

FACULTY OF SCIENCE

COURSE STRUCTURE (Choice Based Credit System)

MASTER OF SCIENCE (GEOINFORMATICS)

Aegis: Charutar Vidya Mandal (Estd.1945)

Effective from Academic Year: 2022-23

Opp. Shastri Maidan, Beside BVM College, Vallabh Vidyanagar, Dist: Anand, Gujarat - 388120 (O): 02692-238001 | Email: adminoffice@cvmu.edu.in | www.cvmu.edu.in



Science

Programme Name:

Master of Science (Geoinformatics)

Programme Structure Summary

		SI	EMES	ΓER 1							
		-	Те	achin	ıg Sch	eme	INT(T)	EXT(T)	INT(P)	EXT(P)	Grand Total
Course Group	Course Name	Cr	Т	Р	Tu	Cont. Hrs	Max./ Passing	Max./ Passing	Max./ Passing	Max./ Passing	Max./ Passing
Core	Principles of Geographical Information System	4	4	0	0	4	50/20	50/20			100/40
Core	Principles and Applications of GPS	4	4	0	0	4	50/20	50/20			100/40
Core	Principles of Remote Sensing	4	4	0	0	4	50/20	50/20			100/40
Core	Comprehensive Viva-Voce	1	0	0	0	-				50/20	50/20
*Elective	Python Programming	4	4	0	0	4	50/20	50/20			100/40
*Elective	Photogrammetry	4	4	0	0	4	50/20	50/20			100/40
Core	RDBMS and Python Programming Lab	4	0	8	0	8			50/20	50/20	100/40
Core	GIS Lab	4	0	8	0	8			50/20	50/20	100/40

* Any One Elective

	SEMESTER 2													
Course Group	Course Name	Cr	Те Т	eachin P	g Sch Tu	eme Cont.	INT(T) Max./	EXT(T) Max./	INT(P) Max./	EXT(P) Max./	Grand Total Max./			
			1	г	Iu	Hrs	Passing	Passing	Passing	Passing	Passing			
Core	Digital Image Processing	4	4	0	0	4	50/20	50/20			100/40			
Core	Spatial Analysis and Modelling	4	4	0	0	4	50/20	50/20			100/40			
Core	Web Programming	4	4	0	0	4	50/20	50/20			100/40			
Core	Comprehensive Viva-Voce	1	0	0	0	-				50/20	50/20			
*Elective	Natural Resources Management	4	4	0	0	4	50/20	50/20			100/40			
*Elective	Disaster Management	4	4	0	0	4	50/20	50/20			100/40			
Core	Image Processing Lab	4	0	8	0	8			50/20	50/20	100/40			
Core	Core Web Programming Lab				0	8			50/20	50/20	100/40			

* Any One Elective



e: Science

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	SEMESTER 3													
			Τe	eachin	ıg Sch	eme	INT(T)	EXT(T)	INT(P)	EXT(P)	Grand Total			
Course Group	Course Name	Cr	Т	Р	Tu	Cont. Hrs	Max./ Passing	Max./ Passing	Max./ Passing	Max./ Passing	Max./ Passing			
Core	Spatial Data Infrastructure & Web GIS Services	4	4	0	0	4	50/20	50/20			100/40			
Core	QGIS Tools and Applications Development	4	4	0	0	4	50/20	50/20			100/40			
Core	Mobile GIS	4	4	0	0	4	50/20	50/20			100/40			
Core	QGIS Lab	4	0	8	0	8			50/20	50/20	100/40			
Core	Mobile GIS Lab	4	0	8	0	8			50/20	50/20	100/40			
Core	Comprehensive Viva- Voce	1	0	0	0	-				50/20	50/20			
*Elective	Geoinformatics Application in Governance	4	4	0	0	4	50/20	50/20			100/40			
*Elective	Geoinformatics Application in Utility Management	4	4	0	0	4	50/20	50/20			100/40			

* Any One Elective

	SEMESTER 4														
			Те	achin	ıg Sch	eme	INT(T)	EXT(T)	INT(P)	EXT(P)	Grand Total				
Course Group	Course Name	Cr	Т	Р	Tu	Cont. Hrs	Max./ Max./ Passing Passing		Max./ Passing	Max./ Passing	May /				
Core	Project Work	24							300/ 120	300/ 120	600/ 240				
Core	Comprehensive Viva-Voce	1								50/20	50/20				



Science

Programme Name:

Master of Science (Geoinformatics)

Programme Outcomes (PO)

P0-1	To create professionals in the field of Geospatial Technology
PO-2	To develop Hand on Learning experience to provide solutions to solve real life geospatial
	problems.
PO-3	An ability to share theoretical and practical knowledge in both teaching and research as
	well as in industries.
PO-4	Foster cooperation among students enabling them to connect and contribute towards
	teamwork activities.
PO-5	The comprehensive syllabus promotes and develops a thorough knowledge of concepts,
	methods, and theory.
P0-6	Students will learn how to prepare map based on GIS by using the modern geographical
	map-making techniques.
PO-7	Acquire the ability to engage in independent and life-long learning in the broadest context
	social, environmental, and technological changes
PO-8	Take informed actions after identifying the assumptions that frame our thinking and
	actions, checking out the degree to which these assumptions are accurate and valid, and
	looking at our ideas and decisions from different perspectives.



Programme Name:

Science

Master of Science (Geoinformatics)

Programme Specific Outcomes (PSO)

PSO-1	Apply fundamental and advanced concepts of GIS, GPS, Remote Sensing, and Photogrammetry to collect, process, analyze, and visualize spatial data effectively.
PSO-2	Develop practical skills in using contemporary geospatial tools such as QGIS, Mobile GIS applications, Spatial Data Infrastructure, and Web GIS services for real-world problem solving.
PSO-3	Design and implement geospatial solutions for diverse domains including disaster management, governance, and utility services through independent project work and internships.
PSO-4	Demonstrate proficiency in programming languages and database management relevant to geoinformatics, enhancing capability to develop custom GIS tools and web applications.

	Faculty Name:	Science	
	Programme Name:	Master of Science (Geoinformatics)	
NIVERSITY Charatar Ways Mandal / Estit 1945!	Semester:	I Academic Batch:	2022-23

Course Group	,	Course Code	Course Name Co		Τe	achin	ıg Sch	eme	Evalı	Assessment/ Evaluation Type		ernal am ation rs.)	INT(T) Max./	EXT(T) Max./	Max./	EXT(P) Max./ Passing	Grand Total Max./
					Т	Р	Tu	Cont. Hrs	Т	Р	Т	Р	Passing	Passing	Passing	Passing	Passing
Core	Interdisciplinary	201400101	Principles of Geographical Information System	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400102	Principles and Applications of GPS	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400103	Principles of Remote Sensing	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400104	Comprehensive Viva-Voce	1	0	0	0	-		Р						50/20	50/20
*Elective	Interdisciplinary	201400107	Python Programming	4	4	0	0	4	Т		2		50/20	50/20			100/40
*Elective	Interdisciplinary	201400108	Photogrammetry	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400109	RDBMS and Python Programming Lab	4	0	8	0	8		Р		3			50/20	50/20	100/40
Core	Interdisciplinary	201400110	GIS Lab	4	0	8	0	8		Р		3			50/20	50/20	100/40
		·	# T = Theory, P = P	racti	cal, T	1 = TI	utoria	al									
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[Dean / Director]:

NAC	Faculty Name:	Science	
	Programme Name:	Master of Science (Geoinformatics)	
UNIVERSITY Argle: Charunaw Weys Mandell Test (1945)	Semester:	II Academic Batch:	2022-23

Course Group	Lours Cours		Course Name	Name Cr		achin	g Sch	eme	Assess Evalu Ty	Exte Exa Dura (Hi	ation	INT(T) Max./ Passing	Max./	INT(P) Max./ Passing	Max./	Grand Total Max./	
					Т	Р	Tu	Cont. Hrs	Т	Р	Т	Р	rassing	rassing	rassing	rassing	Passing
Core	Interdisciplinary	201400201	Digital Image Processing	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400202	Spatial Analysis and Modelling	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400203	Web Programming	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400204	Comprehensive Viva-Voce	1	0	0	0	-		Р						50/20	50/20
*Elective	Interdisciplinary	201400207	Natural Resources Management	4	4	0	0	4	Т		2		50/20	50/20			100/40
*Elective	Interdisciplinary	201400208	Disaster Management	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400209	Image Processing Lab	4	0	8	0	8		Р		3			50/20	50/20	100/40
Core	Interdisciplinary		Web Programming Lab	4	0	8	0	8		Р		3			50/20	50/20	100/40

T = Theory, P = Practical, Tu = Tutorial

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Programme Name:

Master of Science (Geoinformatics)

III Semester:

Science

Academic Batch:

2022-23

Course Group	Board of Studies / Faculty Ownership			Cr	Те	achin	ig Sch	eme	Assess Evalu Ty	'			Max./	EXT(T) Max./	Max./	Max./	Grand Total Max./
					Т	Р	Tu	Cont. Hrs	Т	Р	Т	Р	Passing	rassing	rassing	rassing	Passing
Core	Interdisciplinary	201400301	Spatial Data Infrastructure & Web GIS Services	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400302	QGIS Tools and Applications Development	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400303	Mobile GIS	4	4	0	0	4	Т		2		50/20	50/20			100/40
Core	Interdisciplinary	201400304	QGIS Lab	4	0	8	0	8		Р		3					50/20
Core	Interdisciplinary	201400305	Mobile GIS Lab	4	0	8	0	8		Р		3	50/20	50/20			100/40
Core	Interdisciplinary	201400306	Comprehensive Viva- Voce	1	0	0	0	-		Р						50/20	100/40
*Elective	Interdisciplinary	201400307	Geoinformatics Application in Governance	4	4	0	0	4	Т		2		50/20	50/20			100/40
*Elective	Interdisciplinary	201400308	Geoinformatics Application in Utility Management	4	4	0	0	4	Т		2		50/20	50/20			100/40

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Program		ulty Name: nme Name: Semester:	Master of Science (Geoinformatics)								Aca	adem	nic Batch	1: 2	2022-23	 	
Course Group	Board of Studies / Faculty Ownership	Course Code	Course Name	Cr	Teaching Scheme T P Tu Cont. Hrs				Assess Evalu Ty T	,	External Exam Duration (Hrs.) T P		INT(T) Max./ Passing	EXT(T) Max./ Passing	Max./	EXT(P) Max./ Passing	Grand Total Max./ Passing
Core	Interdisciplinary	201400401	Project Work	24								2			300/ 120	300/ 120	600/ 240
Core	Interdisciplinary	201400402	Comprehensive Viva-Voce	1								2				50/20	50/20
# T = Th	# T = Theory, P = Practical, Tu = Tutorial																
Name & Sign						Name & Sign										-	

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