Shivaji University, Kolhapur
B. A. / B. A. B. Ed. II
Geography
Semester III
MAJOR IV: Basics of Map Making (Practical) as per NEP 2020

Name of the Programme	**:**	B. A. / B. A. B. Ed. (Geography)
Class	**:**	B. A. / B. A. B. Ed.-II
Year of Implementation	**:**	Revised Syllabus will be implemented from June, 2025 onwards
Semester	**:**	III
Name of Vertical Group	**:**	Major IV
Course Code	**:**	**BAU0325MMP322C04**
Course Title	**:**	**Basics of Map Making (Practical) - IV**
Total Credit	**:**	04
Workload	**:**	04 credit (4*30= 120 hours) in semester
Duration	**:**	The course shall be a full time course
Medium of instruction	**:**	Marathi / English
Eligibility of Admission	**:**	As per eligibility criteria prescribed by the University
Examination Pattern	**:**	Practical for100 Marks, the pattern of examination will be Semester End Examination with Assessment / Evaluation

Preamble:

The field of cartography has been pivotal in human history, allowing us to navigate, explore, and understand the world around us. In the era of digital technology and geospatial innovations, the art and science of map-making have evolved, yet the foundational principles remain as important as ever. This course, "Basics of Map Making," aims to equip students with the essential skills and knowledge required to master the basics of cartography, from traditional methods to modern digital techniques.

General Objectives of the Course:

1. To understand the fundamental principles, definitions, and scope of cartography
2. To learn about different types of map scales and their practical applications
3. To gain a comprehensive understanding of various map projections
4. To learn the principles of effective map design and layout, create thematic maps, and use modern mapping technologies

Course Outcomes:

By the end of the syllabus, students will be able to:

1. Explain the fundamental concepts, historical development, and different types of maps
2. Identify, utilize, and convert various map scales accurately in practical applications
3. Understand, classify, and accurately draw different map projections based on their properties
4. Design balanced and visually appealing map layouts, create thematic maps, and employ modern mobile mapping tools for data collection and analysis

Scheme of Teaching and Examination:

The Scheme of teaching and examination should be given as applicable to the course / paper concerned.

B. A. / B. A. B. Ed. part –II

Sr. No.	Subjects/Course & Credit	Practical Hours per week				Examination scheme (Marks)		
1	Basics of Map Making - 4	L	T	P	Total	Practical	Term Work	Total (Semester)
		08	---	08	08	100	---	100

Scheme of Examination:

- The examination shall be conducted at the end of each semester year.
- The Practical paper shall carry 100 marks.
- The evaluation of the performance of the student in practical papers shall be on the basis of semester practical examination of 100 marks.
- Question Paper will be set in the view of the / in accordance with the entire syllabus and preferably covering each Module of syllabi.

Standard of Passing:

(As prescribed under rules & regulation for each diploma / degree / programme)

Nature of Question Paper and Scheme of Marking:

(As per rules & regulation of Shivaji University)

Course Title: Basics of Map Making (Practical)-IV				
Module No.	**Module Name**	**Sub Module**	**No. of hours & Marks**	**Credit**
I	**Introduction to Cartography**	1.1 Definition, Nature and Scope of Cartography 1.2 History of cartography 1.3 Elements of Maps 1.4 Types of Maps **Practical Exercises:** a. Identification and comparison of different types of maps b. Annotating map elements c. Draw a sketch of local area with key elements labelled	30 (20)	1
II	**Understanding Map Scales**	2.1 Types of Map Scales: Verbal, Representative Fraction (RF) and Graphical 2.2 Conversion of Scales: RF to Verbal, Graphical Scale and Vice Versa 2.3 Types of Graphical Scales 2.4 Application of Map Scales in Real-World Scenarios **Practical Exercises:** a. Identifying map scales on various maps b. Drawing and converting different types of map scales c. Measuring distances on a map using different scales. d. Creating a scale conversion table e. Drawing simple linear, Time and Distance scales for different RF values	30 (20)	1

III	**Exploring Map Projections**	3.1 Principles of Map Projection 3.2 Classification of Map Projections: Cylindrical, Conical, Azimuthal, and Conventional 3.3 Applications and Limitations of Different Map Projections 3.4 Commonly Used Digital Projections in GIS Software **Practical Exercises:** a. Identifying map projections used in different maps. b. Drawing at least 3 projections, with emphasis on their properties and uses. (Zenithal Polar Gnomonic Projection, Cylindrical equal area projection, Simple Conical Projection with one Standard Parallel, Universal Transverse Mercator (UTM) Projection) c. Creating a map using a selected projection	30 (20)	1
IV	**Map Design & Mobile Mapping**	4.1 Principles of Map Design and Layout 4.2 Creating Thematic Maps 4.3 Mobile Navigation A-GPS 4.4 Mobile Mapping Apps **Practical Exercises:** a. Applying color schemes and symbols b. Designing a dot density map c. Create a map of a local area using Google Earth d. Collecting and plotting field data using Locus Map, Mappt and GPS Waypoints	30 (20)	1
V	Journal and Viva Voce		(20)	

Note:

1. Figures in the bracket indicate weightage of marks to concern module.
2. Use of stencils, log tables, computer and calculator are allowed.
3. Journal should be completed and duly certified by practical in-charge and Head of the Department.

Suggested Readings

1. Aher, A. B., Chodhari, A. P., & Bharambe, S. N. (2015). Techniques of spatial analysis. Prashant Publication, Jalgaon.
2. Bygott, J. (1964). An introduction to mapwork and practical geography. University Tutorial Press.
3. Khan, M. Z. A. (1998). Textbook of practical geography. Concept Publishing Company, New Delhi.
4. Khullar. Essentials of practical geography. New Academic Publishing Co, India.
5. Mishra, R. P., & Ramesh, A. (2000). Fundamentals of cartography. Concept Publishing Company, New Delhi.
6. Monkhouse, F. J., & Wilkinson, H. R. (1971). Maps and diagrams: Their compilation and construction. Methuen & Co. Ltd., London.
7. Negi, B. S. Practical geography. Kedar Nath Ram Nath, Meerut, Delhi.
8. Raisz, E. (1962). Principles of cartography. McGraw Hill Book Company, Inc., New York.
9. Robinson, A. H. (2010). Elements of cartography (6th ed.). John Wiley & Sons.
10. Saha, P. K., & Basu, P. (2010). Advanced practical geography: A laboratory manual. Books and Allied (P) Ltd, Kolkata.
11. Sarkar, A. (1997). Practical geography: A systematic approach. Orient Longman Limited, Calcutta.
12. Singh, G. (1996). Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi.
13. Singh, L. R. (2011). Fundamentals of practical geography. Sharda Pustak Bhawan.
14. Singh, R., & Kanaujia, L. R. S. Map work and practical geography. Central Book Depot, Allahabad.
15. Yeats, M. (1974). An introduction to quantitative analysis in human geography. McGraw Hill, New York.
16. National Atlas & Thematic Mapping Organization. NATMO Atlas. National Atlas & Thematic Mapping Organization. Retrieved from https://portal.natmo.gov.in/en/