

# M.Tech. Geoinformatics



**Department of Geography**  
School of Geosciences, Bharathidasan University  
Tiruchirappalli – 620 024

## **M.TECH. GEOINFORMATICS PROGRAMME**

Choice Based Credit System [CBCS]

Regulations and Syllabus (2012 – 2014 batch onwards)

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### **REGULATIONS**

#### **PROGRAMME**

M.Tech. Geoinformatics is an autonomous programme through Choice Based Credit System [CBCS] offered by the Department of Geography, Bharathidasan University. During the course of study, the candidates will have an opportunity for a strong exposure to the concepts in geoinformatics and also to the advanced level of applications.

#### **ELIGIBILITY**

Post Graduate in Geography / Applied Geography / Geology / Applied Geology/ Geoinformatics / Spatial Information Technology / Environmental Sciences / Agriculture / Forestry or B.E / B.Tech in Civil Engineering / Agricultural Engineering / Geoinformatics degree or an examination of other University accepted by the syndicate of this University as equivalent are eligible for admission to the M. Tech. Geoinformatics programme. Admission for the programme will be based on the aggregated average of the performance of the candidate in the above programme examinations and also through the entrance examination conducted by the Department.

#### **DURATION OF THE PROGRAMME**

Total duration of the programme:	Two academic years
Number of semesters in each Academic Year:	Two
Odd semester:	July - November
Even semester:	December - April

#### **SCHEME OF EXAMINATION**

Examination will be conducted at the end of each semester. A candidate who fails in a course or courses can reappear for the same in the subsequent semesters. A candidate failing in the dissertation shall be required to resubmit his work in the next semester. The curriculum structure gives a detailed account of the scheme of courses.

#### **PASSING MINIMUM OF MARKS**

A candidate has to secure not less than 45 per cent of the marks in the End-Semester Examination (ESE) and 50 per cent of the marks in the aggregate of the marks secured in the Continuous Internal Assessment (CIA) and the End-Semester Examination (ESE) in each of the courses including practical. Out of 100 marks in each course, 40 per cent of marks are for Continuous Internal Assessment and 60 per cent for University End Semester Examinations.

### **CLASSIFICATION OF SUCCESSFUL CANDIDATES**

Candidates who secure not less than 50 percent of the aggregate marks in the whole examination shall be declared to have passed in the examination. Candidates who obtain 75% of the marks in the aggregate shall be declared to have passed the examination in first class with distinction provided that they pass all the examination prescribed for the programme at first appearance. Candidates who secure not less than 60 per cent of the aggregate marks in the whole examination shall be declared to have passed the examination in first class. All other successful candidates shall be declared to have passed in the second class. A Candidate who has passed all the examinations of the programme at first appearance with maximum marks in aggregate will be given rank certificate.

### **PATTERN OF QUESTION PAPER**

The question paper in each the course would comprise of Part A, Part B and Part C.

Part-A Students have to answer 10 questions (10 X 2 = 20 marks)

Part-B There will be 5 questions in either or pattern (5 X 4 = 20 marks)

Part-C Two out of three questions have to be answered (2 X 10 = 20marks)

### **STATEMENT OF MARKS AND PROVISIONAL DEGREE CERTIFICATE**

The final consolidated statement of marks and provisional degree certificate will be signed and issued by the Controller of Examinations, Bharathidasan University.

### **CONFERMENT OF THE DEGREE**

A candidate shall be eligible for the conferment of the degree after he /she has passed all the examinations prescribed to the programme including the labs and dissertation.

### **REVISION OF REGULATION AND SYLLABUS**

The Department Committee may from time to time scrutinize and change the regulations and the syllabus as and when necessary. However, the Department follows other general guidelines of the University, which are not laid down in this regulation.

## M.TECH. GEOINFORMATICS

Choice Based Credit System (CBCS)

### CURRICULUM STRUCTURE

Semester	Courses	Instruction Hrs/week	Exam Hrs	Credits	Marks		Total
					CIA	ESE	
<b>I</b>	CC - I	4	3	4	40	60	100
	CC - II	4	3	4	40	60	100
	CC - III	4	3	4	40	60	100
	EC - I	3	3	3	40	60	100
	EC - II	3	3	3	40	60	100
	CC - IV (Laboratory)	6	3	3	40	60	100
	CC - V (Laboratory)	6	3	3	40	60	100
<b>Credits</b>		-		<b>24</b>			
<b>II</b>	CC - VI	4	3	4	40	60	100
	CC - VII	4	3	4	40	60	100
	CC - VIII	4	3	4	40	60	100
	EC - III	3	3	3	40	60	100
	EC - IV	3	3	3	40	60	100
	CC - IX (Laboratory)	6	3	3	40	60	100
	CC - X (Laboratory)	6	3	3	40	60	100
<b>Credits</b>		-		<b>24</b>			
<b>III</b>	CC - XI	4	3	4	40	60	100
	CC - XII	4	3	4	40	60	100
	CC - XIII	4	3	4	40	60	100
	EC - V	3	3	3	40	60	100
	EC - VI	3	3	3	40	60	100
	CC - XIV (Laboratory)	6	3	3	40	60	100
	CC - XV (Laboratory)	6	3	3	40	60	100
<b>Credits</b>		-		<b>24</b>			
<b>IV</b>	Dissertation & Viva-Voce	30	-	18	40	60	100
	<b>Credits</b>		-	<b>18</b>			

#### MINIMUM CREDITS OF THE PROGRAMME: 90

CC – Core Course

EC – Elective Course

CIA – Continuous Internal Assessment

ESE – End Semester Examination

## M.Tech Geoinformatics

### Courses Offered Under Choice Based Credit System [CBCS]

Core Courses (Theory)		Credit: 4
1	Aerial Remote Sensing and Photogrammetry*	
2	Satellite Remote Sensing*	
3	Hyperspectral Remote Sensing	
4	Microwave Remote Sensing	
5	Digital Image Processing*	
6	Remote Sensing Applications*	
7	Digital Cartography	
8	Principles of GIS*	
9	Spatial Analysis and Modeling*	
10	Geostatistics	
11	Water Resources	
12	Land Evaluation	
13	Disaster Studies	
14	Coastal Zone Studies	
15	Agro-Climatology	
16	Environmental Studies	

Elective Courses		Credit: 3
1	Air Borne Laser Terrain Mapping	
2	GNSS Surveying	
3	C++ Programming	
4	.NET	
5	Advances in Geographic Information Science	
6	Database and Web Technology	
7	Urban GIS	
8	Web GIS	
9	Project Tasks in GIS	
10	Advanced Survey Methods	
11	Data Warehousing and Data Mining	
12	Research Methodology	

Core Courses (Laboratory)		Credit: 3
1	Remote Sensing and Digital Photogrammetry*	
2	Digital Image Analysis and Interpretation*	
3	Data Analysis in GIS*	
4	GIS Customization*	
5	Resources Evaluation*	
6	Mini Project*	

Dissertation and Viva-voce <sup>#</sup>		Credit: 18
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\*Hard Core

# Students are free to choose institution/organization to do their dissertation