

# Government College of Engineering, Karad

## SCHEME OF INSTRUCTION & SYLLABI

Programme: Information Technology

Proposed Scheme of Instructions: Final Year B. Tech. in Information Technology

Semester – VII (Mode-1-Academic) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME †			
									MSE	ISE	ESE	TOTAL
1	PCC	IT3701	Cloud Computing	3	--	--	3	3	20	20	60	100
2	PCC	IT3702	Cryptography and Cyber Security	3	--	--	3	3	20	20	60	100
3	EL	RM3703	Research Methodology	3	--	--	3	3	20	20	60	100
4	PEC	IT37*4	Program Elective -III	2	--	--	2	2	20	20	60	100
5	PEC	IT37*5	Industry/Program Elective -IV	2	--	--	2	2	20	20	60	100
6	MDM	##	Multi-Disciplinary Minor -V	2	--	--	2	2	20	20	60	100
7	PCC	IT3707	Cloud Computing Lab	--	--	2	2	1	-	25	--	25
8	PCC	IT3708	Cryptography and Cyber Security Lab	--	--	2	2	1	--	25	25	50
9	PEC	IT37*9	Industry/Program Elective -IV Lab	--	--	2	2	1	--	25	--	25
10	EL	IT3710	Major Project	--	--	8	8	4	-	50	50	100
<b>Total</b>				<b>15</b>	<b>0</b>	<b>14</b>	<b>29</b>	<b>22</b>	<b>120</b>	<b>245</b>	<b>435</b>	<b>800</b>

##:- Any course offered from Dept./Inst. Level MDM buckets.

L- Lecture, T-Tutorial, P-Practical,

MSE- Mid Semester Examination,

ISE/CA- In Semester Evaluation/Continuous Assessment,

ESE- End Semester Examination (For Laboratory End Semester performance)

*Ray Phule*



Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme *Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And * Extracurricular Activities (CCA)
Credits	-	-	08	05	02	-	-	07	-
Cumulative Sum	18	13	55	17	20	09	12	08	02

**PROGRESSIVE TOTAL CREDITS: 132+22 =154**

**Note:**

- 1: Students must choose either Mode 1 or Mode 2 at the beginning of Semester VII.
  - 2: Mode-1 students are permitted to enroll in MOOC courses of Semester VIII during Semester VII with prior approval of the respective Head of Department.
- The results of these MOOC courses will be considered in Semester VIII.

*Rayfulken.*

# Government College of Engineering, Karad

## SCHEME OF INSTRUCTION & SYLLABI

Programme: Information Technology

Proposed Scheme of Instructions: Final Year B. Tech. in Information Technology

Semester – VII (Mode-2-Internship) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PEC	IT3711	MOOC - I	-	-	-	--	3	-		100	100
2	PEC	IT3712	MOOC - II	-	-	-	--	3	-		100	100
3	EL	IT3713	Internship	--	--	--	-	12	-	250	250	500
4	MDM	##	Multi-disciplinary Minor – V	2	--	--	2	2	20	20	60	100
<b>Total</b>				<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>20</b>	<b>20</b>	<b>270</b>	<b>510</b>	<b>800</b>

## :- Any course offered from Dept./Inst. Level MDM buckets.

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
<b>Credits</b>	-	-	-	06	02	-	-	12	-
<b>Cumulative Sum</b>	18	13	47	18	20	09	12	13	02

**PROGRESSIVE TOTAL CREDITS: 132+20=152**

**Note :**

1: Students must choose either Mode 1 or Mode 2 at the beginning of Semester VII.

2. For MDM 5 Industry mode students, lectures will be conducted in online mode (with the flexibility of sharing recorded lectures) while MSE & ESE evaluation will be in offline mode.

Rajendra

# Government College of Engineering, Karad

## SCHEME OF INSTRUCTION & SYLLABI

Programme: Information Technology

Proposed Scheme of Instructions: Final Year B. Tech. in Information Technology

Semester – VIII (Mode-1-Internship) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PEC	IT3811	MOOC - I	-	-	-	--	3	-		100	100
2	PEC	IT3812	MOOC - II	-	-	-	--	3	-		100	100
3	EL	IT3813	Internship	--	--	--	-	12	-	250	250	500
4	MDM	##	Multi-disciplinary Minor – VI	2	--	--	2	2	20	20	60	100
<b>Total</b>				<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>20</b>	<b>20</b>	<b>270</b>	<b>510</b>	<b>800</b>

## :- Any course offered from Dept./Inst. Level MDM buckets.

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
<b>Credits</b>	-	-	-	6	02	-	-	12	-
<b>Cumulative Sum</b>	18	13	55	23	22	09	12	20	02

**PROGRESSIVE TOTAL CREDITS: 154+20 =174**

**Note:**

For MDM 6 Internship mode students, lectures will be conducted online (with the flexibility of sharing recorded lectures), while MSE & ESE evaluations will be in offline mode.

*Raj Gulkan*

## Government College of Engineering, Karad

### SCHEME OF INSTRUCTION & SYLLABI

Programme: Information Technology

Proposed Scheme of Instructions: Final Year B. Tech. in Information Technology

Semester – VIII (Mode-2-Academic) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PCC	IT3801	Cloud Computing	3	--	--	3	3	20	20	60	100
2	PCC	IT3802	Cryptography and Cyber Security	3	--	--	3	3	20	20	60	100
3	EL	RM3803	Research Methodology	3	--	--	3	3	20	20	60	100
4	PEC	IT38*4	Program Elective -III	2	--	--	2	2	20	20	60	100
5	PEC	IT38*5	Industry/Program Elective -IV	2	--	--	2	2	20	20	60	100
6	MDM	##	Multi-Disciplinary Minor -VI	2	--	--	2	2	20	20	60	100
7	PCC	IT3807	Cloud Computing Lab	--	--	2	2	1	-	25	--	25
8	PCC	IT3808	Cryptography and Cyber Security Lab	--	--	2	2	1	--	25	25	50
9	PEC	IT38*9	Industry/Program Elective -IV Lab	--	--	2	2	1	--	25	--	25
10	EL	IT3810	Major Project	--	--	8	8	4	-	50	50	100
<b>Total</b>				<b>15</b>	<b>0</b>	<b>14</b>	<b>29</b>	<b>22</b>	<b>120</b>	<b>245</b>	<b>435</b>	<b>800</b>

## :- Any course offered from Dept./Inst. Level MDM buckets.

L- Lecture, T-Tutorial, P-Practical\*

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment ESE- End Semester Examination (For Laboratory End Semester performance)

*Rajkumar*

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Credits	-	-	08	05	02	-	-	07	-
Cumulative Sum	18	13	55	23	22	9	12	20	02

**PROGRESSIVE TOTAL CREDITS: 152+22 =174**

*Rajkumar*

**List of Elective subject:**

<b>Elective-I</b>	IT3514: Advanced Web and Mobile Applications	IT3524:Artificial Intelligence	IT3534:Advanced Database Management Systems	IT3544: Principles of Distributed Systems
<b>Elective-I Lab</b>	IT3510: Advanced Web and Mobile Applications Lab	IT3520:Artificial Intelligence Lab	IT3530:Advanced Database Management Systems Lab	IT3540: Principles of Distributed Systems Lab
<b>Elective-II</b>	IT3614: Advanced Software Engineering	IT3624:Advanced Machine Learning	IT3634: Data Warehousing and Data Mining	IT3644:Interactive Systems
<b>Elective-II Lab</b>	IT3610: Advanced Software Engineering Lab	IT3620:Advanced Machine Learning Lab	IT3630: Data Warehousing and Data Mining Lab	IT3640:Interactive Systems Lab
<b>Elective-III</b> (SEM-VII)	IT3714:Human Computer Interaction	IT3724:Big Data Analytics	IT3734:Natural Language Processing	IT3744:Information Retrieval
<b>Elective-IV</b> (SEM-VII)	IT3715:AI Tools and Industry Trends [Industry Elective]	IT3725:High Performance Computing	IT3735:Quantum Computing	IT3745:Computer Vision
<b>Elective-IV Lab</b> (SEM-VII)	IT3719:AI Tools and Industry Trends Lab [Industry Elective]	IT3729:High Performance Computing Lab	IT3739:Quantum Computing Lab	IT3749:Computer Vision Lab
<b>Elective-III</b> (SEM-VIII)	IT3814:Human Computer Interaction	IT3824:Big Data Analytics	IT3834:Natural Language Processing	IT3844:Information Retrieval
<b>Elective-IV</b> (SEM-VIII)	IT3815:AI Tools and Industry Trends [Industry Elective]	IT3825:High Performance Computing	IT3835:Quantum Computing	IT3845:Computer Vision
<b>Elective-IV Lab</b> (SEM-VIII)	IT3819:AI Tools and Industry Trends Lab [Industry Elective]	IT3829:High Performance Computing Lab	IT3839:Quantum Computing Lab	IT3849:Computer Vision Lab

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**List of Multi-disciplinary Minor (Departmental)**

<b>Offered by Department</b>	<b>Sr. No.</b>	<b>Course category</b>	<b>Course code &amp; Title</b>	<b>Semester</b>
Civil Engineering	1	Multi-disciplinary Minor - 01	CE3305: Basic civil engineering	III
	2	Multi-disciplinary Minor – 02	CE3404: Building materials	IV
	3	Multi-disciplinary Minor – 03	CE3505: Building planning and drawing	V
	4	Multi-disciplinary Minor Lab – 03	CE3510: Building planning and drawing lab	V
	5	Multi-disciplinary Minor – 04	CE3606: Building services	VI
	6	Multi-disciplinary Minor – 05	CE3705: Smart building I	VII
	7	Multi-disciplinary Minor - 06	CE3805: Smart building II	VIII
Mechanical Engineering	1	Multi-disciplinary Minor - 01	ME3304: Material Science	III
	2	Multi-disciplinary Minor – 02	ME3405: Analysis of Mechanical elements	IV
	3	Multi-disciplinary Minor – 03	ME3505: Thermal Engineering	V
	4	Multi-disciplinary Minor Lab – 03	ME3509: Mechanical Engineering Lab	V
	5	Multi-disciplinary Minor – 04	ME3606: Manufacturing Engineering	VI
	6	Multi-disciplinary Minor – 05	ME3705: Energy Conservation and Management	VII
	7	Multi-disciplinary Minor - 06	ME3805: Mechanical System Design	VIII
Electrical Engineering	1	Multi-disciplinary Minor - 01	EE3304: DC Machines and Transformers	III
	2	Multi-disciplinary Minor – 02	EE3404: AC Machines	IV

*Raj Kumar*

	3	Multi-disciplinary Minor – 03	EE3505: Basics of Power System	V
	4	Multi-disciplinary Minor Lab – 03	EE3510: Electrical Machine Lab	V
	5	Multi-disciplinary Minor – 04	EE3606: Electrical Drives	VI
	6	Multi-disciplinary Minor – 05	EE3705: Switchgear and Protection	VII
	7	Multi-disciplinary Minor - 06	EE3805: Energy Management and Audit /Electrical Vehicle	VIII
Information Technology	1	Multi-disciplinary Minor - 01	IT3305: Basics of Data Structure	III
	2	Multi-disciplinary Minor – 02	IT3404:Software Essentials (OS and Application Software)	IV
	3	Multi-disciplinary Minor – 03	IT3505:Database Management Systems	V
	4	Multi-disciplinary Minor Lab – 03	IT3511:Database Management Systems Lab	V
	5	Multi-disciplinary Minor – 04	IT3604:Basics of AI and ML	VI
	6	Multi-disciplinary Minor – 05	IT3705:Web Technology	VII
	7	Multi-disciplinary Minor - 06	IT3805:Data Analytics	VIII
Electronics & Telecommunications Engineering	1	Multi-disciplinary Minor - 01	EX3304: Electronic Circuits	III
	2	Multi-disciplinary Minor – 02	EX3404: Digital Electronics	IV
	3	Multi-disciplinary Minor – 03	EX3505: Signals & Systems	V
	4	Multi-disciplinary Minor Lab – 03	EX3510: Signals & Systems Laboratory	V
	5	Multi-disciplinary Minor – 04	EX3606: Communication System	VI
	6	Multi-disciplinary Minor – 05	EX3706: Microprocessor & Microcontroller	VII
	7	Multi-disciplinary Minor - 06	EX3805: Mobile Communication	VIII

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**List of Multi-disciplinary Minor (Institute Level-Industrial)**

Stream/Technology	Sr.No.	Course category	Course code & Title	Semester
Electrical Vehicle (Electrical Engineering- Institute Level-Industrial)	1	Multi-disciplinary Minor - 01	IMI3311: Foundation of EV and Hybrid Vehicle	III
	2	Multi-disciplinary Minor – 02	IMI3412: EV Battery Technology and Powertrain Development	IV
	3	Multi-disciplinary Minor – 03	IMI3513: EV Power Electronics and Embedded System	V
	4	Multi-disciplinary Minor Lab – 03	IMI3514: Electric Vehicle Lab	V
	5	Multi-disciplinary Minor – 04	IMI3615: EV Charging Infrastructure, Vehicle Testing & Homologation	VI
	6	Multi-disciplinary Minor – 05	IMI3716: EV Vehicle Design, Analysis and Control	VII
	7	Multi-disciplinary Minor - 06	IMI3817: EV PCB Design & Data Analytics	VIII
Image Processing (ETC- Institute Level-Industrial)	1	Multi-disciplinary Minor - 01	IMI3321: Fundamentals of Image.	III
	2	Multi-disciplinary Minor – 02	IMI3422: Basics of Image Processing for Healthcare	IV
	3	Multi-disciplinary Minor – 03	IMI3523: Particle Size Analysis using Image Processing	V
	4	Multi-disciplinary Minor Lab – 03	IMI3524: Particle Size Analysis using Image Processing Lab	V
	5	Multi-disciplinary Minor – 04	IMI3625: Particle Characterization in Healthcare	VI
	6	Multi-disciplinary Minor – 05	IMI3726: Particle Characterization in Formulation and Reverse Engineering	VII
	7	Multi-disciplinary Minor - 06	IMI3827: Project	VIII
Electrical Vehicle (Mechanical Engineering- Institute Level-Industrial)	1	Multi-disciplinary Minor - 01	IMI3331: Foundation of EV and Hybrid Vehicle	III
	2	Multi-disciplinary Minor – 02	IMI3432: Automotive Mechanics for EV	IV
	3	Multi-disciplinary Minor – 03	IMI3533: EV Design, Development, Analysis and Control	V

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	4	Multi-disciplinary Minor Lab – 03	IMI3534:3D modelling and simulation Lab	V
	5	Multi-disciplinary Minor – 04	IMI3635:EV Product Development, Homologation and Hydrogen FCEV	VI
	6	Multi-disciplinary Minor – 05	IMI3736:EV FEA ANALYSIS	VII
	7	Multi-disciplinary Minor - 06	IMI387:CYBER SECURITY AND DATA ANALYSIS	VIII

**List of Multi-disciplinary Minor (Institute Level-Other Discipline)**

Offered by Department	Sr. No.	Course category	Course code & Title	Semester
Law	1	Multi-disciplinary Minor - 01	IMO3311: Constitutional Law	III
	2	Multi-disciplinary Minor – 02	IMO3412: Human Rights & International Law	IV
	3	Multi-disciplinary Minor – 03	IMO3513: Environmental Law	V
	4	Multi-disciplinary Minor Lab – 03	IMO3514: Environmental Law Field Study	V
	5	Multi-disciplinary Minor – 04	IMO3615: Civil Procedure Code (CPC)	VI
	6	Multi-disciplinary Minor – 05	IMO3716: Intellectual Property Law	VII
	7	Multi-disciplinary Minor - 06	IMO3817: Cyber Law	VIII
Management & Finance	1	Multi-disciplinary Minor - 01	IMO3321: Microeconomics	III
	2	Multi-disciplinary Minor – 02	IMO3422: Corporate Social Responsibility	IV
	3	Multi-disciplinary Minor – 03	IMO3523: Principles of Accounting	V
	4	Multi-disciplinary Minor Lab – 03	IMO3524: Principles of Accounting Lab	V
	5	Multi-disciplinary Minor – 04	IMO3625: Business Intelligence	VI
	6	Multi-disciplinary Minor – 05	IMO3726: Marketing Research	VII
	7	Multi-disciplinary Minor - 06	IMO3827: Corporate Governance and Business Ethics	VIII

*rajendra*

## Civil Engineering Department

### List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	CE3316	Environmental Chemistry
Open Elective-I lab	CE3321	Environmental Chemistry Lab
Open Elective-II	CE3415	Project Management
Open Elective-III	CE3516	Environmental Impact Assessment

### List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	CE3326	Environmental Chemistry
Open Elective-I lab	CE3331	Environmental Chemistry Lab
Open Elective-II	CE3425	Project Management
Open Elective-III	CE3526	Environmental Impact Assessment

## Mechanical Engineering Department

### List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	ME3315	Industrial Instrumentation
Open Elective-I lab	ME3312	Industrial Instrumentation Lab
Open Elective-II	ME3416	Industrial Safety
Open Elective-III	ME3516	Entrepreneurship Development

### List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	ME3325	Control systems
Open Elective-I lab	ME3322	Instrumentation and Control Lab
Open Elective-II	ME3426	Industrial Safety
Open Elective-III	ME3526	Entrepreneurship

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## Electrical Engineering Department

### List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	EE3315	Sustainable Energy Systems
Open Elective-I lab	EE3316	Sustainable Energy Systems Lab
Open Elective-II	EE3417	Robotics and Automation
Open Elective-III	EE3518	Optimization Techniques or Electrical vehicle system

### List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	EE3325	Energy Systems Engineering
Open Elective-I lab	EE3326	Energy Systems Engineering Lab
Open Elective-II	EE3427	Power System Engineering
Open Elective-III	EE3528	Optimization Techniques

## Electronics & Telecommunications Engineering Department

### List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	EX3315	Digital System Design
Open Elective-I lab	EX3310	Digital System Design Laboratory
Open Elective-II	EX3415	Microcontroller and Interfacing
Open Elective-III	EX3516	Embedded Systems and RTOS

### List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	EX3325	Digital Electronics
Open Elective-I lab	EX3320	Digital Electronics Laboratory
Open Elective-II	EX3425	Microprocessor and Microcontroller
Open Elective-III	EX3526	Embedded Systems

*Ray Sultan*

## Information Technology Department

### List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	IT3316	Internet of Things
Open Elective-I lab	IT3311	Internet of Things Lab
Open Elective-II	IT3415	Robotics and Automation
Open Elective-III	IT3516	Augmented Reality and Virtual Reality

### List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	IT3326	Sensors and Internet of Things
Open Elective-I lab	IT3321	Sensors and Internet of Things Lab
Open Elective-II	IT3425	Robotics and Automation
Open Elective-III	IT3526	Multimedia and Reality

*Raj Kumar*

## Institute Level- Industrial orientated Open Elective

### AIDSML

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3311	Foundations of AI, Data Science, and Data Engineering”	III
Open Elective-I lab	IOE3312	Foundations for AI, Data Science, and Data Engineering Lab”	III
Open Elective-II	IOE3413	Advanced AI Integration	IV
Open Elective-III	IOE3514	AI Applications and Emerging Technologies	V

### AIoT

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3321	IoT Hardware and Sensors	III
Open Elective-I lab	IOE3322	IoT Hardware and Sensors lab	III
Open Elective-II	IOE3423	Fundamentals of AIoT	IV
Open Elective-III	IOE3524	Cloud Services for IoT	V

### ARVR

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3331	AR/VR Application Development	III
Open Elective-I lab	IOE3332	AR/VR Application Development lab	III
Open Elective-II	IOE3433	Fundamentals of Real-time Rendering	IV
Open Elective-III	IOE3534	Game Development with Unreal Engine	V

### ERP-SAP

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3341	ABAP Programming for SAP HANA	III
Open Elective-I lab	IOE3342	ABAP programming in Eclipse LAB	III
Open Elective-II	IOE3443	SAP HANA	IV
Open Elective-III	IOE3544	SAP PEOJECT	V

*Kay Arlbauer*

**BASKET OF BASIC SCIENCES COURSES (BSC)**

<b>LIST OF BSC COURSES OFFERED SEMESTER WISE</b>						
<b>SEMESTER I</b>						
<b>Sr. No.</b>	<b>Course Code</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1.	IT3101	Applied Chemistry	3	--	--	3
2.	IT3102	Matrix Algebra and Differential Calculus	3	1	--	4
3.	IT3106	Applied Chemistry Lab	--	--	2	1
<b>SEMESTER II</b>						
4.	IT3201	Applied Physics	3	--	--	3
5.	IT3202	Differential and Integral Calculus	3	1	--	4
6.	IT3206	Applied Physics Lab	--	--	2	1
<b>SEMESTER III</b>						
7.	IT3301	Probability and Random Process	2	--	--	2
<b>TOTAL</b>						<b>18</b>

*Raj Kumar*

**BASKET OF ENGINEERING SCIENCE COURSES (ESC)**

LIST OF ESC COURSES OFFERED SEMESTER WISE						
SEMESTER I						
Sr. No.	Course Code	Course	L	T	P	Credits
1.	IT3103	Basic Electronics Engineering	3	--	--	3
2.	IT3104	Programming for problem solving	3	--	-	3
3.	IT3105	Design Thinking	1	--	2	2
4.	IT3107	Programming for problem solving Lab	--	--	2	1
SEMESTER II						
4.	IT3203	Object Oriented Programming	3	--	--	3
5.	IT3207	Object Oriented Programming Lab	-	-	2	1
<b>TOTAL</b>						<b>13</b>

*Kay Buleau*

**BASKET OF PROGRAMME ELECTIVE COURSE (PEC)**

<b>LIST OF PEC COURSES OFFERED SEMESTER WISE</b>						
<b>SEMESTER V</b>						
<b>Sr. No.</b>	<b>Course Code</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1.	IT35*4	Program Elective-01	3	--	--	3
2.	IT35*0	Program Elective-01 Lab	--	--	2	1
<b>SEMESTER VI</b>						
3.	IT36*4	Program Elective-02	3	--	--	3
4.	IT3605	Internet of Things	3	--	--	3
5.	IT36*0	Program Elective-02 Lab	--	--	2	1
6.	IT3611	Internet of Things Lab	--	--	2	1
<b>SEMESTER VII</b>						
7.	IT37*3	Program Elective -03	2	--	--	2
<b>SEMESTER VIII</b>						
8.	IT38*3	Program Elective-04	2	--	--	2
9.	IT3804	Human Computer Interaction	3	--	--	3
<b>TOTAL</b>						<b>19</b>

*Rayulban*

**BASKET OF PROGRAMME CORE COURSE (PCC)**

LIST OF PCC COURSES OFFERED SEMESTER WISE						
SEMESTER II						
Sr. No.	Course Code	Course	L	T	P	Credits
1.	IT3204	Data Structures	3	--	--	3
2.	IT3208	Data Structures Lab	--	--	2	1
SEMESTER III						
3.	IT3302	Design and Analysis of Algorithms	3	--	--	3
4.	IT3303	Discrete Mathematics	3	--	--	3
5.	IT3304	Computer Organization and Architecture	2	--	--	2
6.	IT3309	Design and Analysis of Algorithms Lab	--	--	2	1
7.	IT3310	Programming Lab-I	--	--	2	1
SEMESTER IV						
8.	IT3401	Theory of Computer Science	3	1	--	4
9.	IT3402	Operating Systems	3	--	--	3
10.	IT3403	Database Management Systems	3	--	--	3
11.	IT3409	Database Management Systems Lab	--	--	2	1
SEMESTER V						
12.	IT3501	Computer Networks	3	--	--	3
13.	IT3502	Software Engineering	3	--	--	3
14.	IT3503	Machine Learning	3	--	--	3
15.	IT3507	Computer Networks Lab	--	--	2	1
16.	IT3508	Software Engineering Lab	--	--	2	1

*Lajbelean*

17.	IT3509	Machine Learning Lab	--	--	2	1
<b>SEMESTER VI</b>						
18.	IT3601	Advanced Operating Systems	3	--	--	3
19.	IT3602	Advanced Algorithms	3	--	--	3
20.	IT3603	Mobile Application Development	2	--	--	2
21.	IT3608	Advanced Algorithms Lab	--	--	2	1
22.	IT3609	Mobile Application Development Lab	--	--	2	1
<b>SEMESTER VII</b>						
23.	IT3701	Cloud Computing and Infrastructure Services	3	--	--	3
24.	IT3702	Cryptography and Cyber Security	3	--	--	3
25.	IT3706	Cloud Computing and Infrastructure Services Lab	-	-	2	1
<b>SEMESTER VIII</b>						
26.	IT3801	High Performance Computing	2	--	--	2
27.	IT3802	Advanced Computer Networks	3	--	--	3
28.	IT3806	High Performance Computing Lab	--	--	2	1
<b>TOTAL</b>						<b>60</b>

*Rajulbar*

**BASKET OF OPEN ELECTIVE OTHER THAN PARTICULAR PROGRAM (OE)**

<b>LIST OF OE COURSES OFFERED SEMESTER WISE</b>						
<b>SEMESTER III</b>						
<b>Sr. No.</b>	<b>Course Code</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1.	SD/O/I	Open Elective -01	3	--	--	3
2.	SD/O/I	Open Elective -01 Lab	--	--	2	1
<b>SEMESTER IV</b>						
3.	SD/O/I	Open Elective -02	2	--	--	2
<b>SEMESTER V</b>						
4.	SD/O/I	Open Elective -03	2	--	--	2
<b>TOTAL</b>						<b>08</b>

*Rajkulkarni*

**BASKET OF MULTIDISCIPLINARY MINOR (MDM)**

<b>LIST OF MDM COURSES OFFERED SEMESTER WISE</b>						
<b>SEMESTER III</b>						
<b>Sr. No.</b>	<b>Course Code</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1.	##	Multi-disciplinary Minor - 01	2	--	--	2
<b>SEMESTER IV</b>						
2.	##	Multi-disciplinary Minor - 02	2	--	--	2
<b>SEMESTER V</b>						
3.	##	Multi-disciplinary Minor - 03	3	--	--	3
4.	##	Multi-disciplinary Minor – 03 Lab	--	--	2	1
<b>SEMESTER VI</b>						
5.	##	Multi-disciplinary Minor - 04	2	--	--	2
<b>SEMESTER VII</b>						
6.	##	Multi-disciplinary Minor - 05	2	--	--	2
<b>SEMESTER VIII</b>						
7.	##	Multi-disciplinary Minor - 06	2	--	--	2
<b>TOTAL</b>						<b>14</b>

*Rajivkumar*

**BASKET OF Vocational And Skill Enhancement Course (VSEC)**

LIST OF VESC COURSES OFFERED SEMESTER WISE						
SEMESTER I						
Sr. No.	Course Code	Course	L	T	P	Credits
1.	IT3109	Computer Workshop	--	--	4	2
SEMESTER II						
2.	IT3209	Engineering Graphics Lab	2	--	2	3
SEMESTER IV						
7.	IT3408	Programming Lab-II	1	--	2	2
SEMESTER VI						
8.	IT3607	Programming Lab-III	1	--	2	2
						09

*Raykulban*

**BASKET OF HUMANITIES SOCIAL SCIENCE AND MANAGEMENT (HSSM)**

<b>LIST OF HSSM COURSES OFFERED SEMESTER WISE</b>						
<b>SEMESTER I</b>						
<b>Sr. No.</b>	<b>Course Code</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1.	IT3108	Professional Communication Skills	1	--	2	2
<b>SEMESTER II</b>						
2.	IT3205	Indian Knowledge Systems	--	--	--	2
<b>SEMESTER III</b>						
3.	IT3307	Universal Human Values	2	--	--	2
4.	IT3308	Economics for Engineer	2	--	--	2
<b>SEMESTER IV</b>						
5.	IT3406	Strategic Management	2	--	--	2
6.	IT3407	Professional Ethics	2	--	--	2
<b>TOTAL</b>						<b>12</b>

**BASKET OF EXPERIENTIAL LEARNING (EL)**

<b>LIST OF EL COURSES OFFERED SEMESTER WISE</b>						
<b>SEMESTER IV</b>						
<b>Sr. No.</b>	<b>Course Code</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1.	IT3410	Community Engagement Project	--	--	2	1
<b>SEMESTER VII</b>						
2.	IT3704	Research Methodology	3	--	--	3
3.	IT3707	Project Phase – I	--	--	16	8
<b>SEMESTER VIII</b>						
4.	IT3807	Project Phase – II	--	--	18	9
<b>TOTAL</b>						<b>21</b>

*Rajkumar*

**BASKET OF CO-CURRICULAR AND EXTRACURRICULAR ACTIVITIES(CCA)**

LIST OF CCA COURSES OFFERED SEMESTER WISE						
SEMESTER I						
Sr. No.	Course Code	Course	L	T	P	Credits
1.	IT3110	Yoga	--	--	2	1
SEMESTER II						
2.	IT3210	NCC/NSS/CSP/E-Cell	--	--	2	1
TOTAL						02

*Ray Bulker*

**BASKET OF MOOC**

LIST OF MOOC COURSES OFFERED SEMESTER WISE						
SEMESTER II						
Sr. No.	Course Code	Course	L	T	P	Credits
1.	IT3205	Indian Knowledge Systems (MOOC)	--	--	--	2
SEMESTER VIII (Industry Mode)						
1.	IT3808	MOOC – I	--	--	--	4
2.	IT3809	MOOC – II	--	--	--	4
3.	IT3810	Multi-disciplinary Minor – 06 (MOOC)	2	--	--	2
OR						
SEMESTER VIII ( Research Mode)						
1.	IT3812	MOOC – I	--	--	--	4
2.	IT3814	MOOC – II	--	--	--	4
<b>TOTAL</b>						<b>20</b>

*Kajalban*

**List of Elective subject:**

<b>Elective-I</b>	IT3514: Advanced Web and Mobile Applications	IT3524: Artificial Intelligence	IT3534: Advanced Database Management Systems	IT3544: Principles of Distributed Systems
<b>Elective-I Lab</b>	IT3510: Advanced Web and Mobile Applications Lab	IT3520: Artificial Intelligence Lab	IT3530: Advanced Database Management Systems Lab	IT3540: Principles of Distributed Systems Lab
<b>Elective-II</b>	IT3614: Advanced Software Engineering	IT3624: Advanced Machine Learning	IT3634: Data Warehousing and Data Mining	IT3644: Interactive Systems
<b>Elective-II Lab</b>	IT3610: Advanced Software Engineering Lab	IT3620: Advanced Machine Learning Lab	IT3630: Data Warehousing and Data Mining Lab	IT3640: Interactive Systems Lab
<b>Elective-III</b>	IT3713: Object Oriented Modelling and Design	IT3723: Deep Learning	IT3733: Big Data Analytics	IT3743: Bio-Informatics
<b>Elective-IV</b>	IT3813: Software Testing and Quality Assurance	IT3823: AI Development Platforms	IT3833: Data Science	IT3843: Quantum Computing

*Kajkulbani*

