

MANJARA CHARITABLE TRUST
RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI
Juhu – Versova Link Road, Andheri, Mumbai – 400053

Program Outcomes (POs & PSOs) Attainment
of
UG Program in Information Technology

Batch: 2019-20 to 2022-23

PROGRAM OUTCOMES (PO)

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

PROGRAM SPECIFIC OUTCOMES (PSO)

PSO1 An ability to apply the knowledge in the multidisciplinary fields and make it IT enabled.

PSO2 To develop the knowledge of algorithms, data structures, cloud services, information security, programming languages and data analytics as an IT professional.

Overall Attainment of Program Outcomes

Program Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	1.67	1.45	1.32	1.51	1.59	2.07	1.43	1.57	1.93	1.59	1.47	1.30
Indirect Attainment	2.21	2.07	2.20	2.27	2.48	2.32	1.92	2.05	2.31	2.40	2.08	2.15
Overall Attainment	1.78	1.58	1.50	1.66	1.77	2.12	1.53	1.66	2.01	1.75	1.59	1.47

Overall Attainment of Program Specific Outcomes

Program Outcomes	PSO1	PSO2
Direct Attainment	2.41	1.67
Indirect Attainment	2.04	2.31
Overall Attainment	2.34	1.80

MCT
 MANJARA CHARITABLE TRUST
RAJIV GANDHI INSTITUTE OF TECHNOLOGY
 Department of Information Technology

Attainment

Semester			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I	FEC101	Engineering Mathematics-I	1.56	0.78	0.79	0.79	0.79	0.79	—	—	—	—	—	0.78	—	—
	FEC102	Engineering Physics - I	2.07	1.48	0.89	—	—	—	—	—	—	—	—	1.18	—	—
	FEC103	Engineering Chemistry - I	0.79	—	0.76	—	0.77	—	—	—	—	—	—	1.33	—	—
	FEC104	Engineering Mechanics	1.54	1.25	1.33	1.28	1.01	—	0.83	—	0.84	0.84	—	0.71	—	0.84
	FEC105	Basic Electrical Engineering	1.17	0.63	—	—	—	—	—	—	—	—	—	—	—	—
	FEL103	Engineering Mechanics Lab	1.71	0.86	0.86	0.84	—	—	—	—	1.71	—	—	0.89	—	—
	FEL104	Basic Electrical Engineering Lab	1.96	0.98	—	—	—	—	—	0.98	2.97	—	—	—	—	—
	FEL105	Basic Workshop Practice - I	2.06	1.46	0.86	—	1.74	1.3	—	0.85	—	1.76	—	1.31	—	0.86
	FEC201	Engineering Mathematics-II	1.55	0.77	0.77	0.77	0.77	—	—	—	—	—	—	0.77	—	—
	FEC202	Engineering Physics-II	1.45	1.16	—	—	—	—	—	—	1.74	—	—	1.02	—	—
FEC203	Engineering Chemistry-II	1.27	1.42	0.84	—	—	2.59	2	—	—	—	—	0.84	—	—	
FEC204	Engineering Graphics	0.73	0.73	0.86	0.86	1.49	—	—	—	0.73	0.73	0.73	0.73	—	0.73	
FEC205	C Programming	2.14	1.52	0.91	1.98	1.68	—	—	—	—	—	—	1.28	2.77	1.68	
FEC206 I	Professional Communication and Ethics - I	—	—	—	—	—	—	—	0.73	0.73	0.73	—	0.73	0.73	—	
FEL203	Engineering Graphics Lab	0.67	0.67	0.71	0.76	0.91	—	—	—	0.67	0.67	—	0.67	—	0.67	
FEL206 II	Basic Workshop Practice - II	1.3	1.05	0.82	—	—	—	—	—	—	0.71	—	0.86	—	1.03	

UG PROGRAM IN INFORMATION TECHNOLOGY

DIRECT ATTAINMENT LEVEL of PO & PSO (SECOND YEAR COURSES)

Sem	Course Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
III	ITC301	Engineering Mathematics-III	1.06	0.91	--	0.91	0.91	--	--	--	--	--	--	0.91	--	--
	ITC302	Data Structure and Analysis	2.08	1.91	0.96	0.96	--	--	--	--	--	--	--	0.96	--	0.96
	ITC303	Database Management System	1.33	1.17	1	1	--	--	--	--	--	--	--	1	--	1.2
	ITC304	Principle of Communication	1.96	1.96	0.98	0.98	--	--	--	--	--	--	--	0.98	--	--
	ITC305	Paradigms and Computer Programming Fundamentals	2.14	1.64	1.31	0.98	2.38	--	--	--	--	--	--	--	2.98	1.58
	ITL301	Data Structure Lab	2.15	1.98	0.99	0.99	1.98	--	--	--	--	--	--	0.99	--	0.99
	ITL302	SQL Lab	1.95	0.97	0.97	1.62	0.97							1.46	2.95	2.12
	ITL303	Computer programming Paradigms Lab	2.00	1.67	1.17	2.00	-	-	-	-	-	-	-	-	3.00	3.00
	ITL304	Java Lab (SBL)	2.00	1.83	1.00	1.00	2.00	--	--	--	--	--	--	1.00	--	2.00
	ITM301	Mini Project-1 A for Front end/backend Application using JAVA	1.50	1.40	1.38	1.43	1.50	2.25	1.00	1.67	2.50	1.71	1.00	1.50	3.00	2.78
IV	ITC401	Engineering Mathematics-IV	2.32	0.99	--	0.99	--	--	--	--	--	--	--	0.99	--	--
	ITC402	Computer Network and Network Design	1.62	1.63	1.79	2.13	1.95	1.93	--	--	--	--	--	--	--	--
	ITC403	Operating System	3	3	--	3	3	--	--	--	--	3	3	--	3	3
	ITC404	Automata Theory	2.00	2.00	2.16	1.85	1.69	--	--	--	--	--	--	--	--	--
	ITC405	Computer Organizational Architecture	1.32	1.32	1.188			--	--	--	--	--	--	--	0.99	0.99
	ITL401	Network Lab	2.31	2.17	1.38	1.78	2.98	-	-	-	-	-	-	-	-	-
	ITL402	Unix Lab	1.98	1.16	0.99	0.99	1.32	--	--	--	--	--	--	--	--	--
	ITL403	Microprocessor Lab	0.99	1.155	1.32	1.584	0.99	--	--	--	--	--	0.99	--	--	0.99
	ITL404	Python Lab (SBL)	1.96	1.80	1.43	--	0.98	--	--	--	--	--	0.98	1.80	--	1.96
	ITM401	Mini Project - I B for Python based automation projects	1.50	1.40	1.38	1.43	1.50	2.25	1.00	1.67	2.50	1.71	1.00	1.50	3.00	2.78

UG PROGRAM IN INFORMATION TECHNOLOGY

DIRECT ATTAINMENT LEVEL of PO & PSO (THIRD YEAR COURSES)

Sem	Course Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
V	ITC501	Internet Programming	1.24	0.74	1.34	1.49	--	--	--	--	--	--	1.365	--	--	0.74	
	ITC 502	Computer Network Security	2.21	2.36	2.57	2.47	2.47	2.47	--	--	--	--	--	2.97	--	2.47	
	ITC503	Entrepreneurship and E- business	2.00	2.00	2.00	2.00	1.67	2.00	2.00	2.00	1.67	1.67	1.60	1.60	3.00	--	
	ITC504	Software Engineering	0.99	0.99	0.83	0.83	0.99	2.98	0.83	--	0.99	0.99	1.66	0.99		0.99	
	ITDO5012	Advance Data Management Technologies	1.96	1.14	0.98	1.57											1.64
	ITDO5014	Advanced Data structure and Analysis	0.96	1.93	1.66	2.08	1.87	1.65	1.24	1.24				1.48	1.51	0.82	1.79
	ITL501	IP Lab	1.64	--	1.48	--	0.98	--	--	--	--	--	--	0.98	1.81	--	1.97
	ITL502	Security Lab	2.49	1.155	--	1.2375	2.394	--	--	--	--	--	--	--	--	--	1.98
	ITL503	DevOps Lab	1.65	1.82	1.32	1.58	--	--	--	--	--	--	--	1.82	1.65	--	1.82
	ITL504	Advance DevOps Lab	1.48	1.81	1.32	1.73	2.14	--	--	--	0.99	--	1.78	--	--	--	1.81
	ITL505	Professional Communication & Ethics-II	--	--	--	--	--	--	--	3	1.74	1.74	--	0.99	--	0.99	
ITM501	Mini Project- 2 A Web Based Business Model	1.50	1.40	1.38	1.43	1.50	2.25	1.00	1.67	2.50	1.71	1.00	1.50	3.00	2.78		
VI	ITC601	Data Mining & Business Intelligence	2.9	2.9	2.2	2.9	2.9	2.9	2.9	2.7	--	--	2.9	1.9	2.9	--	
	ITC602	Web X.0	1.66	1.06	1.57	--	--	--	--	--	0.89	--	--	--	--	0.89	
	ITC603	Wireless Technology		0.69	0.73			1.515	0.675	0.69				0.7325	1.32	0.72	
	ITC604	AI and DS- 1	1.42	2.06	1.80	1.68	1.55	1.74	1.55	--	--	2.32	--	1.42	2.32	1.68	
	ITDO6013	Green IT	--	0.957	--	0.957	0.957	2.95	1.7284	1.4355	--	--	--	1.3398	-	-	
	ITDO6014	Ethical Hacking and Forensic	1.57	1.81	--	1.18	1.64	1.97	1.97	2.99	--	--	--	--	--	--	
	ITL 601	BI Lab	1.98	0.99	1.81	2.80	2.14	2.31	2.14	1.32	2.97	2.22	1.32	1.98	2.97	0.99	
	ITL602	Web Lab	1.57	--	1.41	--	0.94	--	--	--	--	--	0.94	1.72	0.94	1.88	
	ITL603	Sensor Lab	0.97	0.97	1.31	--	--	--	--	--	--	--	--	0.98	--	1.44	
	ITL604	MAD & PWA Lab	1.90	--	0.95	0.95	1.46	--	--	--	--	--	--	--	--	--	
	ITL605	DS using Python Skill based Lab	2.40	2.33	2.25	3.00	2.17	2.50	2.00	1.00	3.00	1.80	1.00	2.20	3.00	2.17	
	ITM601	Mini Project- 2 B Based on ML	1.50	1.40	1.38	1.43	1.50	2.25	1.00	1.67	2.50	1.71	1.00	1.50	3.00	2.78	

UG PROGRAM IN INFORMATION TECHNOLOGY

DIRECT ATTAINMENT LEVEL of PO & PSO (FINAL YEAR COURSES)

Sem	Course Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
VII	ITC701	AI and DS-II	1.14	2.61	2.74	2.78	1.96	2.20	1.96	0.98	--	--	--	1.76	2.94	2.12
	ITC702	Internet of Everything	2.27	1.56	2.03	2.03	1.72	1.89	1.25	1.18	--	--	1.56	0.94	0.95	1.41
	ITDO7014	Software Testing and QA	2.07	1.73	2.23	2.22	--	--	--	--	--	--	--	--	--	--
	ITDO7024	Information Retrieval System	1.97	1.47	0.98	1.10	1.23	1.47	--	--	--	--	--	--	2.22	1.32
	ILO7013	Management Information System	2.05	1.86	1.86	1.68	2.05	1.86	1.49	1.86	1.86	1.86	1.86	1.86	2.80	1.86
	ILO7016	Cyber Security and Laws	0.87	0.87	--	0.83	--	--	0.83	--	--	--	--	0.87	--	0.88
	ITL701	Data Science Lab	1.80	1.83	1.67	2.83	2.17	2.50	2.20	1.20	3.00	1.80	2.00	1.80	3.00	2.00
	ITL702	IOE Lab	2.14	2.14	1.98	2.31	1.98	1.97	1.23	1.48	--	--	1.81	1.81	0.98	1.57
	ITL703	Secure Application Development	1.95	1.14	0.97	1.62	0.97	--	--	--	--	--	--	1.46	2.95	2.12
	ITL704	Recent Open Source Project Lab	1.00	2.00	1.00	1.00	1.33	--	--	--	3.00	--	--	--	--	2.00
ITP701	Major Project I	1.50	1.40	1.38	1.43	1.50	2.25	1.00	1.67	2.50	1.71	1.00	1.50	3.00	2.78	
VIII	ITC801	Blockchain and DLT	1.59	0.96	0.79	0.79	--	--	--	--	--	--	--	--	--	1.59
	ITDO8011	Big Data Analytics	1.79	1.07	0.88	0.88	--	--	--	--	--	--	--	--	--	1.79
	ITDO8024	Cloud computing and Services	0.86	1.15	1.58	--	1.29	2.01	1.44	1.72	--	--	--	--	--	1.29
	ILO8011	Project Management	2.07	1.88	1.69	1.69	0.94	0.94	--	1.69	1.88	1.88	2.07	1.25	--	--
	ILO8012	Finance Management	0.90	1.35	0.90	0.90	--	--	0.90	--	--	--	1.80	--	--	--
	ITL801	Blockchain Lab	1.97	1.18	0.98	0.98										1.97
	ITL802	Cloud computing	0.86	1.15	1.58	--	1.29	2.01	1.44	1.72	--	--	--	--	--	1.29
	ITP801	Major Project II	1.50	1.40	1.38	1.43	1.50	2.25	1.00	1.67	2.50	1.71	1.00	1.50	3.00	2.78

INDIRECT ATTAINMENT LEVEL PO & PSO

**of
UG PROGRAM IN INFORMATION TECHNOLOGY**

			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1
Program Exit Survey			2.2	2.2	2.16	2.61	2.23	2.17	2.2	2.01	2.13	2.25	2.25	2.23	2.2
Employer Feedback			2	1.5	2	2	2.5	2	1.5	2	2	2	1.66	2	2.5
Alumni Feedback			2.11	2.06	2.45	2.48	2.71	2.86	2.07	2.01	2.57	2.5	2.33	1.57	1.43
Parents Feedback			2.63	2.69	2.25	..	2.2	2.63	3	..	3	..
ABIT			2.1	1.92	2.2	2	2.48	2.34	1.92	2.01	2.23	2.25	2.08	1.93	2.04

Average	2.21	2.07	2.2	2.27	2.48	2.32	1.92	2.05	2.31	2.4	2.08	2.15	2.04
20% of Indirect Attainment	2.21	2.07	2.20	2.27	2.48	2.32	1.92	2.05	2.31	2.40	2.08	2.15	2.04