

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

Department of Computer Science and Engineering

III SEMESTER

					Teach	ing I	Hours/V	Veek		Exam	ination		
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	Dur			•	
1	BSC	MVJ22CS31	Mathematics for Computer Science	MA	2	2	0	-	03	50	50	100	3
2	IPCC	MVJ22CS32	Operating systems	CS	3	0	2	Y	03	50	50	100	4
3	PCC	MVJ22CS33	Digital Design and Computer Organization	CS	3	0	2	-	03	50	50	100	3
4	PCC	MVJ22CS34	DataStructuresandApplication	CS	3	0	0	-	03	50	50	100	3
5	PCCL	MVJ22CSL35	DataStructuresLab	CS	0	0	2	-	03	50	50	100	1
6	ESC	MVJ22CS36X	ESC/ETC/PLC	CS	3	0	0	-	03	50	50	100	3
7	SCR	MVJ22SCR37	Social Connect and Responsibility	CS	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	MC	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	15/16	2/4	12/12	-	21/24	550/650	350/350	900/1000	20

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/P	PLC)
MVJ22CS361	FunctionalProgrammingusingJava	MVJ22CS363	DataAnalyticswithEXCEL
MVJ22CS362	PythonProgrammingforAI&ML	MVJ22CS364	DataAnalyticswithR
	AbilityEnhancementCourse–III – MVJ22AXYYL (X is S	emester, YY is vertio	cal Number, L is level of the vertical)
MVJ22A3011	Idea Box - Innovation	MVJ22A3071	IOT– Connecting the world
MVJ22A3021	Tomorrow's Engineers – Engineering Solution to Societal	MVJ22A3081	FSIPD–Ideas to Product
	Problems		
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– Larning 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 (noSEE).

However, questions from the practical part of IPCCs hall 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

NationalServiceScheme/PhysicalEducation/Yoga:Allstudentshavetoregisterforanyoneofthe coursesnamelyNationalService Scheme(NSS),PhysicalEducation (PE)(Sports and Athletics), andYoga(YOG) with the concerned coordinatorof the course during the first Week of III semesters. Activities shall be carriedout between III semesterto the VIsemester(for4 semesters). Successful completionoftheregisteredcourse andrequisite CIE score ismandatory forthe awardofthe Degree. The eventsshallbeappropriatelyscheduledbythecollegesandthesameshallbereflectedinthecalendarpreparedfortheNSS,PE,andYogaactivities. Thesecoursesshallnotbeconsid eredforverticalprogressionaswellasforthecalculationofSGPAandCGPA,butcompletionofthecourseismandatoryfortheawardofDegree.

IV SEMESTER

					Теа	aching H	ours/Wee	ek		Exan	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
ſ	Туре	Code	1		L	Т	Р	S					
1	PCC	MVJ22CS41	Analysis and Design of Algorithms	CS	3	0	0	-	03	50	50	100	3
2	IPCC	MVJ22CS42	Microcontrollers	CS	3	0	2	-	03	50	50	100	4
3	IPCC	MVJ22CS43	DatabaseManagementSystems	CS	3	0	2	Y	03	50	50	100	4
4	PCCL	MVJ22CSL44	Analysisand DesignofAlgorithms Lab	CS	0	0	2	-	03	50	50	100	1
5	ESC	MVJ22CS45X	ESC/ETC/PLC	CS	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	CS	2	0	0	-	02	50	50	100	2
8	UHV	MVJ22UHV48	Universal human values course	CS	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	16/17	0/2	8/8	-	21/24	500/600	400/400	900/1000	20

Note: 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 Co	urse (ESC/ETC/PLC)	
MVJ22CS451	DiscreteMathematicalStructures	MVJ22CS453	OptimizationTechnique
MVJ22CS452	GraphTheory	MVJ22CS454	Data Visualization with Python
A	bilityEnhancementCourse/SkillEnhancementCourse –IV - MVJ22A	XYYL (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

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– Larning 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 (noSEE).

However, questions from the practical part of IPCCs hall 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

NationalServiceScheme/PhysicalEducation/Yoga:Allstudentshavetoregisterforanyoneofthe coursesnamelyNationalService Scheme(NSS),PhysicalEducation (PE)(Sports and Athletics), andYoga(YOG) with the concerned coordinator of the course during the first Week of III semesters. Activities shall be carriedout between III semester to the VIsemester(for4 semesters). Successful completionoftheregisteredcourse and requisite CIE score ismandatory for the awardofthe Degree. The eventsshallbeappropriatelyscheduledbythecollegesandthesameshallbereflectedinthecalendarpreparedfortheNSS,PE,andYogaactivities. Thesecoursesshall notbeconsideredforverticalprogressionaswellasforthecalculationofSGPAandCGPA,butcompletionofthecoursesismandatoryfortheawardof Degree.

V SEMESTER

					Tead	ching	Hours/V	Veek		Exami	nation	-	
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					
1	HSMS	MVJ22CS51	SoftwareEngineeringand Project Management	CS	3	0	0	-	03	50	50	100	3
2	IPCC	MVJ22CS52	ComputerNetworks	CS	3	0	2	Y	03	50	50	100	4
3	PCC	MVJ22CS53	TheoryofComputation	CS	4	0	0	-	03	50	50	100	4
4	PCCL	MVJ22CSL54	DataVisualizationLab	CS	0	0	2	_	03	50	50	100	1
5	PEC	MVJ22CS55X	Professional Elective-I	CS	3	0	0	_	03	50	50	100	3
6	PROJ	MVJ22CSP56	Mini Project	CS	0	0	4	-	03	100	-	100	2
7	AEC	MVJ22RMI57	Essence of Research Methodology and IPR	CS	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	Yoga.	Yoga Teacher									
				Total	18	0	10	-	23	550	350	900	22

Course, PCCL: Professional Core Course laboratory, PEC: Professional Elective Course, PROJ: Project /Mini Project. MC: Mandatory Course (Non-credit), AEC: Ability Enhancement Course,, PROJ: Project /Mini Project. SEC: Skill Enhancement Course, L: Lecture, T: Tutorial, P: Practical S: Self Study, SDA: Skill Development Activity, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation

Course Code	Professional Elective-I
MVJ22CS551	Computer Graphics
MVJ22CS552	Artificial Intelligence
MVJ22CS553	Unix System Programming
MVJ22CS554	Distributed Systems

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However, questions from the practical part of IPCCs hall 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

NationalServiceScheme/PhysicalEducation/Yoga: Allstudentshavetoregisterforanyoneofthe coursesnamelyNationalService Scheme(NSS), PhysicalEducation (PE)(Sports and Athletics), andYoga(YOG) with the concerned coordinator of the course during the first Week of III semesters. Activities shall be carriedout between III semester (for4 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-projectwork:MiniProjectisalaboratory-oriented/handsoncoursethatwillprovideaplatformtostudentstoenhancetheirpracticalknowledgeandskillsbythe 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.

CIEprocedureforMini-project:

(i) Singlediscipline:TheCIEmarksshallbeawardedbyacommitteeconsistingoftheHeadoftheconcernedDepartmentandtwofacultymembersoftheDepartment, 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 Evaluations hall 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.

NoSEEcomponentforMini-Project.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering
andTechnologycurriculum.MultidisciplinarycoursesthatareaddedsupplementthelatesttrendandadvancedtechnologyintheselectedstreamofEngineering.Each
groupwillprovide anoptionto selectone course.Theminimum numberofstudents' strengthsforofferingaprofessionalelective
is10.However,thisconditionalshallnotbeapplicabletocaseswheretheadmissiontotheprogramislessthan10.

VI SEMESTER

					Tea	ching	Hours/V	/eek	Ι	Examir	nation		
Sl. No.	C	ourse	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					
1	IPCC	MVJ22CS61	Cloud Computing (Open Stack /Google)	CS	3	0	2	Y	03	50	50	100	4
2	PCC	MVJ22CS62	Machine Learning	CS	3	0	0	-	03	50	50	100	3
3	PEC	MVJ22CS63X	Professional Elective-II	CS	3	0	0	-	03	50	50	100	3
4	OEC	MVJ22CS64X	Open Elective-I	CS	3	0	0	-	03	50	50	100	3
5	PROJ	MVJ22CSP65	Major Project Phase-I	CS	0	0	4	-	03	100	-	100	2
6	PCCL	MVJ22CSL66	Machine Learning lab	CS	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	HSMC	MVJ22IKK68	Indian Knowledge System	CS	1	0	0	-	02	50	50	100	1
		MVJ22NS69	National Service Scheme (NSS).	NSS coordinator									
9	MC	MVJ22PE69	Physical Education (PE) (Sports and Athletics).	Physical Education Director	0	0	2	-	-	100	-	100	0
		MVJ22YO69	Yoga.	Yoga Teacher									
				Total	14	0	12	-	22	550	350	900	18
Proje	ote: Note: IPCC: Integrated Professional Core Course, PCC: Professional Core Course, PEC: Professional Elective Course, OEC: Open Elective Course, PROJ: oject /Mini Project, PCCL: Professional Core Course laboratory, AEC: Ability Enhancement Course, HSMC: humanity social science management course MC: andatory 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	Course Code	Open Elective-I
MVJ22CS631	Blockchain Technology	MVJ22CS641	Introduction to Data Structures
MVJ22CS632	Computer Vision	MVJ22CS642	Fundamentals of Operating Systems
MVJ22CS633	Compiler Design	MVJ22CS643	Mobile Application Development
MVJ22CS634	Advanced Java	MVJ22CS644	Introduction to AI

ļ	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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Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technologycurriculum. 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.

OpenElectiveCourses:

Studentsbelongingto aparticularstreamof EngineeringandTechnologyare notentitledto theopenelectives offeredbytheirparentDepartment.However,theycan opt for an elective offeredby otherDepartments, provided they satisfy the prerequisite conditionif any. Registration open electivesshall 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 conditionshallnotbeapplicabletoclasswheretheadmissiontotheprogramislessthan 10.

ProjectPhase-I:Studentshavetodiscusswiththementor/guideandwiththeirhelphe/shehastocompletetheliteraturesurveyandpreparethereportandfinally definetheproblemstatementfortheproject work.

VII SEMESTER

					Теас	ching H	lours/W	/eek		Exan	nination	-	
Sl. No.		Course	Course Title	Teaching Department	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	ation in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Туре	Code			L	Т	Ρ	S	Dura				
1	IPCC	MVJ22CS71	InternetofThings	CS	3	0	2	-	03	50	50	100	4
2	IPCC	MVJ22CS72	ParallelComputing	CS	3	0	2	Y	03	50	50	100	4
3	PCC	MVJ22CS73	Cryptography&NetworkSecurity	CS	4	0	0	-	03	50	50	100	4
4	PEC	MVJ22CS74X	Professional Elective-III	CS	3	0	0	-	03	50	50	100	3
5	OEC	MVJ22CS75X	Open Elective-II	CS	3	0	0	-	03	50	50	100	3
6	PROJ	MVJ22CSP76	Major Project Phase -II	CS	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: Lecture, T: Tutorial, P: Practical S: Self Study, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.												

Course Code	Professional Elective-III	Course Code	Open Elective-II
MVJ22CS741	DeepLearning	MVJ22CS751	IntroductiontoDBMS
MVJ22CS742	NaturalLanguageProcessing	MVJ22CS752	IntroductiontoAlgorithms
MVJ22CS743	SoftComputing	MVJ22CS753	SoftwareEngineering
MVJ22CS744	BigDataAnalytics	MVJ22CS754	Cyber Security

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technologycurriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in these lecteds tream 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.

OpenElectiveCourses:

Studentsbelongingto aparticularstreamof EngineeringandTechnologyare notentitledto theopenelectives offeredbytheirparentDepartment.However,theycan opt for an elective offeredby otherDepartments, provided they satisfy the prerequisite conditionif any. Registration open electivesshall 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.

PROJECTWORK(MVJ22CSP76): The objective of the Project work is

(i) Toencourageindependentlearningandtheinnovativeattitudeofthestudents.

(ii) Todevelopinteractiveattitude, communicationskills, organization, timemanagement, and presentationskills.

(iii) Toimpartflexibilityandadaptability.

(iv) Toinspireteamworking.

(v) Toexpandintellectualcapacity,credibility,judgmentandintuition.

(vi) Toadheretopunctuality, setting and meeting deadlines.

(vii) Toinstallresponsibilitiestooneselfandothers.

(viii)To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhancecommunication skills, involve ingroup discussion to present and exchange ideas.

CIEprocedureforProjectWork:

(1) Singlediscipline: 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.

TheCIEmarksawardedfortheprojectwork, shall be based on the evaluation of the project work Report, project presentations kill, and question and answerses sion in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

(2) Interdisciplinary: ContinuousInternalEvaluationshallbegroup-wiseat the collegelevelwith the participationofallguides of the college.Participation of externalguide/s, if any, is desirable. The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentationskill, 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

			Course Title	Teaching Department	Teaching Hours/Week				Examination				
Sl. No.	Course				Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	ation in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Туре	Code			L	Т	Р	S	Dura				
1	PEC	MVJ22CS81X	Professional Elective-IV (Online Courses, NPTEL/SWAYAM)	CS	-	-	-	-	_	-	-	-	3
2	OEC	MVJ22CS82X	Open Elective-III (Online Courses, NPTEL/SWAYAM)	CS	-	-	-	-	-	-	-	-	3
3	INT	MVJ22CSI83	Internship (Industry/Research) (14-20 weeks)		0	0	12	-	03	100	100	200	10
			•	Total	0	0	12	-	03	100	100	200	16
Note: INT: Internship, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation, PEC: Professional ElectiveCourse, OEC: OpenElective Course.													

Course Code	Professional Elective-IV	Course Code	Open Elective-III
MVJ22CS811	NPTEL/SWAYAM	MVJ22CS821	NPTEL/SWAYAM
MVJ22CS812	NPTEL/SWAYAM	MVJ22Cs822	NPTEL/SWAYAM
MVJ22CS813	NPTEL/SWAYAM	MVJ22CS823	NPTEL/SWAYAM
MVJ22CS814	NPTEL/SWAYAM	MVJ22CS824	NPTEL/SWAYAM

Elucidation:

AtthebeginningofIVyearsoftheprogrami.e., afterVIsemester, VIIsemesterclasswork and VIIIsemester **ResearchInternship/IndustrialInternship/RuralInternship** shall be permitted to be operated simultaneously by the University so that students have ample opport unity for an internship. In other words, agood percentage of the class shall attend VII semester classwork and a similar percentage of others shall attend to Research Internship or Industrial Internship or Rural Internship.

Research/Industrial /RuralInternship 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 consideredforthe awardofa Degree. Those, who donottake up/complete the internshipshallbedeclared failandshallhave to complete itduring 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 periodofworkexperienceundertakenbystudents tosupplement 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.

Thefacultycoordinatorormentorhastomonitorthestudent'sinternshipprogressandinteractwiththemto guide forthe 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 shallnot bear any cost involved in carrying out the internship by students. However, students can receive any financial assistance extended by the organization.

ProfessionalElective/OpenElectiveCourse:TheseareONLINEcoursessuggestedbythe respectiveBoardofStudies.Details of these courses shall be made available for students by the respective board of studies well before starting of semester.

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