

#### MVJ College of Engineering, Bengaluru

(An Autonomous Institute)

Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi, Recognised by UGC with 2(f) & 12 (B), Accredited by NBA & NAAC

Scheme of Teaching and Examination 2022-23

Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2022-23

# **III SEMESTER**

					Теа	ching	Hours/W	eek		Exar	nination		
SI. No.		Course	Course Title	Teaching Department	Theory/ lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Туре	Code			L	Т	Р	s	Dui				
1	BSC	MVJ22IO31	Maths for AV Communication	МА	2	2	0	-	03	50	50	100	3
2	IPCC	MVJ22IO32	Analysis and Design of Digital Circuits	ΙΟ	3	0	2	Y	03	50	50	100	4
3	IPCC	MVJ22IO33	Analog Electronic Circuits	ΙΟ	3	0	2	-	03	50	50	100	4
4	PCC	MVJ22IO34	Network Analysis	IO	3	0	0	-	03	50	50	100	3
5	PCCL	MVJ22IOL35	Analog and Digital Electronics Laboratory	ΙΟ	0	0	2	-	03	50	50	100	1
6	ESC	MVJ22IO36x	ESC/ETC/PLC	ΙΟ	3	0	0	-	03	50	50	100	3
7	SCR	MVJ22SCR37	Social Connect and Responsibility	IO	0	0	2	-	01	100	-	100	1
8	AEC/SEC	MVJ22A3YY1	AEC Vertical Level 1	Respective Vertical	1	0	2	-	02	50	50	100	2
		MVJ22NS39	National Service Scheme (NSS)	NSS coordinator									
9	МС	MVJ22PE39	Physical Education (PE) (Sports and Athletics)	PE Director	0	0	2	-	-	100	-	100	0
		MVJ22YO39	Yoga	Yoga Teacher									
10	BSC	MVJ22MATDIP-I	Additional Mathematics -I	MA	1	2	0	-	3	100	-	100	0
		•	·	Total	16	4	12	-	24	650	350	1000	21

Note: BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, PCCL: Professional Core Course laboratory, ESC: Engineering Science Course, ETC: Emerging Technology Course, PLC: Programming Language Course, SCR: Social Connect Responsibility, AEC: Ability Enhancement Course, SEC: Skill Enhancement Course, MC: Mandatory Course (Non-credit), L: Lecture, T: Tutorial, P: Practical, S: Self Study, SDA: Skill Development Activity, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

	Engineering Science Course (ESC/ETC/PLC)											
MVJ22IO361	Digital System Design using Verilog	MVJ22IO363	Computer Organization and Architecture									
MVJ22IO362	Sensors and Instrumentation	MVJ22IO364	Applied Numerical methods									
Ability Enhancement Course – III – MVJ22AXYYL (X is Semester, YY is vertical Number, L is level of the vertical)												
MVJ22A3011	Idea Box - Innovation	MVJ22A3071	IoT – Connecting the world									
MVJ22A3021	Tomorrow's Engineers – Engineering Solution to Societal Problems	MVJ22A3081	FSIPD –Ideas to Product									
MVJ22A3031	Tinkering Lab – Experiment and Conceptualize	MVJ22A3091	Software Development - Code your ideas									
MVJ22A3041	UAV – Develop Drones	MVJ22A3101	LabVIEW – Graphical Programming									
MVJ22A3051	Astronomy – Explore the space	MVJ22A3111	CNC Programming – Advanced Manufacturing									
MVJ22A3061	Robotics and Industrial Automation Lab – Design Robots	MVJ22A3121	NCC									

**Professional Core Course (IPCC):** Refers to Professional Core Course Theory Integrated with practical of the same course. Credit for IPCC can be 04 and its Teaching– Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./ B. Tech.) 2022-23 may please be referred.

**National Service Scheme** /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first Week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the Degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of Degree.

**IV SEMESTER** 

					Т	eaching H	ours/Week	4		Exar	nination	1	
SI. No.		Course	Course Title	Teaching Department	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Туре	Code			L	Т	Р	s	Du				
1	PCC	MVJ22IO41	Engineering Electromagnetics	ΙΟ	3	0	0	-	03	50	50	100	3
2	PCC	MVJ22IO42	Modern Control systems	IO	3	0	0	-	03	50	50	100	3
3	IPCC	MVJ22IO43	Principles of Communication Systems	ΙΟ	3	0	2	Y	03	50	50	100	4
4	PCCL	MVJ22IOL44	Communication laboratory	ΙΟ	0	0	2	-	03	50	50	100	1
5	ESC	MVJ22IO45x	ESC/ETC/PLC	IO	3	0	0	-	03	50	50	100	3
6	AEC/SEC	MVJ22A4YY2	AEC Vertical Level 2	Respective Verticals	1	0	2	-	02	50	50	100	2
7	BSC	MVJ22BI47	Biology For Engineers	ΙΟ	2	0	0	-	02	50	50	100	2
8	UHV	MVJ22UHV48	Universal human values course	ΙΟ	1	0	0	-	02	50	50	100	1
		MVJ22NS49	National Service Scheme (NSS)	NSS coordinator									
9	MC	MVJ22PE49	Physical Education (PE) (Sports and Athletics)	PE Director	0	0	2	-	-	100	-	100	0
		MVJ22YO49	Yoga	Yoga Teacher									
10	BSC	MVJ22MATDIP-II	Additional Mathematics-II	MA	1	2	0	-	3	100	-	100	0
				Total	17	2	8	-	24	600	400	1000	19

Note: PCC: Professional Core Course, IPCC: Integrated Professional Core Course, PCCL: Professional Core Course laboratory, ESC: Engineering Science Course, ETC: Emerging Technology Course, PLC: Programming Language Course, AEC: Ability Enhancement Course, SEC: Skill Enhancement Course, BSC: Basic Science Course, UHV: Universal Human Value Course, MC: Mandatory Course (Non-credit), L: Lecture, T: Tutorial, P: Practical, S: Self Study, SDA: Skill Development Activity, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

	Engineering Science Course (ESC/ETC/PLC)									
MVJ22IO451	Signals and Systems	MVJ22IO453	Operating System							
MVJ22IO452	Object Oriented Concepts with Java	MVJ22IO454	Engineering Statistics and Linear Algebra							

	Ability Enhancement Course / Skill Enhancement Course – IV - MVJ22AXYYL (X is Semester, YY is vertical Number, L is level of the vertical)											
MVJ22A4012	Idea Box - Innovation	MVJ22A4072	IoT – Connecting the world									
MVJ22A4022	Tomorrow's Engineers – Engineering Solution to Societal Problems	MVJ22A4082	FSIPD –Ideas to Product									
MVJ22A4032	Tinkering Lab – Experiment and Conceptualize	MVJ22A4092	Software Development - Code your ideas									
MVJ22A4042	UAV – Develop Drones	MVJ22A4102	LabVIEW – Graphical Programming									
MVJ22A4052	Astronomy – Explore the space	MVJ22A4112	CNC Programming – Advanced Manufacturing									
MVJ22A4062	Robotics and Industrial Automation Lab – Design Robots	MVJ22A4122	NCC									

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**National Service Scheme** /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first Week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the Degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses is mandatory for the award of Degree.

# **V SEMESTER**

					Tea	ching	Hours/W	eek		Exami	nation		
SI. No.			Teaching Department	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	uration in Hours	CIE Marks	SEE Marks	Total Marks	Credits	
	Туре	Code	-		L	Т	Р	S	D				
1	HSMC	MVJ22IO51	Technical Management	IO	3	0	0	-	03	50	50	100	3
2	IPCC	MVJ22I052	Computer Communication Networks	ΙΟ	3	0	2	-	03	50	50	100	4
3	PCC	MVJ22I053	Data Structure and Algoritms using Pytonn	ΙΟ	3	2	0	Y	03	50	50	100	4
4	PCCL	MVJ22IOL54	Data Structure and Algoritms using Python Laboratory	ΙΟ	0	0	2	-	03	50	50	100	1
5	PEC	MVJ22IO55x	Professional Elective Course-I	ΙΟ	3	0	0	-	03	50	50	100	3
6	PROJ	MVJ22IOP56	Mini Project	ΙΟ	0	0	4	-	03	100	-	100	2
7	AEC	MVJ22RMI57	Research Methodology and IPR	ΙΟ	3	0	0		03	50	50	100	3
8	MC	MVJ22ENV58	Environmental Studies	CV	2	0	0		02	50	50	100	2
		MVJ22NS59	National Service Scheme (NSS).	NSS coordinator									
9	MC	MVJ22PE59	Physical Education (PE) (Sports and Athletics).	PE Director	0	0	2	-	-	100	-	100	0
		MVJ22YO59	VJ22YO59 Yoga. Yoga Teacher										
				Total	17	2	10	-	23	550	350	900	22

Note: HSMC: Humanities, Social Science and Management Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, PCCL: Professional Core Course, Integrated Professional Core Course, PCCL: Professional Core Course, PCCL: Professional Core Course, PCCL: Professional Core Course, Integrated Professional Core Course, PCCL: Professional Core Course, PCCL: Professional Core Course, Integrated Professional Core Course, PCCL: P

Course Code	Professional Elective-I
MVJ22IO551	Database Management Systems
MVJ22IO552	MEMS and NANO Technology
MVJ22IO553	Mobile Application Development
MVJ22IO554	Fuzzy Logic and Neural Networks
MVJ22IO555	Innovation and Entrepreneurship

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**National Service Scheme** /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first Week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the Degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of Degree.

**Mini-project work:** Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary Mini- project can be assigned to an individual student or to a group having not more than 4 students.

### CIE procedure for Mini-project:

(i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(ii) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

### No SEE component for Mini-Project.

**Professional Elective Courses (PEC):** A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of Engineering. Each group will provide an option to select one course. The minimum number of students' strengths for offering a professional elective is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

					Teac	ching I	Hours/W	eek		Exa	nination	i	
Sl. No.	C	ourse	Course Title	Teaching Department	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	uration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Туре	Code	-		L	Т	Р	S	Ц				
1	IPCC	MVJ22IO61	Industrial Internet of Things	IO	3	0	2	Y	03	50	50	100	4
2	PCC	MVJ22IO62	Microcontroller and Embedded Systems	IO	3	0	0	-	03	50	50	100	3
3	PEC	MVJ22IO63X	Professional Elective-II	IO	3	0	0	-	03	50	50	100	3
4	OEC	MVJ22IO64X	Open Elective-I	IO	3	0	0	-	03	50	50	100	3
5	PROJ	MVJ22IOP65	Project Phase-I	IO	0	0	4	-	03	100	-	100	2
6	PCCL	MVJ22IOL66	Microcontroller and Embedded Systems Laboratory	IO	0	0	2	-	03	50	50	100	1
7	AEC/SDC	MVJ22A6YY3	AEC Vertical Level 3	Respective Vertical	1	0	2	-	02	50	50	100	1
8	HMSC	MVJ22IKK68	Indian Knowledge System	IO	1	0	0	-	02	50	50	100	1
		MVJ22NS69	National Service Scheme (NSS).	NSS coordinator									
9	МС	MVJ22PE69	Physical Education (PE) (Sports and Athletics).	Physical Education Director	0	0	2	-	-	100	-	100	0
		MVJ22YO69	Yoga.	Yoga Teacher									
				Total	13	0	12	-	20	500	300	800	18

Professional Core Course laboratory, AEC: Ability Enhancement Course, MC: Mandatory Course (Non-credit), L: Lecture, T: Tutorial, P: Practical S: Self Study, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Course Code	Professional Elective-II	<b>Course Code</b>	Open Elective-I
MVJ22IO631	Applications of IoT in Robotics	MVJ22IO641	Real Time Operating Systems
MVJ22IO632	Machine Learning	MVJ22IO642	Sensor Technology
MVJ22IO633	Industrial and Medical IoT	MVJ22IO643	Robotics and Automation
MVJ22IO634	Cryptography and Network Security	MVJ22IO644	Introduction to Industrial IOT

	Ability Enhancement Course / Skill Enhancement Course-V - MVJ22AXYYL (X is Semester, YY is vertical Number, L is level of the vertical)											
MVJ22A6013	Idea Box - Innovation	MVJ22A6073	IoT – Connecting the world									
MVJ22A6023	Tomorrow's Engineers – Engineering Solution to Societal Problems	MVJ22A6083	FSIPD –Ideas to Product									
MVJ22A6033	Tinkering Lab – Experiment and Conceptualize	MVJ22A6093	Software Development - Code your ideas									
MVJ22A6043	UAV – Develop Drones	MVJ22A6103	LabVIEW – Graphical Programming									
MVJ22A6053	Astronomy – Explore the space	MVJ22A6113	CNC Programming – Advanced Manufacturing									
MVJ22A6063	Robotics and Industrial Automation Lab – Design Robots	MVJ22A6123	NCC									

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**National Service Scheme** /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first Week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the Degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of Degree.

**Professional Elective Courses (PEC):** A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of Engineering. Each group will provide an option to select one course. The minimum number of students' strengths for offering professional electives is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

#### **Open Elective Courses:**

Students belonging to a particular stream of Engineering and Technology are not entitled to the open electives offered by their parent Department. However, they can opt for an elective offered by other Departments, provided they satisfy the prerequisite condition if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor. The minimum numbers of students' strength for offering Open Elective Course is 10. However, this condition shall not be applicable to class where the admission to the program is less than 10.

**Project Phase-I**: Students have to discuss with the mentor /guide and with their help he/she has to complete the literature survey and prepare the report and finally define the problem statement for the project work.

# **VII SEMESTER**

					Те	aching H	lours/We	ek		Exa	mination		
Sl. No.		Course	Course Title	Teaching Department	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Туре	Code			L	Т	Р	S	Du				
1	IPCC	MVJ22IO71	Big Data Analytics	IO	3	0	2	-	03	50	50	100	4
2	IPCC	MVJ22I072	Artificial Intelligence	IO	3	0	2	Y	03	50	50	100	4
3	PCC	MVJ22I073	Real Time Operating Systems	IO	4	0	0	-	03	50	50	100	4
4	PEC	MVJ22IO74X	Professional Elective-III	IO	3	0	0	-	03	50	50	100	3
5	OEC	MVJ22IO75X	Open Elective-II	IO	3	0	0	-	03	50	50	100	3
6	PROJ	MVJ22IOP76	Major Project Phase II	IO	0	0	12	-	03	100	100	200	6
				Total	16	0	16	-	18	350	350	700	24
	Note: IPCC: Integrated Professional Core Course, PCC: Professional Core Course, PEC: Professional Elective Course, OEC: Open Elective Course, PROJ: Project /Mini Project, L:												
Lectu	ecture, T: Tutorial, P: Practical S: Self Study, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.												

Course Code	Professional Elective-III	<b>Course Code</b>	Open Elective-II
MVJ22IO741	Privacy and security in IoT	MVJ22EC751	Soft Computing Techniques
MVJ22I0742	Design of Smart Cities	MVJ22EC752	Medical Electronics
MVJ22IO743	Software Engineering	MVJ22EC753	IoT and Wireless Sensor Networks
MVJ22IO744	Cloud Computing and IOT Analytics	MVJ22EC754	Industrial and Medical IoT

**Professional Elective Courses (PEC):** A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of Engineering. Each group will provide an option to select one course. The minimum number of students' strengths for offering professional electives is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

# **Open Elective Courses:**

Students belonging to a particular stream of Engineering and Technology are not entitled to the open electives offered by their parent Department. However, they can opt for an elective offered by other Departments, provided they satisfy the prerequisite condition if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor. The minimum numbers of students' strength for offering Open Elective Course is 10. However, this condition shall not be applicable to class where the admission to the program is less than 10. PROJECT WORK (MVJ22CVP76): The objective of the Project work is

- (i) To encourage independent learning and the innovative attitude of the students.
- (ii) To develop interactive attitude, communication skills, organization, time management, and presentation skills.
- (iii) To impart flexibility and adaptability.
- (iv) To inspire team working.
- (v) To expand intellectual capacity, credibility, judgment and intuition.
- (vi) To adhere to punctuality, setting and meeting deadlines.
- (vii) To install responsibilities to oneself and others.
- (viii) To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.
- **CIE procedure for Project Work:**
- (1) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.
- The CIE marks awarded for the project work, shall be based on the evaluation of the project work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.
- (2) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

SEE procedure for Project Work: SEE for project work will be conducted by the two examiners appointed by the University. The SEE marks awarded for the project work shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25.

# VIII SEMESTER

				Teaching Department	Teaching Hours/Week				Examination				
Sl. No.	Course		Course Title		Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	uration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Туре	Code			L	Т	Р	S	Du				
1	PEC	MVJ22IO81X	Professional Elective-IV (Online Courses, NPTEL/SWAYAM)	ΙΟ	-	-	-	-	-	-	-	-	3
2	OEC	MVJ22IO82X	Open Elective-III (Online Courses, NPTEL/SWAYAM)	ΙΟ	-	-	-	-	_	-	-	-	3
3	INT	MVJ22IOI83	Internship (Industry/Research) (14-20 weeks)		0	0	12	-	03	100	100	200	10
				Total	0	0	12	-	03	100	100	200	16
Note:	Note: PEC: Professional Elective Course, OEC: Open Elective Course, INT: Internship, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation,												

Course Code	Professional Elective-IV	<b>Course Code</b>	Open Elective-III
MVJ22IO811	NPTEL/SWAYAM	MVJ22IO821	NPTEL/SWAYAM
MVJ22I0812	NPTEL/SWAYAM	MVJ22IO822	NPTEL/SWAYAM
MVJ22I0813	NPTEL/SWAYAM	MVJ22IO823	NPTEL/SWAYAM
MVJ22I0814	NPTEL/SWAYAM	MVJ22IO824	NPTEL/SWAYAM

**Elucidation:** 

At the beginning of IV years of the program i.e., after VI semester, VII semester classwork and VIII semester **Research Internship** /**Industrial Internship** / **Rural Internship** shall be permitted to be operated simultaneously by the University so that students have ample opportunity for an internship. In other words, a good percentage of the class shall attend VII semester classwork and a similar percentage of others shall attend to Research Internship or Industrial Internship.

Research/Industrial /Rural Internship shall be carried out at an Industry, NGO, MSME, Innovation center, Incubation center, Start-up, center of Excellence (CoE), Study Centre established in the parent institute and /or at reputed research organizations/institutes.

The mandatory Research internship /Industry internship / Rural Internship is for 14 to 20 Weeks. The internship shall be considered as a head of passing and shall be considered for the award of a Degree. Those, who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent University examination after satisfying the internship requirements.

**Research internship:** A research internship is intended to offer the flavor of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

**Industry internship:** Is an extended period of work experience undertaken by students to supplement their Degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints.

**Rural Internship:** Rural development internship is an initiative of Unnat Bharat Abhiyan Cell, RGIT in association with AICTE to involve students of all departments studying in different academic years for exploring various opportunities in techno-social fields, to connect and work with Rural India for their upliftment.

The faculty coordinator or mentor has to monitor the student's internship progress and interact with them to guide for the successful completion of the internship. The students are permitted to carry out the internship anywhere in India or abroad. University shall not bear any expenses incurred in respect of the internship.

With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (within or outside the state or abroad), provided favorable facilities are available for the internship and the student remains regularly in contact with the internal guide. University shall not bear any cost involved in carrying out the internship by students. However, students can receive any financial assistance extended by the organization.

Professional Elective /Open Elective Course: These are ONLINE courses suggested by the respective Board of Studies. Details of these courses shall be made available for students by the respective board of studies well before starting of semester.

**Dean Academics** 

HOD