FIRST-YEAR OF MASTER OF ARTS MAJOR GEOGRAPHY REVISED SYLLABUS ACCORDING TO CBCS NEP2020
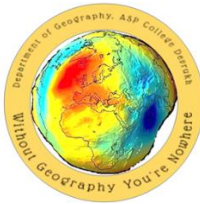
COURSE TITLE: TOOLS AND TECHNIQUES IN SPATIAL ANALYSIS-II
SEMESTER-I, W.E.F. 2023-2024

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangmeshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Master of Arts
Name of the Department	:	Geography
Name of the Class	:	First Year
Semester	:	First
No. of Credits	:	02
Title of the Course	:	Tools and Techniques in Spatial Analysis-II
Course Code	:	A505GEP
Name of the Vertical in adherence to NEP 2020	:	Major
Eligibility for Admission	:	UG Degree in Geography
Passing Marks	:	40%
Mode of Assessment	:	Summative
Level	:	PG
Pattern of Marks Distribution for TE and CIA	:	NA
Status	:	NEP-CBCS
To be implemented from the Academic Year	:	2023-2024
Ordinances/Regulations(if any)		

Syllabus for First Year of Master of Arts in Geography

(With effect from the academic year 2023-2024)

SEMESTER-I   **Paper No.–V**

Course Title: Tools and Techniques in Spatial Analysis-II **No. of Credits - 02**

Type of Vertical: Major   **COURSE CODE:** A504GEP

Learning Outcomes Based on BLOOM's Taxonomy:

Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
After completing the course, the learner will be able to…		
CLO-01	Remember	Fundamentals of GIS
CLO-02	Understand	Understand the fundamentals of Q-GIS Software
CLO-03	Apply	Apply the Q-GIS software for map creation.
CLO-04	Analyse	Analyze the different tools available in Q-GIS.
CLO-05	Evaluate	Evaluate the map elements used in Q-GIS.
CLO-06	Create	Create a map using the Q-GIS software.

Syllabus for First Year of Master of Arts in Geography

(With effect from the academic year 2023-2024)

SEMESTER-I   **Paper No.–V**

Course Title: Tools and Techniques in Spatial Analysis-II   **No. of Credits - 02**

Type of Vertical: Major   **COURSE CODE:** A505GEP

Module No.	Content	Credits	No. of Hours
1	**Fundamentals of GIS and Q-GIS** o GIS: Concept, Components and Applications o Types of GIS Software: Proprietary and FOSS o Understanding the Q-GIS: Project, Edit, View, Settings, Layer, Plugins, Vector, Raster, Database, Web, Mesh, Processing and Help o Working with Plugins o Searching and Downloading Spatial Data	01	30
2	**Geo-referencing, Layer Creation and Layout** o Geo-referencing a Topo Map using the latitudes and longitudes o Map to Map Geo-referencing o Transformation Settings in Geo-referencing o Layer Creation: Point, Line and Polygon o Projection and Reprojection of Map o Digitizing Map Data, Topology creation and error correction o Map Layout in Q-GIS o Working with Attributes related to Population o Importing Spreadsheets or CSV files o Designing Population Distribution Maps	01	30

Required Previous Knowledge

No previous knowledge is required to learn the subject.

Access to the Course

The course is available for all the students admitted for Bachelor of Arts and selected Geography as an optional Subject.

Methods of Assessment:

Vocational skill Courses, Skill Enhancement Courses and courses having laboratory sessions shall be assessed at the end of each semester.

Grading Scale

The grading scale used is O to F. Grade O is the highest passing grade on the grading scale, and grade F is a fail. The Board of Examinations of the college reserves the right to change the grading scale.

References:

1. Q-GIS Manual

2. Peter A. Burrough and Rachael A. McDonnell, 2011, Principles of Geographic Information Systems, Oxford University Press.

3. Ian Heywood, Sarah Cornelius, and Steve Carver, An Introduction to Geographic Information System, 2010, third edition, Pearson Education Ltd.

4. David O' Sullivan and David J. Unwin, 2010, Geographic Information analysis, second edition, John Wiley & Sons.

5. Paul a. Longley, Michael F. Goodchild, David J. Maguire, David W. Rhind, 2011, Geographic Information Systems and Science, third edition, John Wiley & Sons.

6. John R. Jenson and Ryan R. Jensen, 2013, Introductory Geographic Information system, Pearson Education.