	1	-	-	-	-	3	-	1	-	-	3	
	Program Outcome Attainment		3.81	3.81	3.81	3.81	-	-	-	-	-	3.81	-	3.81	-	-	3.81	
5	Electrical Networks and Measurements	ISC305.1	3.44	3	3	-	-	1	-	-	-	-	-	3	-	3	1	
		ISC305.2	3.3	3	3	-	-	1	-	-	-	-	-	3	-	1	1	
		ISC305.3	3.44	3	3	-	-	1	-	-	-	-	-	3	-	1	1	
		ISC305.4	3.33	3	3	-	-	1	-	-	-	-	-	3	-	1	1	
		ISC305.5	3.3	3	3	-	-	1	-	-	-	-	-	3	-	1	1	
		ISC305.6	3.44	3	3	-	-	1	-	-	-	-	-	3	-	1	1	
	Program Outcome Attainment		3.38	3.38	-	-	3.38	-	-	-	-	-	3.38	-	3.39	3.38		
6	Transducer-I Lab Practice	ISL301.1	2.8	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISL301.2	2.8	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISL301.3	2.8	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISL301.4	2.8	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISL301.5	2.8	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
		ISL301.6	2.8	3	3	1	1	1	-	-	-	-	1	-	1	3	-	1
	Program Outcome Attainment		2.88	2.88	2.88	2.88	2.88	-	-	-	-	2.88	-	2.88	2.88	-	2.88	

7	Analog Electronics Lab practice	ISL 302.1	1.04	3	3	-	-	1	-	-	-	-	-	-	1	-	1	3
		ISL 302.2	1.04	3	3	-	-	1	-	-	-	-	-	-	1	-	1	3
		ISL 302.3	1.44	3	3	-	-	1	-	-	-	-	-	-	1	-	1	3
		ISL 302.4	1.55	3	3	-	-	1	-	-	-	-	-	-	1	-	1	3
		ISL 302.5	1.67	3	3	-	-	1	-	-	-	-	-	-	1	-	1	3
		ISL 302.6	1.67	3	3	-	-	1	-	-	-	-	-	-	1	-	1	3
		Program Outcome Attainment		1.4	1.4	-	-	1.4	-	-	-	-	-	-	1.4	-	1.4	1.4
8	Digital Electronics Lab practice	ISL 303.1	2.8	3	3	3	1	3	-	-	-	3	3	-	1	-	-	3
		ISL 303.2	2.8	3	3	3	1	3	-	-	-	3	3	-	1	-	-	3
		ISL 303.3	2.8	3	3	3	1	3	-	-	-	3	3	-	1	-	-	3
		ISL 303.4	2.8	3	3	3	1	3	-	-	-	3	3	-	1	-	-	3
		ISL 303.5	2.8	3	3	3	1	3	-	-	-	3	3	-	1	-	-	3
		ISL 303.6	2.8	3	3	3	1	3	-	-	-	3	3	-	1	-	-	3
		Program Outcome Attainment		2.8	2.8	2.8	2.8	2.8	-	-	-	2.8	2.8	-	2.8	-	-	2.8
9	Object Oriented programming and Methodology	ISL 304.1	0.28	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-
		ISL 304.2	0.47	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-
		ISL 304.3	2.18	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-
		ISL 304.4	0.6	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-
		ISL 304.5	1.95	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-
		ISL 304.6	1.35	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-
		Program Outcome Attainment		-	1.14	-	-	1.14	-	-	-	-	-	-	-	-	-	-
9	Mini	ISM301.1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	

Project-1A	ISM301.2	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISM301.3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISM301.4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISM301.5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISM301.6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Program Outcome Attainment		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Sem IV (R2019)																			
Sr. No.	Name of the course	CO code	CO attainment	Program Outcomes												Programme Specific Outcomes			
				PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	
1	Engineering Mathematics IV	ISC401.1	4	2	2	-	1	-	-	-	-	-	-	-	-	1	-	-	1
		ISC401.2	3.86	3	3	-	2	-	-	-	-	-	-	-	-	2	-	-	1
		ISC401.3	3.93	3	3	-	2	-	-	-	-	-	-	-	-	2	-	-	1
		ISC401.4	3.44	2	2	-	1	-	-	-	-	-	-	-	-	2	-	-	1
		ISC401.5	3.86	2	2	-	2	-	-	-	-	-	-	-	-	2	-	-	1
		ISC401.6	3.44	1	1	-	1	-	-	-	-	-	-	-	-	1	-	-	1
		Program Outcome Attainment		3.8	3.8	-	3.8	-	-	-	-	-	-	-	-	3.76	-	-	3.76
2	Transducers -II	ISC402.1	4	3	3	3	-	-	-	-	-	-	3	-	1	3	1	2	
		ISC402.2	4	3	-	3	3	-	-	-	-	-	3	-	1	3	1	2	
		ISC402.3	4	3	3	3	3	-	-	-	-	-	3	-	1	3	1	2	
		ISC402.4	4	3	3	3	3	-	-	-	-	-	3	-	1	3	1	2	
		ISC402.5	3.44	3	3	3	3	-	-	-	-	-	3	-	1	3	1	2	
		ISC402.6	3.44	3	3	3	3	-	-	-	-	-	3	-	1	3	1	2	
		Program Outcome Attainment		3.81	3.78	3.81	3.78	-	-	-	-	-	3.81	-	3.81	3.81	-	-	

3	Signal Conditioning Circuit Design	ISC403.1	3.19	3	3	3	1	-	-	-	-	-	3	-	1	3	-	3
		ISC403.2	3.19	3	3	3	1	-	-	-	-	-	3	-	1	3	-	3
		ISC403.3	2.58	3	3	3	1	-	-	-	-	-	3	-	1	3	-	3
		ISC403.4	3.14	3	3	3	1	-	-	-	-	-	3	-	1	3	-	3
		ISC403.5	2.63	3	3	3	1	-	-	-	-	-	3	-	1	3	-	3
		ISC403.6	2.67	3	3	3	1	-	-	-	-	-	3	-	1	3	-	3
		Program Outcome Attainment		2.9	2.9	2.9	2.9	-	-	-	-	-	2.9	-	2.9	2.9	-	2.9
4	Feedback Control system	ISC404.1	2.88	3	3	1	3	1	-	1	-	-	-	1	1	2	1	3
		ISC404.2	2.88	3	3	1	3	1	-	1	-	-	-	1	1	2	1	3
		ISC404.3	2.88	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		ISC404.4	2.32	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		ISC404.5	2.32	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		ISC404.6	2.32	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		Program Outcome Attainment		2.6	2.6	2.6	2.6	2.88	-	2.6	-	-	-	2.6	2.6	2.6	2.6	2.6
5	Control System Components	ISC 405.1	3.44	-	-	2	-	-	1	2	-	-	-	-	3	-	-	1
		ISC 405.2	3.44	1	-	2	-	-	1	2	-	-	-	-	3	1	1	1
		ISC 405.3	3.02	1	-	-	-	-	1	2	-	-	-	-	3	1	1	1
		ISC 405.4	3.02	1	-	1	-	-	1	2	-	-	-	-	3	-	1	1
		ISC 405.5	3.02	1	-	1	-	-	1	2	-	-	-	-	3	1	1	1
		ISC 405.6	2.88	1	-	1	-	-	1	2	-	-	-	-	3	1	1	1
		Program Outcome Attainment		3.08	-	3.24	-	-	3.14	3.14	-	-	-	-	3.14	3.09	3.08	3.14
6	Process Control Components Lab	ISL401.1	2.6	-	-	2	-	-	1	2	-	-	-	-	3	3	3	3
		ISL401.2	2.6	1	-	2	-	-	1	2	-	-	-	-	3	3	3	3
		ISL401.3	2.6	1	-	-	-	-	1	2	-	-	-	-	3	3	3	3
		ISL401.4	2.6	1	-	1	-	-	1	2	-	-	-	-	3	3	3	3
		ISL401.5	2.6	1	-	1	-	-	1	2	-	-	-	-	3	3	3	1
		ISL401.6	2.6	1	-	1	-	-	1	2	-	-	-	-	3	3	3	3
		Program Outcome Attainment		2.60	-	2.60	-	-	2.60	2.60	-	-	-	-	2.60	2.60	2.60	2.60

7	Signal Conditioning Circuit Design Lab	ISL402.1	4	3	3	3	1	3	-	-	-	3	3	-	1	3	-	3
		ISL402.2	4	3	3	3	1	3	-	-	-	3	3	-	1	3	-	3
		ISL402.3	4	3	3	3	1	3	-	-	-	3	3	-	1	3	-	3
		ISL402.4	4	3	3	3	1	3	-	-	-	3	3	-	1	3	-	3
		ISL402.5	4	3	3	3	1	3	-	-	-	3	3	-	1	3	-	3
		ISL402.6	4	3	3	3	1	3	-	-	-	3	3	-	1	3	-	3
		Program Outcome Attainment	4.00	4.00	4.00	4.00	4.00	-	-	-	-	-	4.00	-	4.00	4.00	-	4.00
8	Feedback Control systems Lab	ISL403.1	3.3	3	3	1	3	1	-	1	-	-	-	1	1	2	1	3
		ISL403.2	2.87	3	3	1	3	1	-	1	-	-	-	1	1	2	1	3
		ISL403.3	3.1	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		ISL403.4	2.75	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		ISL403.5	2.75	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		ISL403.6	2.75	3	3	1	3	-	-	1	-	-	-	1	1	2	1	3
		Program Outcome Attainment	2.92	2.92	-	-	3.09	-	-	-	-	-	0.00	2.92	2.92	2.92	2.92	2.92
9	Virtual Instrumentation Lab	ISL404.1	2.6	-	1	-	-	3	-	-	-	-	-	-	-	-	-	
		ISL404.2	2.95	-	1	-	-	3	-	-	-	-	-	-	-	-	-	
		ISL404.3	3.11	-	1	-	-	3	-	-	-	-	-	-	-	-	-	
		ISL404.4	2.43	-	1	-	-	3	-	-	-	-	-	-	-	-	-	
		ISL404.5	2.25	-	1	-	-	3	-	-	-	-	-	-	-	-	-	
		ISL404.6	1.67	-	1	-	-	3	-	-	-	-	-	-	-	-	-	
		Program Outcome Attainment	-	2.50	-	-	2.50	-	-	-	-	-	-	-	-	-	-	
10	Mini Project-1B	ISM401.1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		ISM401.2	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		ISM401.3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		ISM401.4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		ISM401.5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		ISM401.6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		Program Outcome Attainment	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	

Sem V (R2019)																		
Sr. No.	Name of the course	CO code	CO attainment	Program Outcomes												Programme Specific Outcomes		
				PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
1	Electrical Machines and Drives	ISC 501.1	4	1	-	-	1	1	1	-	-	-	-	-	3	1	2	2
		ISC 501.2	4	3	1	-	-	1	1	-	-	-	-	-	3	-	2	2
		ISC 501.3	4	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-
		ISC 501.4	4	2	2	-	-	1	1	-	-	-	-	-	-	-	-	-
		ISC 501.5	4	2	2	1	-	2	1	-	-	-	-	-	-	1	-	-
		ISC 501.6	4	2	-	1	-	-	2	2	-	-	-	-	2	-	1	1
		Program Outcome Attainment		4.00	4.00	4.00	4.00	-	-	4.00	0.00	-	-	-	-	4.00	-	4.00
2	Application of Microcontroller	ISC 502.1	4	1	2	2	-	2	-	-	-	1	1	-	1	1	1	1
		ISC 502.2	4	1	-	-	-	-	-	-	-	1	1	-	1	-	-	1
		ISC 502.3	4	1	2	2	-	2	-	-	-	1	1	-	1	-	-	1
		ISC 502.4	4	1	2	2	2	2	-	-	-	1	1	-	1	-	1	1
		ISC 502.5	4	1	2	2	2	2	-	-	-	1	1	-	1	2	2	2
		ISC 502.6	3.44	1	2	2	2	2	-	-	-	1	1	-	1	3	3	3
		Program Outcome Attainment		3.91	3.89	3.89	3.81	-	-	-	-	-	3.91	-	3.91	3.72	3.76	3.81
3	Control System Design	ISC 503.1	4	1	-	-	2	-	-	-	-	-	-	3	-	3	2	
		ISC 503.2	4	3	3	-	-	2	-	-	-	-	-	3	-	3	-	
		ISC 503.3	4	1	1	3	-	3	-	-	-	-	-	-	-	3	2	
		ISC 503.4	4	2	2	-	3	-	-	-	-	-	-	-	-	3	-	
		ISC 503.5	4	2	2	3	-	3	-	-	-	-	-	-	1	3	2	
		ISC 503.6	3.44	2	2	3	-	3	-	-	-	-	-	-	1	3	2	
		Program Outcome Attainment		3.90	3.89	3.81	-	3.90	-	-	-	-	-	-	4.00	3.72	3.91	3.86

4	Process Instrum entation System	ISC 504.1	4	3	3	2	2	1	1	1	1	1	1	1	1	2	2	2	
		ISC 504.2	4	3	3	3	2	1	1	1	1	1	1	1	1	2	2	2	1
		ISC 504.3	4	3	3	3	2	3	1	2	2	1	2	2	2	2	3	3	2
		ISC 504.4	4	3	2	2	2	2	1	1	1	1	1	2	2	3	3	2	
		ISC 504.5	3.44	3	2	1	2	3	1	2	1	1	1	2	2	2	3	2	
		ISC 504.6	3.44	3	3	3	2	2	1	1	1	1	1	1	2	2	2	2	
		Program Outcome Attainment		3.8 1	3. 83	3. 84	3. 81	3. 77	3. 81	3. 79	3. 84	3. 81	3.8 4	3.8 1	3.8 0	3.84	3.8 1	3.8 0	
5	Analyti cal Instrum entation	ISDOC50 11.1	3.15	3	3	1	-	-	-	1	-	2	1	-	3	2	1	3	
		ISDOC50 11.2	3.15	3	3	1	-	-	-	1	-	2	1	-	3	2	1	3	
		ISDOC50 11.3	3.15	3	3	1	-	-	-	1	-	2	1	-	3	2	1	3	
		ISDOC50 11.4	3.29	3	3	1	-	-	-	1	-	2	1	-	3	2	1	3	
		ISDOC50 11.5	3.36	3	3	1	-	-	-	1	-	2	1	-	3	2	1	3	
		ISDOC50 11.6	3.36	3	3	1	-	-	-	1	-	2	1	-	3	2	1	3	
		Program Outcome Attainment		3.2 4	3. 24	3. 24	0. 00	-	-	-	-	-	3.2 4	-	3.2 4	3.24	3.2 4	-	
6	Data Structu res and Algorit hmes	ISDOC50 12.1	4	-	2	2	-	3	-	-	-	-	-	-	-	-	-		
		ISDOC50 12.2	4	-	2	2	-	3	-	-	-	-	-	-	-	-	-		
		ISDOC50 12.3	4	-	2	2	-	3	-	-	-	-	-	-	-	-	-		
		ISDOC50 12.4	4	-	2	2	-	3	-	-	-	-	-	-	-	-	-		
		ISDOC50 12.5	3.44	-	2	2	-	3	-	-	-	-	-	-	-	-	-		
		ISDOC50	3.44	-	2	2	-	3	-	-	-	-	-	-	-	-	-		

		12.6																
		Program Outcome Attainment	-	3.81	3.81	-	3.81	-	-	-	-	-	-	-	-	-	-	
7	Electric al Machines and Drives Lab	ISL 501.1	2.8	1	-	-	1	1	1	-	-	-	-	-	3	-	-	1
		ISL 501.2	2.8	3	1	-	-	1	1	-	-	-	-	-	3	-	-	1
		ISL 501.3	2.8	1	1	-	-	1	1	-	-	-	-	-	-	-	-	1
		ISL 501.4	2.8	2	2	-	-	1	1	-	-	-	-	-	-	-	-	1
		ISL 501.5	2.8	2	2	1	-	2	1	-	-	-	-	-	-	-	1	1
		ISL 501.6	2.8	2	-	1	-	-	2	2	-	-	-	-	2	-	1	1
		Program Outcome Attainment	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
8	Applica tions of Microco ntroller- Lab Practice	ISL 502.1	3.4	3	3	3	3	-	-	-	-	-	3	-	1	1	1	1
		ISL 502.2	3.12	3	3	3	3	-	-	-	-	-	3	-	1	-	-	1
		ISL 502.3	3.53	3	3	3	3	-	-	-	-	-	3	-	1	-	-	1
		ISL 502.4	3.59	3	3	3	3	-	-	-	-	-	3	-	1	-	1	1
		ISL 502.5	3.7	3	3	3	3	-	-	-	-	-	3	-	1	2	2	2
		ISL 502.6	3.7	3	3	3	3	-	-	-	-	-	3	-	1	3	3	3
		Program Outcome Attainment	3.51	3.51	3.51	3.51	3.51	0.00	-	-	-	0.00	3.51	-	3.51	3.65	3.64	3.67
9	Process Instrum entaion and Control System Design- Lab	ISL 503.1	3.46	3	3	2	2	1	1	1	1	2	1	1	1	2	3	2
		ISL 503.2	2.92	3	3	3	2	1	1	1	1	2	1	1	2	2	3	1
		ISL 503.3	3.77	3	3	3	2	3	1	2	2	2	2	1	3	3	3	2
		ISL 503.4	4	3	2	2	2	2	1	1	1	2	1	1	3	3	3	2
		ISL 503.5	4	3	2	1	2	3	1	2	1	2	2	1	2	2	3	2
		ISL 503.6	4	3	3	2	2	2	1	1	1	2	2	1	3	2	2	2
		Program Outcome Attainment	3.69	3.65	3.61	3.69	3.81	3.69	3.74	3.70	3.69	3.77	3.69	3.66	3.76	3.72	3.67	3.76
10	Professi onal Commu nication and	ISL504.1	4	1	1	1	1	1	3	3	3	3	3	3	3	-	-	-
		ISL504.2	4	1	1	1	1	1	3	3	3	3	3	3	3	-	-	-
		ISL504.3	4	2	1	2	1	1	3	3	3	3	3	3	3	-	-	-
		ISL504.4	4	1	1	2	1	1	3	3	3	3	3	3	3	-	-	-
		ISL504.5	4	2	2	2	2	2	3	3	3	3	3	3	3	-	-	-

	Ethics -II	ISL504.6	4	2	2	2	2	2	2	3	3	3	3	3	3	-	-	-
		Program Outcome Attainment		4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	-	-
11	Mini-Project-2 A	ISM501.1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISM501.2	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISM501.3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISM501.4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISM501.5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISM501.6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		Program Outcome Attainment		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Sem VI (R2019)																		
Sr. No.	Name of the course	CO code	CO attainment	Program Outcomes												Programme Specific Outcomes		
				PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
1	Industrial Process Control	ISC 601.1	4	3	3	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 601.2	4	3	2	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 601.3	4	3	2	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 601.4	4	3	2	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 601.5	3.44	3	2	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 601.6	3.44	3	2	2	-	1	2	1	-	1	-	-	3	3	3	2
		Program Outcome Attainment		3.81	3.83	3.81	-	3.81	3.81	3.81	-	3.81	-	-	3.81	3.81	3.81	3.81
2	Digital Signaling	ISC 602.1	4	3	3	1	3	-	-	-	-	-	-	1	1	-	-	3
		ISC 602.2	4	3	3	1	3	-	-	-	-	-	-	1	1	-	-	3
		ISC 602.3	3.72	3	3	1	3	-	-	-	-	-	-	1	1	-	-	3
		ISC 602.4	3.72	3	3	1	3	-	-	-	-	-	-	1	1	-	-	3
		ISC 602.5	3.44	3	3	1	3	-	-	-	-	-	-	1	1	-	-	3

		ISC 602.6	3.72	3	3	1	3	-	-	-	-	-	-	1	1	-	-	3
		Program Outcome Attainment		3.77	3.77	3.77	3.77	-	-	-	-	-	-	-	3.77	-	-	3.77
3	Industrial Data Communication	ISC 603.1	3.44	3	2	1	-	-	-	-	1	-	-	3	1	-	3	
		ISC 603.2	3.44	3	2	1	-	3	-	-	1	-	-	3	1	-	3	
		ISC 603.3	3.3	3	2	1	-	-	-	-	1	-	-	3	1	-	3	
		ISC 603.4	3.44	3	2	1	-	-	-	-	1	-	-	3	2	-	3	
		ISC 603.5	3.3	3	2	1	-	-	-	-	1	-	-	3	2	-	3	
		ISC 603.6	3.3	3	2	1	-	-	-	-	1	-	-	3	1	-	3	
		Program Outcome Attainment		3.37	3.37	3.37	-	3.44	-	-	-	3.37	-	-	3.37	3.37	-	3.37
4	Database Management Systems	ISDOC60 13.1		2	-	-	3	3	-	2	-	3	-	3	3	-	-	-
		ISDOC60 13.2		2	-	-	3	3	-	2	-	3	-	3	3	-	-	-
		ISDOC60 13.3		2	-	-	3	3	-	2	-	3	-	3	3	-	-	-
		ISDOC60 13.4		2	-	-	3	3	-	2	-	3	-	3	3	-	-	-
		ISDOC60 13.5		2	-	-	3	3	-	2	-	3	-	3	3	-	-	-
		ISDOC60 13.6		2	-	-	3	3	-	2	-	3	-	3	3	-	-	-
		Program Outcome Attainment		0.00	0.00	0.00	0.00	-	-	0.00	-	-	-	0.00	0.00	-	-	-
5	Bio-sensors and signal Processing	ISDOC60 14.1	4	2	3	1	1	1	2	2	1	1	1	1	1	3	1	2
		ISDOC60 14.2	4	2	3	1	1	1	1	2	2	1	1	1	1	3	1	2
		ISDOC60 14.3	4	2	3	1	1	1	1	2	2	1	1	1	1	3	1	2
		ISDOC60 14.4	3.58	2	3	1	1	1	1	2	2	1	1	1	1	3	1	2

		ISDOC60 14.5	3.58	2	3	1	1	1	2	2	1	1	1	1	1	3	1	2
		ISDOC60 14.6	3.58	2	3	1	1	1	2	2	1	1	1	1	1	3	1	2
		Program Outcome Attainment		3.7 9	3. 79	3. 79	3. 79	3. 79	3. 79	3. 79	3. 79	3. 79	3. 79	3.7 9	3.7 9	3.7 9	3.79	3.7 9
6	Industrial Process Control Lab	ISL601.1	3.2	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL601.1	3.2	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL601.1	2.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL601.1	2.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL601.1	2.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL601.1	2.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		Program Outcome Attainment		2.9 3	2. 93	2. 93	-	2. 93	2. 93	2. 93	-	2. 93	-	-	2.9 3	2.93	2.9 3	2.9 3
7	Digital Signal Processi ng Lab	ISL602.1	3.3	3	3	-	-	3	-	-	-	-	-	1	1	-	-	3
		ISL602.2	2.6	3	3	-	-	3	-	-	-	-	-	1	1	-	-	3
		ISL602.3	2.95	3	3	-	-	3	-	-	-	-	-	1	1	-	-	3
		ISL602.4	2.95	3	3	-	-	3	-	-	-	-	-	1	1	-	-	3
		ISL602.5	4	3	3	-	-	3	-	-	-	-	-	1	1	-	-	3
		ISL602.6	3.65	3	3	-	-	3	-	-	-	-	-	1	1	-	-	3
		Program Outcome Attainment		3.2 4	3. 24	-	-	3. 24	-	-	-	-	-	3.2 4	3.2 4	-	-	3.2 4
8	Python Progra mming Lab	ISL603.1	3.54	3	2	-	-	3	-	-	-	3	-	-	3	-	-	-
		ISL603.2	3.02	3	2	-	-	3	-	-	-	3	-	-	3	-	-	-
		ISL603.3	3.07	3	2	-	-	3	-	-	-	3	-	-	3	-	-	-
		ISL603.4	3.16	3	2	-	-	3	-	-	-	3	-	-	3	-	-	-
		ISL603.5	3.16	3	2	-	-	3	-	-	-	3	-	-	3	-	-	-
		ISL603.6	3.3	3	2	-	-	3	-	-	-	3	-	-	3	-	-	-
		Program Outcome Attainment		3.2 1	3. 21	-	-	3. 21	-	-	-	3. 21	-	-	3.2 1	-	-	-
9	Mini-Pr oject 2	ISM601.1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISM601.2	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

B	ISM601.3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISM601.4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISM601.5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISM601.6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Program Outcome Attainment	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Sem VII (R2016)																		
Sr. No.	Name of the course	CO code	CO attainment	Program Outcomes												Programme Specific Outcomes		
				PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
1	Industrial Process control	ISC 701.1	3.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 701.2	3.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 701.3	3.24	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 701.4	3.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 701.5	3.24	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISC 701.6	3.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		Program Outcome Attainment	3.61	3.61	3.61	0.00	3.61	3.61	3.61	-	-	-	-	-	3.61	3.61	3.61	3.61
2	Biomedical Instrumentation	ISC 702.1	3.7	3	3	3	-	-	1	1	-	1	2	1	3	1	1	3
		ISC 702.2	3.7	3	3	3	2	-	1	1	-	1	2	1	3	1	1	3
		ISC 702.3	3.7	3	3	3	2	-	1	1	-	1	2	1	3	1	1	3
		ISC 702.4	3.7	3	3	3	2	-	1	1	-	1	2	1	3	1	1	3
		ISC 702.5	3.7	3	3	3	2	-	1	1	-	1	2	1	3	1	1	3
		ISC 702.6	3.14	3	3	3	2	-	1	1	-	1	2	1	3	1	1	3
		Program Outcome Attainment	3.61	3.61	3.61	3.59	0.00	3.61	3.61	-	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
3	Industrial	ISC 703.1	4	3	2	3	-	-	-	3	-	3	2	3	3	2	2	3
		ISC 703.2	4	3	-	3	2	-	-	3	-	3	2	3	3	2	2	3

	Automa tion	ISC 703.3	4	3	2	3	2	-	-	3	-	3	2	3	3	2	2	3
		ISC 703.4	4	3	2	3	2	-	-	3	-	3	2	2	3	2	2	3
		ISC 703.5	3.44	3	2	3	2	3	2	3	-	3	2	2	3	2	2	3
		ISC 703.6	3.44	3	2	3	2	3	2	3	-	3	2	2	3	2	2	3
		Program Outcome Attainment	3.81	3.78	3.81	3.78	3.44	3.44	3.81	-	3.81	3.81	3.85	3.81	3.81	3.81	3.81	3.81
4	Image Processi ng	ISDLO70 31.1	3.28	3	3	1	-	-	-	-	-	-	-	-	1	-	-	3
		ISDLO70 31.2	4	3	3	1	-	-	-	-	-	-	-	-	1	-	-	3
		ISDLO70 31.3	4	3	3	1	-	-	-	-	-	-	-	-	1	-	-	3
		ISDLO70 31.4	4	3	3	1	-	-	-	-	-	-	-	-	1	-	-	3
		ISDLO70 31.5	4	3	3	1	-	-	-	-	-	-	-	-	1	-	-	3
		ISDLO70 31.6	3.44	3	3	1	-	-	-	-	-	-	-	-	1	-	-	3
		Program Outcome Attainment	3.79	3.79	3.79	-	-	-	-	-	-	-	-	-	3.79	-	-	3.79
5	Buildin g Automa tion	ILO7015.1	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ILO7015.2	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ILO7015.3	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ILO7015.4	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ILO7015.5	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ILO7015.6	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		Program Outcome Attainment	-	-	-	-	4.00	4.00	4.00	-	-	-	4.00	4.00	-	4.00	4.00	
6	Industri al Process Control -Lab	ISL701.1	3.37	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL701.2	3.76	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL701.3	2.8	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL701.4	4	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2

	Practice	ISL701.5	4	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		ISL701.6	3.2	2	1	2	-	1	2	1	-	1	-	-	3	3	3	2
		Program Outcome Attainment		4	3.52	3.52	-	3.52	3.52	3.52	-	-	-	-	3.52	3.52	3.52	3.52
7	Biomedical Instrumentation-Lab Practice	ISL702.1	3.37	1	2	2	-	2	-	-	-	1	1	-	1	1	1	1
		ISL702.2	3.3	1	-	-	-	-	-	-	-	1	1	-	1	-	-	1
		ISL702.3	4	1	2	2	-	2	-	-	-	1	1	-	1	-	-	1
		ISL702.4	4	1	2	2	2	2	-	-	-	1	1	-	1	-	1	1
		ISL702.5	4	1	2	2	2	2	-	-	-	1	1	-	1	2	2	2
		ISL702.6	3.4	1	2	2	2	2	-	-	-	1	1	-	1	3	3	3
		Program Outcome Attainment		4	4	4	4	4	-	-	-	4	4	-	4	4	4	4
8	Industrial Automation-Lab Practice	ISL703.1	3.12	3	2	3	-	-	-	3	-	3	2	3	3	2	2	3
		ISL703.2	2.47	3	-	3	2	-	-	3	-	3	2	3	3	2	2	3
		ISL703.3	3.54	3	2	3	2	-	-	3	-	3	2	3	3	2	2	3
		ISL703.4	4	3	2	3	2	-	-	3	-	3	2	2	3	2	2	3
		ISL703.5	4	3	2	3	2	3	2	3	-	3	2	2	3	2	2	3
		ISL703.6	4	3	2	3	2	3	2	3	-	3	2	2	3	2	2	3
		Program Outcome Attainment		3.52	3.73	3.52	3.60	4.00	4.00	3.52	-	3.52	3.52	3.43	3.52	3.52	3.52	3.52
9	Image Processing Lab Practice	ISL704.1	3.65	1	2	2	-	2	-	-	-	1	1	-	1	1	1	1
		ISL704.2	3.65	1	-	-	-	-	-	-	-	1	1	-	1	-	-	1
		ISL704.3	3.68	1	2	2		2	-	-	-	1	1	-	1	-	-	1
		ISL704.4	3.65	1	2	2	2	2	-	-	-	1	1	-	1	-	1	1
		ISL704.5	2.7	1	2	2	2	2	-	-	-	1	1	-	1	2	2	2
		ISL704.6	2.5	1	2	2	2	2	-	-	-	1	1	-	1	3	3	3
		Program Outcome Attainment		3.31	3.24	3.24	2.95	3.24	-	-	-	3.31	3.31	-	3.31	2.76	2.89	3.06
10	Building Automation-La	ISL704.1	1.97	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ISL704.2	3.25	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ISL704.3	3.3	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ISL704.4	3.65	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1

	b Practice	ISL704.5	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		ISL704.6	4	-	-	-	-	1	3	3	-	-	-	2	1	-	3	1
		Program Outcome Attainment		-	-	-	-	3.36	3.36	3.36	-	-	-	3.36	3.36	-	3.36	3.36
11	Project 1	ISL704.1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISL704.2	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISL704.3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISL704.4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISL704.5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		ISL704.6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		Program Outcome Attainment		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Sem VIII (R2016)																		
Sr. No.	Name of the course	CO code	CO attainment	Program Outcomes												PS O1	PS O2	PS O3
				PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12			
1	Instrumentation project documentation and execution	ISC 801.1	2.3	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISC 801.2	2.3	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISC 801.3	2.3	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISC 801.4	2.3	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISC 801.5	2.3	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISC 801.6	2.3	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		Program Outcome Attainment	2.30	2.30	2.30	-	2.30	-	-	-	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
2	Instrument and System design	ISC802.1	4	3	1	3	-	-	3	3	2	2	2	2	3	3	-	2
		ISC802.2	4	3	1	3	-	-	-	-	-	-	-	-	3	3	-	-
		ISC802.3	3.72	3	1	3	-	-	1	1	1	1	1	1	3	3	1	2
		ISC802.4	3.72	3	1	3	-	-	1	1	1	1	1	1	3	3	1	2
		ISC802.5	3.72	3	1	3	-	-	-	-	-	-	-	-	3	3	-	2
		ISC802.6	3.44	3	1	3	-	-	1	1	-	1	1	1	3	3	1	2

		Program Outcome Attainment	3.77	3.77	3.77	0.00	0.00	3.81	3.81	3.86	3.78	3.78	3.78	3.77	3.63	3.72		
3	Internet of Things	ISDLO80 41.1	4	-	2	2	1	3	-	-	-	-	-	-	-	-	-	
		ISDLO80 41.2	4	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-
		ISDLO80 41.3	3.58	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-
		ISDLO80 41.4	3.58	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-
		ISDLO80 41.5	3.44	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-
		ISDLO80 41.6	3.44	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-
		Program Outcome Attainment		-	3.67	3.67	3.67	3.67	-	-	-	-	-	-	-	-	-	-
4	Power Plant Instrumentation	ISDLO80 44.1	2.32	3	1	3	-	-	3	3	2	2	2	2	3	3	-	2
		ISDLO80 44.2	2.32	3	1	3	-	-	-	-	-	-	-	-	3	3	-	-
		ISDLO80 44.3	2.32	3	1	3	-	-	1	1	1	1	1	1	3	3	1	2
		ISDLO80 44.4	2.32	3	1	3	-	-	1	1	1	1	1	1	3	3	1	2
		ISDLO80 44.5	2.32	3	1	3	-	-	-	-	-	-	-	-	3	3	-	2
		ISDLO80 44.6	2.32	3	1	3	-	-	1	1	-	1	1	1	3	3	1	2
		Program Outcome Attainment		2.32	2.32	2.32	-	-	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32
5	Instrumentation project docume	ISL801.1	3.3	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISL801.2	2.01	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISL801.3	1.61	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1
		ISL801.4	1.9	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1

	ntation and execution-Lab Practice	ISL801.5	1.9	1	1	3	-	3	-	-	-	3	2	3	3	3	1	1	
		ISL801.6	2.6	1	1	3	-	3	-	-	-	3	2	3	3	3	3	1	1
		Program Outcome Attainment		2.2	2.22	2.22	-	2.22	-	-	-	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22
6	Instrument and System design-Lab practice	ISL802.1	4	3	1	3	-	-	3	3	2	2	2	2	3	3	-	2	
		ISL802.2	4	3	1	3	-	-	-	-	-	-	-	-	3	3	-	-	
		ISL802.3	3.77	3	1	3	-	-	1	1	1	1	1	1	3	3	1	2	
		ISL802.4	4	3	1	3	-	-	1	1	1	1	1	1	3	3	1	2	
		ISL802.5	4	3	1	3	-	-	-	-	-	-	-	-	3	3	-	2	
		ISL802.6	4	3	1	3	-	-	1	1	-	1	1	1	3	3	1	2	
		Program Outcome Attainment		4	4	4	-	-	4	4	4	4	4	4	4	4	4	4	4
7	Internet of Things Lab Practice	ISL803.1	2.62	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-	
		ISL803.2	2.01	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-	
		ISL803.3	2.56	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-	
		ISL803.4	2.99	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-	
		ISL803.5	3.07	-	2	2	1	3	-	-	-	-	-	-	-	-	-	-	
		ISL803.6		-	2	2	1	3	-	-	-	-	-	-	-	-	-	-	
		Program Outcome Attainment		-	2.21	2.21	2.21	2.21	-	-	-	-	-	-	-	-	-	-	
8	Power Plant Instrumentation Lab Practice	ISL8033.1	3.72	3	1	3	-	-	3	3	2	2	2	2	3	2	1	-	
		ISL8033.2	3.82	3	1	3	-	-	-	-	-	-	-	-	3	2	1	-	
		ISL8033.3	3.62	3	1	3	-	-	1	1	1	1	1	1	3	2	1	-	
		ISL8033.4	3.54	3	1	3	-	-	1	1	1	1	1	1	3	2	1	-	
		ISL8033.5	3.84	3	1	3	-	-	-	-	-	-	-	-	3	2	1	-	
		ISL8033.6	3.84	3	1	3	-	-	1	1	-	1	1	1	3	2	1	-	
		Program Outcome Attainment		3.73	3.73	3.73	-	-	3.69	3.69	3.65	3.69	3.69	3.69	3.69	3.73	3.73	3.73	-
9	Project II	ISL804.1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		ISL804.2	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		ISL804.3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	

	ISL804.4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISL804.5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ISL804.6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Program Outcome Attainment	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

PO Attainment:

Direct PO attainment 2019-22																	
	SUBJECT NAME	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	
1	Applied Mathematics III	3.86	3.86	3.86	3.86	-	3.86	3.86	3.86	-	-	-	3.86	-	-	3.86	
2	Electrical Networks and Measurements	2.92	2.92	-	-	2.92	-	-	-	-	-	-	2.92	-	2.92	2.92	
3	Analog Electronics	4.00	4.00	4.00	4.00	0.00	-	-	-	-	4.00	-	4.00	4.00	-	4.00	
4	Digital electronics	3.36	3.36	3.31	3.35	3.20	-	-	-	-	-	-	3.36	-	-	3.36	
5	Transducer I	4.00	4.00	-	-	4.00	-	-	-	-	-	-	4.00	-	4.00	4.00	
6	Object Oriented programming and Methodology	1.47	1.57	1.57	1.65	1.57	-	-	-	1.47	1.47	-	1.47	-	-	-	
7	Analog Electronics Lab practice	3.13	3.13	-	-	3.13	-	-	-	-	-	-	3.13	-	3.13	3.13	
8	Transducer-I Lab Practice	3.74	3.74	3.74	3.74	3.74	-	-	-	-	3.74	-	3.74	3.74	-	3.74	
9	Digital Electronics Lab practice	3.53	3.53	3.53	-	4.00	-	-	-	3.53	3.53	-	3.53	-	-	3.53	
10	Applied Mathematics IV	4.0	4.0	-	4.0	-	-	-	-	-	-	-	4.0	-	-	4.0	

		0	0		0							0			0	
11	Transducer II	4.0 0	4.0 0	4.0 0	4.0 0	-	-	-	-	-	4.0 0	-	4.0 0	4.0 0	-	-
12	Feedback control System	2.7 8	2.7 5	-	-	2.6 2	-	-	-	-	-	-	-	3.0 5	2.7 6	3.0 5
13	Analytical Instrumentation	3.1 2	3.1 2	3.1 2	3.1 2	3.1 2	-	3.1 2	-	3. 12	-	3.1 2	3.1 2	3.1 2	3.1 2	3.1 2
14	Signal conditioning Circuit Design	3.7 2	3.7 2	3.7 2	3.7 2	-	-	3.7 2	3. 72	3. 72	3.7 2	-	3.7 2	3.7 2	-	3.7 2
15	Application Software Practices	-	2.2 2	2.2 2	-	2.2 2	-	-	-	-	-	-	-	-	-	2.2 2
16	Transducer-II Lab Practice	4.0 0	4.0 0	4.0 0	4.0 0	4.0 0	-	-	-	-	4.0 0	-	4.0 0	4.0 0	-	4.0 0
17	Feedback Control systems Lab Practice	2.8 0	2.8 0	-	-	2.8 0	-	-	-	-	-	-	2.8 0	-	2.8 0	-
18	Analytical Instrumentation Lab Practice	2.0 0	2.0 0	2.0 0	2.0 0	2.5 2	-	2.0 0	-	2. 00	-	2.0 0	2.0 0	2.0 0	2.0 0	2.0 0
19	Signal Conditioning Circuit Design Lab Practice	3.1 9	3.1 9	3.1 9	3.1 9	3.1 9	-	3.1 9	3. 19	3. 19	3.1 9	-	3.1 9	3.1 9	-	3.1 9
20	Signals and System	2.8 8	2.8 8	2.8 8	2.8 8	-	-	2.8 8	2. 88	-	-	-	-	2.8 8	-	2.8 8
21	Application of Microcontroller I	3.6 1	3.6 1	3.6 1	3.6 1	-	-	-	-	-	3.6 1	-	3.6 1	3.4 6	3.5 0	3.5 7
22	Control System Design	1.4 9	1.4 9	1.5 1	-	1.5 0	-	-	-	-	-	-	1.4 6	1.5 2	1.4 9	1.5 0
23	Control System Components	3.8 6	3.8 6	3.8 6	3.8 6	3.8 6	3.8 6	3.8 6	3. 86	3. 86	3.8 4	3.8 6	3.8 6	3.8 6	3.8 6	3.8 6
24	Advanced Sensors	3.8 1	3.8 1	3.8 1	3.8 1	-	-	-	-	-	3.8 1	-	3.8 1	3.8 1	-	-
25	Database Management System	3.2 5	3.2 3	3.1 8	3.1 8	-	-	-	-	-	-	-	3.1 8	-	-	-
26	Business Communication and Ethics	3.4 6	3.4 6	3.4 6	-	3.4 6	3.4 6	3.4 6	-	3. 46	3.4 6	3.4 6	3.4 6	-	-	3.4 6
27	Application of Microcontroller I-Lab Practice	3.6 0	3.5 2	3.5 2	3.6 0	3.5 2	-	-	-	3. 60	3.6 0	-	3.6 0	3.2 0	3.3 1	3.4 7
28	Control System Design -Lab Practice	3.5 0	3.5 6	3.5 2	-	3.4 4	-	-	-	-	-	-	-	-	-	-

29	Control System Components-Lab	2.74	2.71	2.68	2.68	2.71	2.68	2.65	2.68	2.68	2.74	2.68	2.71	2.67	2.66	2.71
30	Advanced Sensors-lab	4.00	4.00	4.00	4.00	-	-	-	-	-	4.00	-	4.00	4.00	-	-
31	Database Management System-Lab Practice	3.12	2.83	2.75	2.75	-	-	-	-	-	-	-	2.95	-	-	-
32	Miniproject	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
33	Process Instrumentation system	1.41	1.41	1.37	1.41	1.46	-	-	-	-	-	-	-	1.41	1.41	1.41
34	Industrial Data Communication	3.86	3.86	3.86	0.00	3.86	-	-	-	3.86	-	-	3.86	3.86	-	3.86
35	Electrical Machines and Drives	4.00	4.00	4.00	4.00	4.00	4.00	4.00	-	-	-	-	4.00	4.00	4.00	4.00
36	Digital Signal Processing	2.51	2.51	2.51	2.51	2.88	-	-	-	-	-	2.51	2.51	-	-	-
37	Advanced control system	3.81	3.79	3.68	3.68	-	-	-	-	-	-	-	-	-	-	-
38	Bio-sensors and Signal Processing	3.91	3.91	3.84	3.91	3.91	3.87	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91
39	Process Instrumentation system-Lab Practice	2.34	2.43	2.38	2.39	2.24	2.39	2.31	2.35	2.19	2.35	2.39	2.26	2.34	2.39	2.38
40	Industrial Data Communication-Lab Practice	3.52	3.52	3.52	-	4.00	-	-	-	3.52	-	-	3.52	3.52	-	3.52
41	Electrical Machines and Drives-Lab Practice	2.42	2.10	2.10	2.80	2.10	2.40	2.80	-	-	-	-	2.80	-	2.10	2.33
42	Digital Signal Processing-Lab Practice	3.58	3.58	-	3.58	-	-	-	-	-	-	3.58	3.58	-	-	3.58
43	Advanced control system-Lab Practice	2.96	2.96	2.96	2.96	2.96	-	-	-	-	2.96	-	2.96	2.96	-	2.96
44	miniproject	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
45	Industrial Process control	3.61	3.61	3.61	-	3.61	3.61	3.61	-	-	-	-	3.61	3.61	3.61	3.61
46	Biomedical Instrumentation	3.61	3.61	3.61	3.59	-	3.61	3.61	-	3.61	3.61	3.61	3.61	3.61	3.61	3.61
47	Industrial Automation	3.81	3.78	3.81	3.78	3.44	3.44	3.81	-	3.81	3.81	3.85	3.81	3.81	3.81	3.81
48	Image Processing	3.79	3.79	3.79	-	-	-	-	-	-	-	-	3.79	-	-	3.79

49	Building Automation	-	-	-	-	4	4	4	-	-	-	4	4	-	4	4
50	Industrial Process control Lab Practice	4	3.52	3.52	-	3.52	3.52	3.52	-	-	-	-	3.52	3.52	3.52	3.52
51	Biomedical Instrumentation Lab	4	3.61	3.61	3.59	-	3.61	3.61	-	3.6	3.6	3.61	3.61	3.61	3.61	3.61
52	Industrial Automation Lab	3.52	3.73	3.52	3.6	4	4	3.52	-	3.5	3.5	3.43	3.52	3.52	3.52	3.52
53	Image Processing Lab	3.31	3.24	3.24	2.95	3.24	-	-	-	3.3	3.3	-	3.31	2.76	2.89	3.06
54	Building Automation Lab Practice	-	-	-	-	3.36	3.36	3.36	-	-	-	3.36	3.36	-	3.36	3.36
55	Project 1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
56	Instrumentation project documentation and execution	2.3	2.3	2.3	-	2.3	-	-	-	2.3	2.3	2.3	2.3	2.3	2.3	2.3
57	Instrument and System design	3.77	3.77	3.77	-	-	3.81	3.81	3.8	3.7	3.7	3.78	3.77	3.77	3.63	3.72
58	Internet of Things(IoT)	-	3.67	3.67	3.67	3.67	-	-	-	-	-	-	-	-	-	-
59	Power Plant Instrumentation	2.32	2.32	2.32	-	-	2.32	2.32	2.3	2.3	2.3	2.32	2.32	2.32	2.32	2.32
60	Instrumentation project documentation and execution-Lab practice	2.22	2.22	2.22	-	2.22	-	-	-	2.2	2.2	2.22	2.22	2.22	2.22	2.22
61	Instrument and System design-Lab Practice	4	4	4	-	-	4	4	4	4	4	4	4	4	-	4
62	IoT-Lab practice	-	2.21	2.21	2.21	2.21	-	-	-	-	-	-	-	-	-	-
63	Power Plant Instrumentation-Lab Practice	3.73	3.73	3.73	-	-	3.69	3.69	3.6	5	-	-	3.73	3.73	3.73	-
64	Project II	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Overall PO Attainment(2018-22)	3.3	3.3	3.2	3.2	3.0	3.6	3.3	3.	3.	3.5	3.1	3.4	3.3	3.0	3.3
		0	0	0	0	0	0	0	50	20	0	0	0	0	0	0

**Overall PO Attainment
Batch 2018-22**

				PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
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Direct PO attainment	3.3	3.3	3.2	3.2	3	3.6	3.3	3.5	3.2	3.5	3.1	3.4	3.3	3	3.3
Indirect PO attainment	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Overall PO attainment	3.51	3.51	3.44	3.44	3.3	3.72	3.51	3.65	3.44	3.65	3.37	3.58	3.51	3.3	3.51

4. Bachelor of Electronics and Telecommunication Engineering: CO-PO-PSO mapping and attainment. CO Attainment:

CO Attainment 2021-22																
Sem-III																
Name of the course	CO code	Division	Direct (Theory)				Direct(Laboratory)						DIRECT	Indirect		INDIRECT
			Test1	Test2	AVG IAT	ESE	LAB Journal	Assignment	Mini Project	Mock Viva	Term work	ORAL/P R		Skill Enhancement Lecture	Course Exit Survey	
Applied Mathematics III	ECC301	A	0	0	3	3	0	0	0	0	3	0	-	0	3	-
		B	0	0	3	3	0	0	0	0	3	0	-	0	3	-
		AVG	0	0	3	3	0	0	0	0	3	0	3	0	3	3
Electronic Devices & Circuits-I	ECC302	A	3	3	3	3	3	0	0	0	3	3	-	3	3	-
		B	3	3	3	3	-	0	0	0	3	3	-	3	3	-
		AVG	3	3	3	3	3	0	0	0	3	3	3	3	3	3
Digital System Design	ECC303	A	3	3	3	3	0	0	0	0	3	0	-	0	3	-
		B	3	3	3	3	0	0	0	0	3	0	3	0	3	3
		AVG	3	3	3	3	0	0	0	0	3	0	3	0	3	3
Network Theory	ECC304	A	3	3	3	3	0	0	0	0	3	0	3	0	3	-
		B	3	3	3	3	0	0	0	0	3	0	-	0	3	-
		AVG	3	3	3	3	0	0	0	0	3	0	3	0	3	3
Electronic Instrumentation & Control Systems	ECC305	A	3	3	3	3	0	0	0	0	3	0	-	3	3	-
		B	3	3	3	3	0	0	0	0	3	0	-	3	3	-
		AVG	3	3	3	3	0	0	0	0	3	0	3	3	3	3
Skill Lab: C++ and Java Programming	ECL304	A	0	0	0	0	0	0	0	0	3	0	-	0	3	-
		B	0	0	0	0	0	0	0	0	3	3	-	0	3	-
		AVG	0	0	0	0	0	0	0	0	3	1.5	2	0	3	3
Mini Project 1A	ECM301	A	0	0	0	0	0	0	0	0	3	3	-	0	0	-
		B	0	0	0	0	0	0	0	0	3	3	-	0	0	-

	AVG	0	0	0	0	0	0	0	0	0	3	3	3	-	-	-
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CO_PO_PSO Mapping (Sem III)																
Name of the course		Program Outcomes												PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	
Engineering Mathematics III		3	3	-	2	-	-	-	-	-	-	-	1	-	2	
	DIRECT	3	3	0	1.8	0	0	0	0	0	0	0	1.2	0	1.8	
	INDIRECT	3	3	0	1.8	0	0	0	0	0	0	0	1.2	0	1.8	
Electronic Devices & Circuits-I		3	2	2	2	2	2	1	-	-	2		2	2	1	
	DIRECT	3	1.8	1.8	1.8	1.8	1.8	1.2	0	0	1.8	0	1.8	1.8	1.2	
	INDIRECT	3	1.8	1.8	1.8	1.8	1.8	1.2	0	0	1.8	0	1.8	1.8	1.2	
Digital System Design		3	3	3	3	2	-	-	-	-	-	-	-	3	3	
	DIRECT	3	3	3	3	1.8	0	0	0	0	0	0	0	3	3	
	INDIRECT	3	3	3	3	1.8	0	0	0	0	0	0	0	3	3	
Network Theory		3	3	3	3	3	2	2	-	-	-	1	1	3	3	
	DIRECT	3	3	3	3	3	1.8	1.8	0	0	0	1.2	1.2	3	3	
	INDIRECT	3	3	3	3	3	1.8	1.8	0	0	0	1.2	1.2	3	3	
Electronic Instrumentation & Control Systems		3	3	2	1	3	-	-	-	-	-	-	1	3	3	
	DIRECT	3	3	1.8	1.2	3	0	0	0	0	0	0	1.2	3	3	
	INDIRECT	3	3	1.8	1.2	3	0	0	0	0	0	0	1.2	3	3	
Skill Lab: C++ and Java Programming		-	2	3	2	2	2	2	-	-	-	-	3	2	2	
	DIRECT	0	1.2	2	1.2	1.2	1.2	1.2	0	0	0	0	2	1.2	1.2	
	INDIRECT	0	1.8	3	1.8	1.8	1.8	1.8	0	0	0	0	3	1.8	1.8	

SEM-III	DIRECT	3	2.5	2.32	2	2.16	1.6	1.4	0	0	1.8	1.2	1.48	2.4	2.2
	INDIRECT	3	2.6	2.52	2.1	2.28	1.8	1.6	0	0	1.8	1.2	1.68	2.52	2.3
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		3	2.53	2.38	2.03	2.2	1.66	1.46	0	0	1.8	1.2	1.54	2.44	2.23

Sem-IV

Name of the course	CO code	Division	Direct (Theory)				Direct(Laboratory)						DIRECT	Indirect		INDIRECT
			Test1	Test2	AVG IAT	ESE	LAB Journal	Assignment	Mini Project	Mock Viva	Term work	ORAL/PR		Skill Enhancement Lecture	Course Exit Survey	
Engineering Mathematics-I V	ECC401	A	-	-	3	3	0	0	0	0	3	0	-	0	3	-
		B	-	-	3	3	0	0	0	0	3	0	-	0	3	-
		AVG	-	-	3	3	0	0	0	0	3	0	3	0	3	3
Microcontrollers	ECC402	A	3	3	3	3	0	0	0	0	3	0	-	0	3	-
		B	3	3	3	3	0	0	0	0	3	0	-	0	3	-
		AVG	3	3	3	3	0	0	0	0	3	0	3	0	3	3
Linear Integrated Circuits	ECC403	A	3	3	3	2	0	0	0	0	2	3	-	0	3	-
		B	3	3	3	3	0	0	0	0	3	3	3	0	3	-
		AVG	3	3	3	2.5	0	0	0	0	2.5	3	3	0	3	3
Signals and Systems	ECC404	A	2	3	3	3	0	3	3	0	3	0	-	0	3	-
		B	-	-	3	2	-	-	-	-	3	-	-	0	3	-
		AVG	2	3	3	2.5	0	3	3	0	3	0	3	0	3	3
Principles of Communication Engineering	ECC405	A	3	2	3	3	0	0	0	0	3	3	-	0	3	-
		B	3	3	3	3	0	0	0	0	3	3	-	0	3	-
		AVG	3	2.5	3	3	0	0	0	0	3	3	3	0	3	3

Skill Lab: Python Programming	ECL40 4	A	0	0	0	0	0	0	0	0	0	3	3	-	3	3	-
		B	0	0	0	0	0	0	0	0	0	0	3	3	-	3	3
	AVG	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3
Mini Project 1B	ECM4 01	A	0	0	0	0	0	0	0	0	0	3	3	-	-	-	-
		B	0	-	-	-	-	-	-	-	-	-	3	3	-	-	-
	AVG	0	0	0	0	0	0	0	0	0	0	3	3	3	-	-	-

CO_PO_PSO Mapping

Name of the course		Program Outcomes												PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
Applied Mathematics-I V	ECC401	3	3	-	2	-	-	-	-	-	-	-	-	1	1	3
	DIRECT	3	3	0	1.8	0	0	0	0	0	0	0	0	1.2	1.2	3
	INDIRECT	3	3	0	1.8	0	0	0	0	0	0	0	0	1.2	1.2	3
Microcontrollers	ECC402	3	3	3	3	3	2	3	3	1	2	2	3	3	3	3
	DIRECT	3	3	3	3	3	1.8	3	3	1.2	1.8	1.8	3	3	3	3
	INDIRECT	3	3	3	3	3	1.8	3	3	1.2	1.8	1.8	3	3	3	3
Linear Integrated Circuits	ECC403	3	2	2	2	3	2	2	-	1	1	-	-	3	2	
	DIRECT	3	1.8	1.8	1.8	3	1.8	1.8	0	1.2	1.2	0	0	3	1.8	
	INDIRECT	3	1.8	1.8	1.8	3	1.8	1.8	0	1.2	1.2	0	0	3	1.8	
Signals and Systems	ECC404	3	3	3	2	1	1	2	-	-	2	-	2	2	2	
	DIRECT	3	3	3	1.8	1.2	1.2	1.8	0	0	1.8	0	1.8	1.8	1.8	
	INDIRECT	3	3	3	1.8	1.2	1.2	1.8	0	0	1.8	0	1.8	1.8	1.8	
Principles of Communication Engineering	ECC405	3	3	2	2	1	2	2	2	1	1	-	-	3	3	
	DIRECT	3	3	1.8	1.8	1.2	1.8	1.8	1.8	1.2	1.2	0	0	3	3	
	INDIRECT	3	3	1.8	1.8	1.2	1.8	1.8	1.8	1.2	1.2	0	0	3	3	
Skill Lab:	ECL404	3	3	2	2	3	-	2	-	3	-	3	3	3	3	

Python Programming	DIRECT	3	3	1.8	1.8	3	0	1.8	0	3	0	3	3	3	3
	INDIRECT	3	3	1.8	1.8	3	0	1.8	0	3	0	3	3	3	3
SEM-IV	DIRECT	3	2.8	2.28	2	2.28	1.65	2.04	2.4	1.65	1.5	2.4	2.25	2.5	2.6
	INDIRECT	3	2.8	2.28	2	2.28	1.65	2.04	2.4	1.65	1.5	2.4	2.25	2.5	2.6
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		3	2.8	2.28	2	2.28	1.65	2.04	2.4	1.65	1.5	2.4	2.25	2.5	2.6

Sem-V																
Name of the course	CO code	Division	Direct (Theory)				Direct(Laboratory)						Direct avg	Indirect		Indirect Avg
			Test1	Test2	AVG IAT	ESE	LAB Journal	Assignment	Mini Project	Mock Viva	Term work	ORAL/P R		Skill Enhancement Lecture	Course Exit Survey	
Digital Communication	ECC5 01	A	3	3	3	3	0	0	0	0	3	3	3	0	3	3
		B	3	3	3	3	0	0	0	0	3	3	3	0	3	3
		AVG	3	3	3	3	0	0	0	0	3	3	3	0	3	3
Discrete-Time Signal Processing	ECC5 02	A	3	3	3	3	0	0	0	0	3	3	3	0	3	3
		B	3	3	3	3	0	0	0	0	3	3	3	0	3	3
		AVG	3	3	3	3	0	0	0	0	3	3	3	0	3	3
Digital VLSI	ECC5 03	A	3	3	3	3	3	3	3	0	3	3	3	0	3	3
		B	3	3	3	3	3	3	3	3	3	3	3	0	3	3
		AVG	3	3	3	3	3	3	3	2	3	3	3	0	3	3
Random Signal Analysis	ECC5 04	A	0	0	3	3	0	0	0	0	3	0	3	3	3	3
		B	3	3	3	3	3	3	0	0	3	0	3	3	3	3
		AVG	2	2	3	3	2	2	0	0	3	0	3	3	3	3
Data Compression and Cryptography	ECCD LO501 2	A	3	3	3	3	0	0	0	0	0	0	3	3	3	3
		B	3	3	3	3	0	0	0	0	0	0	3	3	3	3

		AVG	3	3	3	3	0	0	0	0	0	0	3	3	3	3
Data Structure & Algorithm	ECCD LO5014	A	3	3	3	3	0	0	0	0	0	0	3	0	3	3
		B	3	3	3	3	0	0	0	0	0	0	3	0	3	3
		AVG	3	3	3	3	0	0	0	0	0	0	3	0	3	3
Professional Communication & Ethics-II	ECL504	A	0	0	0	0	0	0	0	0	3	3	3	3	3	3
		B	0	0	0	0	0	0	0	0	3	3	3	3	3	3
		AVG	0	0	0	0	0	0	0	3	3	3	3	3	3	
Mini Project 2A: Embedded System Project	ECM501	A	0	0	0	0	0	0	0	0	3	3	3	0	0	0
		B	0	0	0	0	0	0	0	0	3	3	3	0	0	0
		AVG	0	0	0	0	0	0	0	3	3	3	0	0	0	

CO_PO_PSO Mapping															
Name of the course		Program Outcomes											PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Digital Communication	ECC501	3	3	2	2	3	0	0	0	0	1	1	2	3	2
	DIRECT	3	3	1.8	1.8	3	0	0	0	0	1.2	1.2	1.8	3	1.8
	INDIRECT	3	3	1.8	1.8	3	0	0	0	0	1.2	1.2	1.8	3	1.8
Discrete-Time Signal Processing	ECC502	3	3	3	3	1	3	1	-	2	-	2	-	-	3
	DIRECT	3	3	3	3	1.2	3	1.2	0	1.8	0	1.8	0	0	3
	INDIRECT	3	3	3	3	1.2	3	1.2	0	1.8	0	1.8	0	0	3
Digital VLSI	ECC503	3	3	3	3	3	0	0	0	0	0	2	2	3	1
	DIRECT	3	3	3	3	3	0	0	0	0	0	1.8	1.8	3	1.2
	INDIRECT	3	3	3	3	3	0	0	0	0	0	1.8	1.8	3	1.2

Random Signal Analysis	ECC504	3	3	1	2	3	2	2	3	0	0	2	2	2	3
	DIRECT	3	3	1.2	1.8	3	1.8	1.8	3	0	0	1.8	1.8	1.8	3
	INDIRECT	3	3	1.2	1.8	3	1.8	1.8	3	0	0	1.8	1.8	1.8	3
Data Compression and Cryptography	ECC502	3	3	2	-	2	2	2	2	-	1	-	3	2	2
	DIRECT	3	3	1.8	0	1.8	1.8	1.8	1.8	0	1.2	0	3	1.8	1.8
	INDIRECT	3	3	1.8	0	1.8	1.8	1.8	1.8	0	1.2	0	3	1.8	1.8
Data Structure & Algorithm	ECC5014	3	3	2	0	3	1	1	0	1	2	0	2	2	2
	DIRECT	3	3	1.8	0	3	1.2	1.2	0	1.2	1.8	0	1.8	1.8	1.8
	INDIRECT	3	3	1.8	0	3	1.2	1.2	0	1.2	1.8	0	1.8	1.8	1.8
Professional Communication & Ethics-II	ECC5012	1	1	1	1	1	3	3	3	3	3	2	3	1	1
	DIRECT	1.2	1.2	1.2	1.2	1.2	3	3	3	3	3	1.8	3	1.2	1.2
	INDIRECT	1.2	1.2	1.2	1.2	1.2	3	3	3	3	3	1.8	3	1.2	1.2
SEM-V	DIRECT	2.74	2.74	1.97	2.16	2.31	2.16	1.8	2.6	2	1.8	1.68	2.2	2.1	1.97
	INDIRECT	2.74	2.74	1.97	2.16	2.31	2.16	1.8	2.6	2	1.8	1.68	2.2	2.1	1.97
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.74	2.74	1.97	2.16	2.31	2.16	1.8	2.6	2	1.8	1.68	2.2	2.1	1.97

Sem-VI

Name of the course	CO code	Division	Direct (Theory)				Direct(Laboratory)						DIRECT	Indirect		INDIRECT	
			Test1	Test2	AVG IAT	ESE	LAB Journal	Assignment	Mini Project	Mock Viva	Term work	ORAL/ PR		Skill Enhancement Lecture	Course Exit Survey		
Artificial Neural Network and Fuzzy Logic	ECC604	A	3	3	3	3	0	0	0	0	0	0	0	3	3	3	3
		B	3	3	3	2	0	0	0	0	0	0	0	3	3	3	3
		AVG	3	3	3	3	0	0	0	0	0	0	0	3	3	3	3
Computer Communication Networks	ECC602	A	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0
		B	3	3	3	3	0	0	0	0	3	3	3	0	3	3	3
		AVG	3	3	3	3	0	0	0	0	3	3	3	0	2	2	2
Electromagnetics and Antenna	ECC601	A	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0
		B	3	3	3	1	3	0	3	3	3	3	3	0	3	3	3
		AVG	3	3	3	2	2	0	2	2	3	3	2	0	2	2	2
Image Processing & Machine Vision	ECC603	A	3	3	3	3	3	0	0	0	0	3	3	0	3	3	3
		B	3	3	3	3	3	0	0	3	3	3	3	0	3	3	3
		AVG	3	3	3	3	3	0	0	2	2	3	3	0	3	3	3
Database Management System	ECCD LO6014	A	3	3	3	3	0	0	0	0	0	0	0	0	0	3	3
		B	3	3	3	3	0	0	0	0	0	0	0	0	0	3	3
		AVG	3	3	3	3	0	0	0	0	0	0	0	3	0	3	3
Digital Forensic	ECCD LO6013	A	3	3	3	0	0	0	0	0	0	0	0	0	0	3	3
		B	3	3	3	0	0	0	0	0	0	0	0	0	0	3	3
		AVG	3	3	3	0	0	0	0	0	0	0	0	3	0	3	3
Skill Lab: Linux, Networking & Server Configuration	ECL604	A	0	0	0	0	3	0	0	0	3	2	3	0	3	3	3
		B	0	0	0	0	3	0	0	0	3	3	3	0	3	3	3
		AVG	0	0	0	0	3	0	0	0	3	3	3	0	3	3	3

Mini Project-2B	ECM601	A	0	0	0	0	0	0	0	0	3	3	3	0	0	0
		B	0	0	0	0	0	0	0	0	3	3	3	0	0	0
			0	0	0	0	0	0	0	0	3	3	3	0	0	0

CO_PO_PSO Mapping

Name of the course		Program Outcomes											PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Artificial Neural Network and Fuzzy Logic		3	3	3	3	2	1	-	-	-	-		3	3	3
	ECC604	3	3	3	3	1.8	1.2	0	0	0	0	0	3	3	3
	INDIRECT	3	3	3	3	1.8	1.2	0	0	0	0	0	3	3	3
Computer Communication Network	ECC602	3	3	3	3	3	2	-	-	-	2	1	1	3	3
	DIRECT	3	3	3	3	3	1.8	0	0	0	1.8	1.2	1.2	3	3
	INDIRECT	2	2	2	2	2	1.2	0	0	0	1.2	0.8	0.8	2	2
Electromagnetics and Antenna		3	3	3	3	3	3	-	-	3	-	3	3	2	2
	DIRECT	2	2	2	2	2	2	0	0	2	0	2	2	1.2	1.2
	INDIRECT	2	2	2	2	2	2	0	0	2	0	2	2	1.2	1.2
Image Processing & Machine Vision		3	3	3	3	2	1	-	-	-	-		1	3	3
	DIRECT	3	3	3	3	1.8	1.2	0	0	0	0	0	1.2	3	3
	INDIRECT	3	3	3	3	1.8	1.2	0	0	0	0	0	1.2	3	3
Database Management System		3	3	3	2					2	2	-	3	3	3
	DIRECT	3	3	3	1.8	0	0	0	0	1.8	1.8	0	3	3	3
	INDIRECT	3	3	3	1.8	0	0	0	0	1.8	1.8	0	3	3	3
Digital Forensic		3	3	3	3	3	3	-	2	1	-	-	2	1	1
	DIRECT	3	3	3	3	3	3	0	1.8	1.2	0	0	1.8	1.2	1.2
	INDIRECT	3	3	3	3	3	3	0	1.8	1.2	0	0	1.8	1.2	1.2

Skill Lab: Linux, Networking & Server Configuration		1	1	2	3	3	-	-	-	3	-	-	3	1	2
	DIRECT	1.2	1.2	1.8	3	3	0	0	0	3	0	0	3	1.2	1.8
	INDIRECT	1.2	1.2	1.8	3	3	0	0	0	3	0	0	3	1.2	1.8
SEM-VI	DIRECT	2.6	2.6	2.69	2.69	2.43	1.84	0	1.8	2	1.8	1.6	2.17	2.23	2.31
	INDIRECT	2.46	2.46	2.54	2.54	2.27	1.72	0	1.8	2	1.5	1.4	2.11	2.09	2.17
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.56	2.56	2.65	2.65	2.38	1.8	0	1.8	2	1.71	1.54	2.15	2.19	2.27

Sem-VII

Name of the course	CO code	Division	Direct (Theory)				Direct(Laboratory)						DIRECT	Indirect		INDIRECT
			Test1	Test2	AVG IAT	ESE	LAB Journal	Assignment	Mini Project/Paper presentation	Mock Viva	Term work	ORAL/PR		Skill Enhancement Lecture	Course Exit Survey	
Microwave Radar Engineering	ECC701	A	3	3	3	3	0	0	0	0	3	3	3	3	3	3
		B	3	3	3	3	0	0	0	0	3	3	3	3	3	3
		AVG	3	3	3	3	0	0	0	0	3	3	3	3	3	3
Mobile Communication System	ECC702	A	3	3	3	3	3	0	3	0	3	3	3	3	3	3
		B	3	3	3	3	3	0	3	0	3	3	3	3	3	3
		AVG	3	3	3	3	3	0	3	0	3	3	3	3	3	3
Optical Communication	ECC703	A	3	3	3	3	0	0	0	0	3	3	3	3	3	3
		B	3	3	3	3	0	0	0	0	3	3	3	3	3	3
		AVG	3	3	3	3	0	0	0	0	3	3	3	3	3	3
Neural networks & Fuzzy Logic	ECCDL07031	A	3	3	3	3	0	0	0	0	2	3	3	3	3	3
		B	3	3	3	3	0	0	0	0	2	3	3	3	3	3
		AVG	3	3	3	3	0	0	0	0	2	3	3	3	3	3
Big Data Analytics	ECCDL07032	A	3	3	3	3	0	0	0	0	3	3	3	0	3	3
		B	3	3	3	3	0	0	0	0	3	3	3	0	3	3
		AVG	3	3	3	3	0	0	0	0	3	3	3	0	3	3

Management Information System	ILO7013	A	3	3	3	3	0	3	0	0	0	0	3	0	3	3
		B	3	3	3	3	0	3	0	0	0	0	3	0	3	3
		AVG	3	3	3	3	0	3	0	0	0	0	3	0	3	3
Operations Research	ILO7015	A	3	3	3	3	0	0	0	0	0	0	3	0	3	3
		B	3	3	3	3	0	0	0	0	0	0	3	0	3	3
		AVG	3	3	3	3	0	0	0	0	0	0	3	0	3	3
Cyber Security and Laws	ILO7016	A	3	3	3	3	0	0	0	0	0	0	0	3	3	3
		B	3	3	3	3	0	0	0	0	0	0	0	3	3	3
		AVG	3	3	3	3	0	0	0	0	0	0	3	3	3	3

CO_PO_PSO Mapping

Name of the course		Program Outcomes												PSOs	
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Microwave Radar Engineering	ECC701	3	3	3	3	3	1	1	-	2	3	2	2	3	3
		3	3	3	3	3	1.2	1.2	0	1.8	3	1.8	1.8	3	3
	INDIRECT	3	3	3	3	3	1.2	1.2	0	1.8	3	1.8	1.8	3	3
Mobile Communication System	ECC702		3	3	-	-	1	-	-	-	-	-	1	2	2
		DIRECT	0	3	3	0	0	1.2	0	0	0	0	1.2	1.8	1.8
	INDIRECT	0	3	3	0	0	1.2	0	0	0	0	1.2	1.8	1.8	
Optical Communication	ECC703	3	3	3	3	3	2	1	3	3	3	2	3	2	2
		DIRECT	3	3	3	3	3	1.8	1.2	3	3	3	1.8	3	1.8
	INDIRECT	3	3	3	3	3	1.8	1.2	3	3	3	1.8	3	1.8	1.8
Neural networks & Fuzzy Logic	ECCDL O7031	3	3	2	2	3	2	2	1	1	2	1	2	3	3
		DIRECT	3	3	1.8	1.8	3	1.8	1.8	1.2	1.2	1.8	1.2	1.8	3

	T														
	INDIRECT	3	3	1.8	1.8	3	1.8	1.8	1.2	1.2	1.8	1.2	1.8	3	3
Big Data Analytics	ECCDL O7032	3	3	3	3	3	2	1	1	2	2	2	2	2	3
	DIRECT	3	3	3	3	3	1.8	1.2	1.2	1.8	1.8	1.8	1.8	1.8	3
	INDIRECT	3	3	3	3	3	1.8	1.2	1.2	1.8	1.8	1.8	1.8	1.8	3
Management Information System	ILO7013	2	3	-	2	-	-	-	-	-	-	-	-	-	2
	DIRECT	1.8	3	0	1.8	0	0	0	0	0	0	0	0	0	1.8
	INDIRECT	1.8	3	0	1.8	0	0	0	0	0	0	0	0	0	1.8
Operations Research	ILO7015	3	3	3	3	-	-	-	-	2	2	3	3	-	3
	DIRECT	3	3	3	3	0	0	0	0	1.8	1.8	3	3	0	3
	INDIRECT	3	3	3	3	0	0	0	0	1.8	1.8	3	3	0	3
Cyber Security and Laws	ILO7016	2	2	1	2	2	2	-	1	-	2	2	3	2	2
	DIRECT	1.8	1.8	1.2	1.8	1.8	1.8	0	1.2	0	1.8	1.8	3	1.8	1.8
	INDIRECT	1.8	1.8	1.2	1.8	1.8	1.8	0	1.2	0	1.8	1.8	3	1.8	1.8
SEM-VII	DIRECT	2.66	2.85	2.57	2.49	2.76	1.6	1.35	1.65	1.92	2.2	1.9	2.23	2.2	2.4
	INDIRECT	2.66	2.85	2.57	2.49	2.76	1.6	1.35	1.65	1.92	2.2	1.9	2.23	2.2	2.4
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.66	2.85	2.57	2.49	2.76	1.6	1.35	1.65	1.92	2.2	1.9	2.23	2.2	2.4

CO_PO_PSO Mapping															
Name of the course		Program Outcomes												PSOs	
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2
RF Design	ECC801	3	3	3	3	-	3	-	-	-	-	-	3	3	3
	DIRECT	3	3	3	3	0	3	0	0	0	0	0	3	3	3
	INDIRECT	3	3	3	3	0	3	0	0	0	0	0	3	3	3
Wireless Networks	ECC802	3	3	3	3	-	3	2	-	-	-	-	3	3	3
		3	3	3	3	0	3	1.8	0	0	0	0	3	3	3
	INDIRECT	3	3	3	3	0	3	1.8	0	0	0	0	3	3	3
Satellite Communication	ECCDLO8043	3	3	3	3	-	3	2	-	-	-	-	3	3	3
	DIRECT	3	3	3	3	0	3	1.8	0	0	0	0	3	3	3
	INDIRECT	3	3	3	3	0	3	1.8	0	0	0	0	3	3	3
Network Management for Telecommunication	ECCDLO8044	3	3	3	2	3	3	3	-	-	-	-	3	3	3
	DIRECT	3	3	3	1.8	3	3	3	0	0	0	0	3	3	3
	INDIRECT	3	3	3	1.8	3	3	3	0	0	0	0	3	3	3
Environmental Management	ILO8029	3	1	-	1	1	3	3	3	3	2	2	3	-	2
	DIRECT	3	1.2	0	1.2	1.2	3	3	3	3	1.8	1.8	3	0	1.8
	INDIRECT	3	1.2	0	1.2	1.2	3	3	3	3	1.8	1.8	3	0	1.8
Finance Management	ILO8022	2	-	-	-	-	2	1	2	-	-	3	3	-	1
	DIRECT	1.8	0	0	0	0	1.8	1.2	1.8	0	0	3	3	0	1.2
	INDIRECT	1.8	0	0	0	0	1.8	1.2	1.8	0	0	3	3	0	1.2
Project Management	ILO8021	-	-	3	-	3	2	3	2	2	-	3	3	-	2

	DIRECT	0	0	3	0	3	1.8	3	1.8	1.8	0	3	3	0	1.8
	INDIRECT	0	0	3	0	3	1.8	3	1.8	1.8	0	3	3	0	1.8
Entrepreneurship Development and Management	ILO8023	-	-	-	-	2	3	1	2	3	2	2	3	1	
	DIRECT	0	0	0	0	1.8	3	1.2	1.8	3	1.8	1.8	3	1.2	0
	INDIRECT	0	0	0	0	1.8	3	1.2	1.8	3	1.8	1.8	3	1.2	0
SEM-VIII	DIRECT	2.8	2.64	3	2.4	2.25	2.7	2.14	2.1	2.6	1.8	2.4	3	2.64	2.4
	INDIRECT	2.8	2.64	3	2.4	2.25	2.7	2.14	2.1	2.6	1.8	2.4	3	2.64	2.4
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.8	2.64	3	2.4	2.25	2.7	2.14	2.1	2.6	1.8	2.4	3	2.64	2.4

CO-PSO Attainment (A.Y. 2021-22)																
Name of the course		Program Outcomes												PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
SEM-III	DIRECT	3	2.5	2.32	2	2.16	1.6	1.4	0	0	1.8	1.2	1.48	2.4	2.2	
	INDIRECT	3	2.6	2.52	2.1	2.28	1.8	1.6	0	0	1.8	1.2	1.68	2.52	2.3	
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		3	2.53	2.38	2.03	2.2	1.66	1.46	0	0	1.8	1.2	1.54	2.44	2.23	
SEM-IV	DIRECT	3	2.8	2.28	2	2.28	1.65	2.04	2.4	1.65	1.5	2.4	2.25	2.5	2.6	
	INDIRECT	3	2.8	2.28	2	2.28	1.65	2.04	2.4	1.65	1.5	2.4	2.25	2.5	2.6	
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		3	2.8	2.28	2	2.28	1.65	2.04	2.4	1.65	1.5	2.4	2.25	2.5	2.6	
SEM-V	DIRECT	2.74	2.74	1.97	2.16	2.31	2.16	1.8	2.6	2	1.8	1.68	2.2	2.1	1.97	
	INDIRECT	2.74	2.74	1.97	2.16	2.31	2.16	1.8	2.6	2	1.8	1.68	2.2	2.1	1.97	
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.74	2.74	1.97	2.16	2.31	2.16	1.8	2.6	2	1.8	1.68	2.2	2.1	1.97	

	DIRECT	2.6	2.6	2.69	2.69	2.43	1.84	#DIV/0!	1.8	2	1.8	1.6	2.17	2.23	2.31
SEM-VI	INDIRECT	2.74	2.74	2.83	2.83	2.6	2.04	#DIV/0!	1.8	2.25	1.8	2.1	2.31	2.31	2.4
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.64	2.64	2.73	2.73	2.48	1.9	#DIV/0!	1.8	2.08	1.8	1.75	2.21	2.25	2.34
	DIRECT	2.66	2.85	2.57	2.49	2.76	1.6	1.35	1.65	1.92	2.2	1.9	2.23	2.2	2.4
SEM-VII	INDIRECT	2.66	2.85	2.57	2.49	2.76	1.6	1.35	1.65	1.92	2.2	1.9	2.23	2.2	2.4
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.66	2.85	2.57	2.49	2.76	1.6	1.35	1.65	1.92	2.2	1.9	2.23	2.2	2.4
	DIRECT	2.8	2.64	3	2.4	2.25	2.7	2.14	2.1	2.6	1.8	2.4	3	2.64	2.4
SEM-VIII	INDIRECT	2.8	2.64	3	2.4	2.25	2.7	2.14	2.1	2.6	1.8	2.4	3	2.64	2.4
70% FROM DIRECT VALUE + 30% FROM INDIRECT VALUE		2.8	2.64	3	2.4	2.25	2.7	2.14	2.1	2.6	1.8	2.4	3	2.64	2.4

PO Attainment:

Final PO Attainment													
Batch (2018-2022)													
Admission Year: 2018-2019 Pass out Year: 2021-2022													
From Academic Year 2019-2020 students were in Department of Electronics and Telecommunication													
Sr. No.	Assessment Tools	Attainment of Program Outcomes (in %)											
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	Direct Assessment Tools (70%)	1.939	1.869	1.855	1.757	1.624	1.379	1.33	1.589	1.652	1.232	1.498	1.603
2	Indirect Assessment Tools (30%)	0.852	0.852	0.843	0.828	0.834	0.741	0.672	0.807	0.801	0.765	0.732	0.795
Total		2.791	2.721	2.698	2.585	2.458	2.12	2.002	2.396	2.453	1.997	2.23	2.398
Sr. No.	Assessment Tools	Attainment of Program Outcomes (in %)											
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	Direct Assessment Tools	2.77	2.67	2.65	2.51	2.32	1.97	1.9	2.27	2.36	1.76	2.14	2.29
2	Indirect Assessment Tools	2.84	2.84	2.81	2.76	2.78	2.47	2.24	2.69	2.67	2.55	2.44	2.65

Batch (2018-2022)													
Attainment of Program Outcomes (in %)													
Direct Assessment tool	Semester	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
End semester results	III	2.57	2.57	2.56	2.24	2.024	1.72	1.72	-	1.9375	1.12	1.87857 1429	1.7275
	IV	2.94	2.94	2.94	2.66	2.36	1.86	2.19	2.9	2.57	1.92	2.57	1.99
	V	2.85	2.41	2.23	2.72	2.32	2.075	2.033	2.175	2.730	1.900	1.950	2.65
	VI	2.788	2.640	2.575	2.540	2.233	1.885	1.981	2.538	2.411	1.647	2.132	2.121
	VII	2.66	2.85	2.57	2.49	2.76	1.6	1.35	1.65	1.92	2.2	1.9	2.23
	VIII	2.8	2.64	3	2.4	2.25	2.7	2.14	2.1	2.6	1.8	2.4	3
	Average	2.77	2.67	2.65	2.51	2.32	1.97	1.9	2.27	2.36	1.76	2.14	2.29

PO Attainment by Indirect Assessment Tools															
Batch (2018-2022)															
Sr.No.	Indirect assessment tool	Expected Level of PO attainment (in %)	Actual PO attainment (in %)	Attainment of Program Outcomes (in %)											
				PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	Placement	85	75.78	89.15	89.15	89.15	89.15	89.15	89.15	89.15	89.15	89.15	89.15	89.15	89.15
2	Higher Studies	15	12.67	84.47	84.47	84.47	84.47	84.47	84.47	84.47	84.47	84.47	84.47	84.47	84.47

3	Student Exit Survey	--	--	82.08	81.19	81.19	81.19	77.73	81.9	80.97	81.9	82.22	81.9	80.97	79.73
4	Professional Societies	--	48	100	100	100	100	100	100	100	100	100	100	100	100
5	Co-curricular activities (Technology day / Praxis / edifice / other technical events)	--	54	100	100	100	100	100	100	100	100	100	100	100	100
6	Looking Beyond Syllabus(LBS)	--	21.48	100	100	100	100	100	100	100	100	100	100	100	100
7	Course Exit/evaluation survey	--	--	2.67	2.68	2.61	2.52	2.55	1.93	1.48	2.38	2.34	2.1	1.87	2.29
Average (1 to 6)				92.62	92.47	92.47	92.47	91.89	92.59	92.43	92.59	92.64	92.59	92.43	92.23
				3	3	3	3	3	3	3	3	3	3	3	3
Overall Average (1 to 7)				2.84	2.84	2.81	2.76	2.78	2.47	2.24	2.69	2.67	2.55	2.44	2.65

Sr. No.	Academic Year/Indirect assessment tool	Attainment of Program Outcomes (in %)													
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		
1	Academic Year 2021-2022 (Final Year)														
	Course Exit/evaluation survey	2.73	2.745	2.785	2.445	2.505	2.15	1.745	1.875	2.26	2	2.15	2.615		

2	Academic Year 2020-2021 (Third Year)													
	Course Exit/evaluation survey	2.525	2.525	2.365	2.573	2.683	1.825	1.000	2.250	2.303	2.264	1.448	2.208	
3	Academic Year 2019-2020 (Second Year)													
	Course Exit/evaluation survey	2.76	2.76	2.68	2.55	2.47	1.81	1.7	3	2.45	2.03	2.02	2.06	
Average		2.67	2.68	2.61	2.52	2.55	1.93	1.48	2.38	2.34	2.1	1.87	2.29	

Sr.No.	Academic Year/Indirect assessment tool	Participation of students (%)	Average of participation in %
1	Professional Societies (in %)		
	Academic Year 2021-2022 (Final Year)	27.33%	48.00%
	Academic Year 2020-2021 (Third Year)	50.66%	
	Academic Year 2019-2020 (Second Year)	65.71%	
2	Co-curricular activities (Technology day / Praxis / edifice / other technical events)		
	Academic Year 2021-2022 (Final Year)	100%	54%
	Academic Year 2020-2021 (Third Year)	12.66%	
	Academic Year 2019-2020 (Second Year)	48.57%	
3	Looking Beyond Syllabus(LBS)	Avg(21.48%)	21.48

**5. Bachelor of Information Technology Engineering: CO-PO-PSO mapping and attainment.
CO Attainment:**

Final CO attainment (AY 2019-20) SEM-III					
Subject	COs	Direct CO Attainment	Indirect CO Attainment	Final CO Attainment =0.8*Direct+0.2*Indirect	Average CO attainment for subject
AM-III	ITC301.1	4	4	4	3.7
	ITC301.2	4	4	4	
	ITC301.3	3.4	4	3.5	
	ITC301.4	3.4	4	3.5	
	ITC301.5	2.8	4	3	
	ITC301.6	4	4	4	
LD	ITC302.1	3.7	4	3.8	3.6
	ITC302.2	3.7	4	3.8	
	ITC302.3	3.8	4	3.8	
	ITC302.4	3.8	4	3.8	
	ITC302.5	2.8	4	3	
DSA	ITC303.1	3.7	4	3.8	3.8
	ITC303.2	3.9	3	3.7	

	ITC303.3	3.8	4	3.8	
	ITC304.4	3.7	4	3.8	
DBMS	ITC304.1	4	4	4	4
	ITC304.2	4	4	4	
	ITC304.3	4	4	4	
	ITC304.4	4	4	4	
	ITC304.5	4	4	4	
	ITC304.6	4	4	4	
PC	ITC305.1	1.7	2	1.8	1.7
	ITC305.2	1.4	2	1.5	
	ITC305.3	1.9	1	1.7	
	ITC305.4	1.7	2	1.8	
	ITC305.5	2.1	2	2.1	
	ITC305.6	1.4	2	1.5	
Digital Design	ITL301.1	4	4	4	4
	ITL301.2	4	4	4	
	ITL301.3	4	4	4	
	ITL301.4	4	4	4	
	ITL301.5	4	4	4	
DS LAB	ITL302.1	4	4	4	4
	ITL302.2	4	3	3.8	

	ITL302.3	4	4	4	
	ITL302.4	4	4	4	
SQL	ITL303.1	4	4	4	4
	ITL303.2	4	4	4	
	ITL303.3	4	4	4	
	ITL303.4	4	4	4	
	ITL303.5	4	4	4	
	ITL303.6	4	4	4	
JPL	ITL304.1	4	4	4	4
	ITL304.2	4	4	4	
	ITL304.3	4	4	4	
	ITL304.4	4	4	4	
	ITL304.5	4	3	3.8	
Average		3.6	3.7	3.6	3.6

Final CO attainment (AY 2019-20) SEM-IV					
Subject	COs	Direct CO Attainment	Indirect CO Attainment	Final CO Attainment =0.8*Direct+0.2*Indirect	Average CO attainment for subject
AM-IV	ITC401.1	2.8	4	3	3.3
	ITC401.2	4	4	4	
	ITC401.3	4	3	3.8	
	ITC401.4	2.8	4	3	
	ITC401.5	2.8	4	3	
	ITC401.6	2.8	3	2.8	
CN	ITC402.1	4	4	4	3.8
	ITC402.2	4	4	4	
	ITC402.3	4	4	4	
	ITC402.4	2.8	4	3	
	ITC402.5	2.8		2.2	

	ITC402.6	2.8		2.2	
OS	ITC403.1	3.6	3	3.5	3.2
	ITC403.2	3.6	3	3.5	
	ITC403.3	2.8	3	2.8	
	ITC403.4	3.8	3	3.6	
	ITC403.5	2.8	3	2.8	
	ITC403.6	2.8		2.2	
COA	ITC404.1	3.4	3.4	3.4	3.2
	ITC404.2	3.6	3.6	3.6	
	ITC404.3	2.8	2.8	2.8	
	ITC404.4	3.4	3.4	3.4	
	ITC404.5	2.8	2.8	2.8	
	ITC404.6	2.8	2.8	2.8	
AT	ITC405.1	3.4	4	3.5	3.4
	ITC405.2	3.3	4	3.4	
	ITC405.3	2.8	4	3	
	ITC405.4	3.6	4	3.7	
CN-LAB	ITL401.1	4	4	4	3.6
	ITL401.2	4	4	4	
	ITL401.3	4	4	4	
	ITL401.4	3		2.4	
	ITL401.5	4	2	3.6	
UNIX LAB	ITL402.1	4	3	3.8	3.7
	ITL402.2	4	2	3.6	
	ITL402.3	4	2	3.6	
	ITL402.4	4	3	3.8	
	ITL402.5	4	2	3.6	
	ITL402.6	4	3	3.8	
MP LAB	ITL403.1	3.7	4	3.8	3.9
	ITL403.2	3.7	4	3.8	
	ITL403.3	4	4	4	

	ITL403.4	4	4	4	
	ITL403.5	3.7	4	3.8	
	ITL403.6	4	4	4	
PYTHON LAB	ITL404.1	3.9	4	3.9	3.8
	ITL404.2	3.3	4	3.4	
	ITL404.3	3.7	4	3.8	
	ITL404.4	3.9	4	3.9	
	ITL404.5	3.8	4	3.8	
	ITL404.6	3.9	4	3.9	
Average		3.5	3.5	3.5	3.5

Final CO attainment (AY2020-21) SEM-V

Subject	COs	Direct CO Attainment	Indirect CO Attainment	Final CO Attainment =0.8*Direct+0.2*Indirect	Average CO attainment for subject
MEP	ITC501.1	3.9	3	3.7	3.3
	ITC501.2	3.7	3	3.6	
	ITC501.3	3.6	2	3.3	
	ITC501.4	3.1	3	3.1	
	ITC501.5	2.8	3	2.8	
	ITC501.6	2.8		2.2	
IP	ITC502.1	3.7	4	3.8	3.7
	ITC502.2	3.88	2	3.5	
	ITC50.3	3.667	4	3.7	
	ITC502.4	3.7	4	3.8	
	ITC502.5	3.7	4	3.8	
	ITC502.6	2.8	3	2.8	
ADMT	ITC503.1	3.92	4	3.9	3.4
	ITC503.2	3.78	3	3.6	
	ITC503.3	2.8	4	3	

	ITC503.4	4	4	4	
	ITC503.5	4	3	3.8	
	ITC503.6	2.8		2.2	
CNS	ITC504.1	3.8	4	3.8	3.9
	ITC504.2	4	4	4	
	ITC504.3	4	4	4	
	ITC504.4	4	4	4	
	ITC504.5	3.8	4	3.8	
	ITC504.6	3.9	4	3.9	
ADSA	ITD 011.1	4	4	4	4
	ITD 011.2	3.9	4	3.9	
	ITD 011.3	3.9	4	3.9	
	ITD 011.4	4	4	4	
	ITD 011.5	3.9	4	3.9	
	ITD 011.6	4	4	4	
ECOM &EBUS INESS	ITD 013.1	3.9	4	3.9	3.9
	ITD 013.2	4	4	4	
	ITD 013.3	4	4	4	
	ITD 013.4	4	3	3.8	
	ITD 013.5	4	4	4	
	ITD 013.6	4	3	3.8	
IP LAB	ITL501.1	3.87	4	3.9	3.8
	ITL501.2	3.87	4	3.9	
	ITL501.3	3.75	4	3.8	
	ITL501.4	3.75	4	3.8	
	ITL501.5	3.75	4	3.8	
	ITL501.6	3.75	3	3.6	
SECUR ITY LAB	ITL502.1	4	4	4	4
	ITL502.2	4	4	4	
	ITL502.3	4	4	4	

	ITL502.4	4	4	4	
	ITL502.5	4	3	3.8	
	ITL502.6	4	4	4	
OLAP LAB	ITL503.1	4	3	3.8	3.6
	ITL503.2	4	3	3.8	
	ITL503.3	4	3	3.8	
	ITL503.4	4	2	3.6	
	ITL503.5	4	2	3.6	
	ITL503.6	4		3.2	
IOT MINI PROJE CT	ITL504.1	3.7	4	3.8	3.8
	ITL504.2	3.7	4	3.8	
	ITL504.3	3.7	4	3.8	
	ITL504.4	3.7	4	3.8	
	ITL504.5	3.7	4	3.8	
	ITL504.6	3.7		3	
BCE	ITL505.1	4	4	4	4
	ITL505.2	4	4	4	
	ITL505.3	4	4	4	
	ITL505.4	4	4	4	
	ITL505.5	4	4	4	
Average		3.8	3.6	3.7	3.7

Final CO attainment (AY2021-22) SEM-VI

Subject	COs	Direct CO Attainment	Indirect CO Attainment	Final CO Attainment =0.8*Direct+0.2*Indirect	Average CO attainment for subject
SEPM	ITC601.1	4	4	4	3.9
	ITC601.2	4	4	4	
	ITC601.3	4	4	4	
	ITC601.4	3.9	4	3.9	

	ITC601.5	4	4	4	
	ITC601.6	3.6	4	3.7	
DMBI	ITC602.1	4	4	4	4
	ITC602.2	4	4	4	
	ITC602.3	4	4	4	
	ITC602.4	4	4	4	
	ITC602.5	4	4	4	
	ITC602.6	4	4	4	
CCS	ITC603.1	4	4	4	4
	ITC603.2	4	4	4	
	ITC603.3	4	4	4	
	ITC603.4	4	4	4	
	ITC603.5	4	4	4	
	ITC603.6	4	4	4	
WN	ITC604.1	4	4	4	4
	ITC604.2	4	4	4	
	ITC604.3	4	4	4	
	ITC604.4	4	4	4	
	ITC604.5	4	4	4	
	ITC604.6	4	4	4	
DLO-D F	ITDLO6023.1	4	4	4	4
	ITDLO6023.2	4	4	4	
	ITDLO6023.3	4	4	4	
	ITDLO6023.4	4	4	4	
	ITDLO6023.5	4	4	4	
	ITDLO6023.6	4	4	4	
MINI PROJE CT	ITM605.1	4	4	4	4
	ITM605.2	4	4	4	
	ITM605.3	4	4	4	
	ITM605.4	4	4	4	
	ITM605.5	4	4	4	

	ITM605.6	4	4	4	
CCS LAB	ITL603.1	4	4	4	4
	ITL603.2	4	4	4	
	ITL603.3	4	4	4	
	ITL603.4	4	4	4	
	ITL603.5	4	4	4	
	ITL603.6	4	4	4	
Sensor Network LAB	ITL604.1	4	4	4	4
	ITL604.2	4	4	4	
	ITL604.3	4	4	4	
	ITL604.4	4	4	4	
	ITL604.5	4	4	4	
	ITL604.6	4	4	4	
BI LAB	ITL602.1	3.63	4	3.7	3.6
	ITL602.2	3.37	4	3.5	
	ITL602.3	3.48	4	3.6	
	ITL602.4	3.1	4	3.3	
	ITL602.5	3.7	4	3.8	
	ITL601.6	3.48	4	3.6	
SN LAB	ITL604.1	4	4	4	4
	ITL604.2	4	4	4	
	ITL604.3	4	4	4	
	ITL604.4	4	4	4	
	ITL604.5	4	4	4	
	ITL604.6	4	4	4	
Average		3.9	4	4	4

Final CO attainment (AY 2021-22) SEM-VII					
Subject	COs	Direct CO Attainment	Indirect CO Attainment	Final CO Attainment =0.8*Direct+0.2*Indirect	Average CO attainment for subject
END	ITC701.1	2.8	4	3	3.4
	ITC701.2	2.8	4	3	
	ITC701.3	3.6	4	3.7	
	ITC701.4	2.8	4	3	
	ITC701.5	3.7	4	3.8	
	ITC701.6	3.6	4	3.7	
IS	ITC702.1	4	4	4	3.8
	ITC702.2	4	4	4	
	ITC702.3	3.7	4	3.8	
	ITC702.4	4	4	4	
	ITC702.5	4	4	4	
	ITC702.6	2.8	4	3	
STQA	ITDLO7034.1	4	4	4	4
	ITDLO7034.2	4	4	4	
	ITDLO7034.3	4	4	4	
	ITDLO7034.4	4	4	4	
	ITDLO7034.5	4	4	4	
	ITDLO7034.6	4	4	4	
AI	ITC703.1	3.2	4	3.4	3.1
	ITC703.2	2.9	4	3.1	
	ITC703.3	3.3	4	3.4	
	ITC703.4	3.1	4	3.3	
	ITC703.5	2.9	4	3.1	
	ITC703.6	2.1	4	2.5	
NDL LAB	ITL701.1	4	4	4	4
	ITL701.2	4	4	4	

	ITL701.3	4	4	4	
	ITL701.4	4	4	4	
	ITL701.5	4	4	4	
	ITL701.6	4	4	4	
AS LAB	ITL702.1	4	4	4	3.9
	ITL702.2	3.7	4	3.8	
	ITL702.3	3.7	4	3.8	
	ITL702.4	4	4	4	
	ITL702.5	3.7	4	3.8	
	ITL702.6	4	4	4	
MIS	ILO7013.1	4	4	4	4
	ILO7013.2	4	4	4	
	ILO7013.3	4	4	4	
	ILO7013.4	4	4	4	
	ILO7013.5	4	4		
PROJECT-I	ITM 705.1	4	4	4	4
	ITM 705.2	4	4	4	
	ITM 705.3	4	4	4	
	ITM 705.4	4	4	4	
	ITM 705.5	4	4	4	
	ITM 705.6	4	4	4	
IS LAB	ITL703.1	3.1	4	3.3	3.5
	ITL703.2	3.3	4	3.4	
	ITL703.3	3.3	4	3.4	
	ITL703.4	3.4	4	3.5	
	ITL703.5	3.4	4	3.5	
	ITL703.6	3.7	4	3.8	
Android App Development Lab	ITL704.1	4	4	4	4
	ITL704.2	4	4	4	
	ITL704.3	4	4	4	

	ITL704.4	4	4	4	
	ITL704.5	4	4	4	
	ITL704.6	4	4	4	
Average		3.7	4	3.8	3.8

Final CO attainment (AY2021-22) SEM-VIII					
Subject	COs	Direct CO Attainment	Indirect CO Attainment	Final CO Attainment =0.8*Direct+0.2*Indirect	Average CO attainment for subject
BDA	ITC801.1	4	4	4	3.6
	ITC801.2	3.901	4	3.9	
	ITC801.3	4	4	4	
	ITC801.4	3.91	4	3.9	
	ITC801.5	2.8	4	3	
	ITC801.6	2.8	4	3	
IOE	ITC802.1	3.7	4	3.8	3.6
	ITC802.2	3.7	4	3.8	
	ITC802.3	3.8	4	3.8	
	ITC802.4	3.9	4	3.9	
	ITC802.5	2.8	4	3	
	ITC802.6	2.8	4	3	
DLO-UI	ITDLO8041.1	4	4	4	4
	ITDLO8041.2	4	4	4	
	ITDLO8041.3	4	4	4	
	ITDLO8041.4	4	4	4	
	ITDLO8041.5	4	4	4	
	ITDLO8041.6	4	4	4	
ILO-EM	ILO8029.1	4	4	4	4
	ILO8029.2	4	4	4	
	ILO8029.3	4	4	4	

ILO-FM	ILO8022.1	2.9	4	3.1	3.2
	ILO8022.2	3.1	4	3.3	
BDL LAB	ITL801.1	4	4	4	4
	ITL801.2	4	4	4	
	ITL801.3	4	4	4	
	ITL801.4	4	4	4	
	ITL801.5	4	4	4	
	ITL801.6	4	4	4	
IOE LAB	ITL802.1	3.7	4	3.8	3.6
	ITL802.2	3.7	4	3.8	
	ITL802.3	3.8	4	3.8	
	ITL802.4	3.9	4	3.9	
	ITL802.5	2.8	4	3	
	ITL802.6	2.8	4	3	
DEVOPS LAB	ITL803.1	2.8	4	3	3
	ITL803.2	2.8	4	3	
	ITL803.3	2.8	4	3	
	ITL803.4	2.8	4	3	
	ITL803.5	2.8	4	3	
	ITL803.6	2.8	4	3	
R-PROG LAB	ITL804.1	4	4	4	4
	ITL804.2	4	4	4	
	ITL804.3	4	4	4	
	ITL804.4	4	4	4	
	ITL804.5	4	4	4	
	ITL804.6	4	4	4	
PROJECT-II	ITM 805.1	4	4	4	4
	ITM 805.2	4	4	4	
	ITM 805.3	4	4	4	
	ITM 805.4	4	4	4	

	ITM 805.5	4	4	4	
	ITM 805.6	4	4	4	
Average		3.7	4	3.7	3.7

Final CO Attainment (For the batch passed out in 2021-22)	
Sem	Final CO Attainment
III	3.6
IV	3.5
V	3.7
VI	4
VII	3.8
VIII	3.7
Average	3.7

PO-PSO Attainment for AY 2021-22 Attainment:

Semester	Subject	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
III (2019-20)	AM-III	ITC301	3.7	3.7	-	2.2	-	--	-	-	-	-	-	2.2		3.7
	LD	ITC302	2.2	1.8	2.7	-	2.5	3	3	2.1	3.6	-	-	3.6	3	3
	DSA	ITC303	2.3	3.8	3.8	2.8	3.8	-	-	-	1.5	-	-	3.8	3.8	3.8
	DBMS	ITC304	4	4	4	4	4	-	-	-	4	-	-	4	4	4
	PC	ITC305	1	0.7	-	-	-	-	-	-	1.1	-	-	1		1
	DDL LAB	ITL301	2.4	2.4	3	-	3.2	3.7	3.7	2.4	4	-	-	4	4	4
	DS LAB	ITL302	4	4	3.9	4	3.9	-	-	-	3.9	-	-	4	4	4
	SQL Lab	ITL303	4	4	4	4	4	-	-	-	4	-	-	4	4	4
	JPL	ITL304	1.6			1.6	2.4	-	-	-	-	-	-	4	4	4
Sem III Average			2.8	3.1	3.6	3.1	3.4	3.4	3.4	2.3	3.2	-	-	3.4	3.8	3.5
IV (2019-20)	AM-IV	ITC401	3.3	3.3	-	2	-	-	-	-	-	-	-	2		3.3
	CN	ITC402	3.2	1.9	-	1.8	-	-	-	-	-	-	-	1.9	3.2	3.2
	OS	ITC403	1.8	2.3	2.3	1.8	-	-	-	-	1.9	-	-	3.1	3	1.8
	COA	ITC404	3.3	3.3	3.2	1.9	3.3	3.3	-	-	3.3	-	-	3.3	3.3	3.3
	AT	ITC405	3.4	3.4	2	2	3.4	-	-	-	2	-	-	3.4	3.4	3.4
	N-LAB	ITL401	-	1.9	-	2	3.6	-	-	-	2.1	-	-	3.6	2.1	3.6
	UNIX LAB	ITL402	3.7	3.3	3.3	3.7	3.7	-	-	-	3.2	-	3.7	2.8	3.2	3.2
	MP LAB	ITL403	-	-	-	-	-	-	-	-	-	-	-	2.4	3.1	2
	PYTHON LAB	ITL404	3.9	3.8	3.8	3.8	3.8	-	-	-	3.8	3.9	3.8	3.8	3.8	3.8
Sem IV Average			3.2	2.9	2.9	2.4	3.6	3.3	-		2.7	3.9	3.8	2.9	3.1	3.1
V (2020-21)	MEP	ITC501	3.3	3.6	3.3	3.1	-	2	-	-	-	-	-	2.8	3.1	3.1
	IP	ITC502	-	-	2.2	-	3.6	-	-	-	-	-	-	3.6	3.6	3.6
	ADMT	ITC503	-	1.8	3.4	2	3.3	-	-	1.8	3.5	-	-	3.4	3.4	3.6
	CNS	ITC504	3.9	3.7	-	3.9	3.5	3.4	-	-	-	3.9	-		3.6	3.9
	ADSAA	ITD 011	4	4	3.7	3.3	-	-	-	-	-	-	-	2.7	4	3.3
	ECOM & EBUS	ITDLO5013	-	3.1	3.6	3.2	-	3.5	3.2	3.3	3.4	2.9	-	3.1		2.6
	IP LAB	ITL501	-	-	-	2.3	2.3	-	-	-	3.8	-	-	3.8	3.8	3.8
	SECURITY LA	ITL502	4	4	4	4	4	2.4	-	2.4	4	3.4	4	2.4	2.4	2.4
	OLAP LAB	ITL503	-	2	3.6	2.1	3.5	-	-	2.3	3.6	-	-	3.6	3.5	3.6
	IOT MINI PRO	ITL504	3.6	3.6	3.6	3.6	3.6	3.3	3.4	3.4	3.2	3.4	3.5	3.8	3.8	3.8
	BCE	ITL505	2.4	2.4	2.4	2.4	4	4	4	4	4	4	4	4	2.4	4
Sem V Average			3.5	3.1	3.3	3	3.5	3.1	3.5	2.9	3.6	3.5	3.8	3.3	3.4	3.4

VI (2020-21)	SEPM	ITC601	2.9	2.8	3.3	3.1	2.5	2.1	-	-	3.1	3.1	3.3	2.4	3.3	2.8
	DMBI	ITC602	3.7	3.2	3.3	3.6	3.6	2.6	2.6	-	-	-	-	-	3.3	3.1
	CCS	ITC603	-	3.5	3.5	-	2.1	2.1	3.5	1.8	3.5	-	-	3.5	3.4	3.5
	WN	ITC604	3.3	3.3	3.4	3.8	3.2	3.8	-	-	3.3	-	3.4	3.3	3.3	3.3
	DF	ITD023	3.3	3.2	-	3.2	3.1	3	-	-	-	3.3	-	-	3.4	3
	SD LAB	ITL601	4	4	4	4	4	2.4	-	2.4	4	3.5	4	2.4	2.7	2.4
	BI LAB	ITL602	3.6	3.7	3.7	3.6	3.6	2.7	2.7	-	3.6	-	-	-	3.7	3.7
	CCS LAB	ITL603	-	3.9	3.9	-	2.4	2.4	3.9	2.4	3.9	-	-	3.9	4	3.9
	SN LAB	ITL604	-	4	3.2	4	3.6	2.4	-	-	3.6	4	4	-	3.2	3.2
	MINI PROJECT	ITM605	3.9	3.9	3.8	3.9	3.8	4	4	3.8	2.9	3.7	3.7	3.8	3.9	3.9
Sem VI Average			3.5	3.6	3.6	3.7	3.2	2.8	3.3	2.6	3.5	3.5	3.7	3.2	3.4	3.3
VII (2021-22)	END	ITC701	4	-	-	4	4	3.2	4	4	2.7	-	2.1	2.5	3	3.2
	IS	ITC702	-	-	-	2.3	3.6	-	-	-	2.3	-	-	3.6	3.4	3.6
	AI	ITC703	-	2.7	2.5	2.9	2.3	-	-	-	2	-	-	2.7	2.7	2.9
	STQA	ITDLO7034	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
	MIS	ILO7013	-	-	3.4	-	4	3	4	-	-	-	4	4	4	-
	OR	ILO7015	-	-	-	-	-	-	-	-	-	-	-	4	-	3.6
	CSL	ILO7016	-	-	-	-	-	-	-	-	-	-	-	3.8	2.5	2.9
	NDL LAB	ITL701	2.4	3.5	4	-	2.9	2.4	-	-	4	4	2.4	3.2	3.5	-
	AS LAB	ITL702	-	3.5	3.5	3.5	3.5	2.1	2.1	2.1	2.1	2.4	-	3.5	3.5	3.5
	IS LAB	ITL703	-	3	3.8	3.2	2.7	-	-	-	2.3	-	-	3	3	3.7
	ANDROID LAB	ITL704	-	-	4	4	4	-	-	-	4	-	4	-	4	4
	PROJECT-I	ITM705	4	4	4	4	4	4	4	4	3	4	4	4	4	4
Sem VII Average			3.5	3.4	3.6	3.4	3.5	3.1	3.5	3.4	2.9	3.5	3.4	3.4	3.4	3.5

VIII (2021-22)	BDA	ITC801	3.4	3.4	3.6	3.6	2.4	-	-	-	3.6	-	-	3.6	3.6	3.6
	IOE	ITC802	3.6	3.6	3.5	3.4	3.6	3.4	3	3.4	3.5	3	3.4	3.6	3.5	3.5
	UI	ITDLO8041	3.6	3.5	3.8	3.6	3.4	3.5	3.5	3.6	3.2	3.5	3.7	3.5	3.6	3.7
	EM	ILO8029	4	1.6	-	1.6	1.6	4	4	4	4	2.4	2.4	4	-	2.4
	FM	ILO8022	-	3.2	-	3.2	3.2	3.2	-	3.2	-	-	3.2	1.9	3.2	3.2
	BDL LAB	ITL801	2.4	3.7	3.7	3.7	4	2.7	2.7	2.4	4	4	-	4	4	4
	IOE LAB	ITL802	3.6	3.6	3.5	3.4	3.6	3.4	3	3.4	3.5	3	3.4	3.6	3.5	3.5
	DEVOPS LAB	ITL803	-	2.4	-	-	4	-	-	-	4	4	-	-	-	4
	R PROG LAB	ITL804	4	4	4	4	4	4	4	-	-	-	-	-	4	4
	PROJECT-II	ITM805	4	4	4	4	4	4	4	4	4	3	4	4	4	4
Sem VIII Average			3.6	3.3	3.7	3.4	3.4	3.5	3.5	3.4	3.6	3.4	3.4	3.5	3.7	3.6

Direct PO Attainment (For 2021-22 Pass out batch)

Sem	POs													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
III	2.8	3.1	3.6	3.1	3.4	3.4	3.4	2.3	3.2			3.4	3.8	3.5
IV	3.2	2.9	2.9	2.4	3.6	3.3			2.7	3.9	3.8	2.9	3.1	3.1
V	3.5	3.1	3.3	3	3.5	3.1	3.5	2.9	3.6	3.5	3.8	3.3	3.4	3.4
VI	3.5	3.6	3.6	3.7	3.2	2.8	3.3	2.6	3.5	3.5	3.7	3.2	3.4	3.3
VII	3.5	3.4	3.6	3.4	3.5	3.1	3.5	3.4	2.9	3.5	3.4	3.4	3.4	3.5
VIII	3.6	3.3	3.7	3.4	3.4	3.5	3.5	3.4	3.6	3.4	3.4	3.5	3.7	3.6
Average	3.4	3.2	3.5	3.2	3.4	3.2	3.4	2.9	3.3	3.6	3.6	3.3	3.5	3.4

Indirect PO attainment

Sr. No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Graduate Exit Survey	4	4.5	4	5	4	4	4	4	4	4	4	4	4	4.1
Co-Curricular	3.86	3.6	3.67	3.75	3.86	4	4	4	3.89	3.67	4	3.78	4	4
**Institute level Co-Curricular	3	3	3	3	3	3	3	3	3	3	3	3	3	3

***Extra Curricular	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Average AL	3.9	4.1	3.8	4.4	3.9	4	4	4	3.9	3.8	4	3.9	4	4.1
Final PO attainment= 0.8 * Direct + 0.2* Indirect														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
	3.5	3.4	3.6	3.4	3.5	3.4	3.5	3.1	3.4	3.6	3.7	3.4	3.6	3.5
<p>**Institute level co-curricular activities include NPTEL ,Spoken Tutorials,Microsoft,Oracle certification tests,Looking Beyond syllabus,Cloudera,Praxis,Leading India,Technology day, Technical societies, Internships etc.</p> <p>***Extra curricular activities include Sphoorti, Utsav , Musical and all other cultural events.</p>														

6. Masters of Computer Applications: CO-PO-PSO mapping and attainment.

Sample CO Attainment:

Faculty In charge:Dr. Meenakshi Garg	Subject: Artificial Intelligence & Machine Learning
Class: MCA SEM II(Div B)	Academic Year: 2021-22

Types of Methods	Methods	Expected CO Attainment	CO1	CO2	CO3
Direct Method (70%)	End Semester Report (ESR)(80 Marks Test)	2	3	3	3
	Course Performance History (CPH)(20 Marks Test)	2	3	3	3
	Continuous Assessment (Assignment/Tutorial, etc)	2	3	3	3
Indirect Method (30%)	Course Exit Forms (CEF)(Feedback)	2	3	3	3
	Skill Enhancement Lectures (SEL)	2	3	3	3
CO Attainment in Percentage (%)		2	3	3	3
CO Attained		100%	100%	100%	100%

Course Outcomes (CO)		PO1	PO2	PO3	PO4	PSO1
	C01	3	3	3	3	3
	CO2	3	3	3	3	3
	CO3	3	3	3	3	3
Average PO Attainment in Percentage (%)		3	3	3	3	3

Expected PO Attainment	2	2	2	2	2
PO Attained	100%	100%	100%	100%	100%

PO Attainment

PO Attainment														
Passout Batch 2021-22														
Sem	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I Avg	2.99	2.99	3	2.98	3	3	3	3	3	3	3	3	3	2.99
II Avg	2.95	2.97	2.94	2.98	2.97	2.94	2.95	3	3	NA	2.76	NA	2.95	2.89
III Avg	3	3	3	3	3	NA	3	3	3	3	3	3	3	3
IV Avg	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	2.99	2.99	2.99	2.99	2.99	2.98	2.99	3	3	3	2.94	3	2.99	2.97
1: Weak 2:Medium 3: Strong														