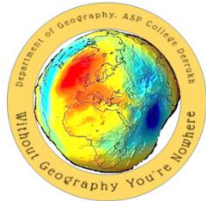# FIRST-YEAR OF MASTER OF ARTS MAJOR GEOGRAPHY REVISED SYLLABUS ACCORDING TO CBCS NEP2020

COURSE TITLE: REMOTE SENSING DATA ANALYSIS
SEMESTER-I, W.E.F. 2023-2024

Name of the Implementing Institute	:	Nya. TatyasahebAthalye 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	:	Remote Sensing Data Analysis
Course Code	:	A507GEP
Name of the Vertical in adherence to NEP 2020	:	Major Elective
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.–**VII

Course Title: Remote Sensing Data Analysis   **No. of Credits -** 02

Type of Vertical: Major Elective   **COURSE CODE:** A507GEP

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	Remember the Sources of Remote Sensing
CLO-02	Understand	Understand the fundamentals of Digital Image Processing
CLO-03	Apply	Apply the Digital Image Processing techniques for image Enhancement
CLO-04	Analyse	Analyse the Remote Sensing Data in a Software
CLO-05	Evaluate	Evaluate the Sources of Remote Sensing
CLO-06	Create	Create LULC Map.

Syllabus for First Year of Master of Arts in Geography

(With effect from the academic year 2023-2024)

SEMESTER-I   **Paper No.–**VII

Course Title: Remote Sensing Data Analysis   **No. of Credits -** 02

Type of Vertical: Major Elective   **COURSE CODE:** A507GEP

Module No.	Content	Credits	No. of Lectures
1	**Working with Remote Sensing Data Sources:** o Google Earth o Bhuvan o GLOVIS o NASA Earth Observation (NEO) o USGS Earth Explorer o NASA Earth Data o NOAA Class o NOAA Digital Coast o IPPMUS Terra o LANCE o VITO Vision	01	30
2	**Working with Remote Sensing Data:** o Introduction to DIP software, Loading of image data, o Layer stacking, study of histogram and layer information o Supervised Classification and Accuracy Assessment o Unsupervised Classification and Recording	01	30

Required Previous Knowledge

No previous Knowledge is necessary to learn the course.

Access to the Course

The course is available for all the students admitted for Master of Arts.

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.

Reference Books:

1. Agrawal, N.K.(2006), Essentials of GPS (Second Edition), Book Selection Centre, Hyderabad

2. American Society of Photogrammetry (1983): Manual of Remote Sensing, ASP Palis Church, V.A.

3. Barrett, E.G. and Curtis, L.F. (1992): Fundamentals of Remote Sensing in Air Photo-interpretation, McMillan, New York. 7.

4. Bernhardsen, Tor (2002): Geographical Information Systems: An Introduction, Third Edition, John Wiley & Sons, Inc., New York.

5. Burrough, Peter A, and McDonnell, R.A. (1998): Principles of Geographical Information Systems, Oxford University Press, Mumbai.

6. Campbell. J. (1989): Introduction to Remote Sensing, Guilford, New York.

7. Clarke, Keith C. (1998): Getting Started with Geographic Information Systems, Prentice-Hall Series in Google. Info. Science, Prentice-Hall, Inc. N.J.

8. Curran, Paul, J, (1988): Principles of Remote Sensing, Longman, London.

9. Heywood, I.et al (2002): An Introduction to Geological Systems, Pearson Education Limited, New Delhi.

10. Iliffe, J.C (2006), Datums and Map Projections for Remote Sensing, GIS, and Surveying, Whittles Publishing, New York.

11. Jonson. R. J. (2003): Remote Sensing of the Environment-An Earth Resources Perspective, Pearson Education Series in Geographical Information Science, Keith C. Clarke (Series editor) Pearson Educators Private Limited. (Singapore), New Delhi.

12. Joseph, G. (2009): Fundamentals of Remote Sensing, Universities Press (India) Pvt. Ltd., Hyderabad.

13. Lillesand, Thompson and Relph Kiffer (1994). Remote Sensing and Image Interpretations, John Wiley and Sons, Inc., New York.

14. Parker, R, N. (2008), GIS and Spatial Analysis for the Social Sciences, Routledge, New York.

15. Paul Longley (2005), Geographic Information Systems and Science, John Wiley & Sons.

16. Pickles, John (2006), The Social Implications of Geographic Information Systems, Rawat Publications, Jaipur.

17. Star, Jeffrey and John Estes (1996), Geographical Information Systems: An Introduction, Prentice-Hall, inc., N.J.

18. Shekar, S, and Chawla, S, (2009), Spatial Databases: A Tour, Pearson Education, Delhi.

19. Tempfli, T. K., Kerle, N., Heuerman, G.C., and Janssen, L.L.F (2009), Principles of Remote Sensing, ITC, Netherlands.