

SES's L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE(AUTONOMOUS)

Syllabus for Approval (REVISED)	BoS meeting held on: 27/9/2025 and 29/9/2025	AC meeting held on : 09/10/2025
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**Board of Studies : GEOGRAPHY/ENVIRONMENT/OTHER STUDIES
(Ad-hoc)**

Sr. No.	Heading	Particulars
1	Nomenclature of the Course	CARTOGRAPHY
2	Eligibility for Admission	PASS CLASS XII EXAM/as per College Regulations on Admission
3	Passing Marks for eligibility	As per College Regulations on Admission
4	Regulations	College Regulations on Admission
5	Programme	FYBA
6	Semesters	Semester: II
7	NEP Vertical	SEC
8	Credit	2
9	Level U.G/PG	UG
10	Pattern	Semester
11	Status (Revised or New) If revised, % of change)	REVISED
12	To be implemented from Academic Year	From the Academic Year: 2025-26

Date:

Chairman / Chairperson:

(name & signature)

**SES's L.S. RAHEJA COLLEGE OF ARTS AND
COMMERCE(AUTONOMOUS)**



**BOARD OF STUDIES: GEOGRAPHY/ENVIRONMENTAL
STUDIES & OTHER STUDIES(AD-HOC)**

PROGRAMME: FYBA

SEMESTER: II

NOMENCLATURE OF THE COURSE: CARTOGRAPHY

NEP Vertical: SEC

Credit: 2

(As Per Choice Based Credit System (under NEP 2020) with effect from the academic year 2025-26)



Programme:	FYBA
Nomenclature of the Course	CARTOGRAPHY
Total Marks	50
Semester:	II
Academic year	2025-26

LEARNING OBJECTIVES:

- i. Understand the fundamental concepts of maps, including their definition, elements, scales, and types.
- ii. Develop skills in map reading, scale conversion, and measurement of distance, area, and time using different types of maps.
- iii. Acquire the ability to collect, tabulate, analyse, and represent data through primary/secondary sources and graphical methods.
- iv. Apply modern digital tools and applications (e.g., Google Earth Pro, GPS apps, iNaturalist, Kobo Toolbox) in survey, mapping, and visualization for socio-economic and environmental studies.
- v. Thematic maps- with the use of Cartographic Technique

COURSE OUTCOMES

- A. Identify and interpret different types of maps (cadastral, relief, weather, thematic, topographical) and apply them in geographical studies.
- B. Demonstrate proficiency in data collection and representation using statistical and graphical techniques for geographical analysis.
- C. Utilize modern geospatial tools and apps (Google Earth Pro, GPS Map Camera, iNaturalist, sound meter, Kobo Toolbox) for field survey, mapping, and visualization.
- D. Design and execute a mini project integrating traditional mapping skills with modern digital tools for socio-economic and environmental applications.

Unit	Course Content	Andragogy	No of Lectures
1.	<p>UNIT 1</p> <p>I. Introduction to map: A. Definition and characteristics of a map B. Elements of map *title *map scale * signs and symbols, legend/key. C. Types of map scale and conversion of scale: (Graphical, Verbal, RF), D. Map area calculation; distance and time calculation. E. Types of maps and map reading: i. Cadastral ii. Physical / relief maps iii. weather maps iv. Thematic maps v. Topographical maps and reading</p> <p>II Data collection, analysis and interpretation:(a) Primary data collection: tools and techniques of data collection, sources of secondary data: Census and published reports. (b)Tabulation and Graphical representation of data: frequency distribution, line graph, histogram, pie chart, dot method.</p>	Chalk and board, use of TOPO maps, Use of live data for data calculation, hands-on training	15
2.	<p>Unit 2</p> <p>Survey and mapping using modern tools: 1. Geotagged photographs – GPS Map Camera Lite, Google, etc. 2. Google Earth Pro / Geo Survey – Spatial (point, line and polygon) and socio-economic survey 3. i Naturalist app for tree/plant identification 4. Sound meter app for sound level measurement 5. Kobo Toolbox for data collection, tabulation and graphical and map visualisation 6. Websites and mobile apps for data, graphs and maps visualisation D) Activity / Project</p>	Chalk and board, use of TOPO, Weather & Thematic maps, Use of various APPs as modern tools. Hands-on training	15
			30

SUGGESTED READINGS

1. Bagrow, L. (2017), *History of Cartography*. Routledge.
2. Darkes, G. (2017). *Cartography: An Introduction*. Trans-Atlantic Publications, Incorporated.
3. Dubey, R., & others. (2022). GIS-based smart noise mapping to compare organised and disorganised traffic using a noise app and Google imagery. *ISPRS Archives, XLVIII-4/W3*, 41–48.
<https://isprs-archives.copernicus.org/articles/XLVIII-4-W3-2022/41/2022/isprs-archives-XLVIII-4-W3-2022-41-2022.pdf>
ISPRS Archives
4. Heberling, J. M., & others. (2018). *iNaturalist* as a tool to expand the research value of museum specimens. *Bioscience, 68*(8), 816–817.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6240452/>
5. Kardous, C. A., & Shaw, P. B. (2014). Evaluation of smartphone sound measurement applications. *Journal of the Acoustical Society of America, 135*(4), 194–200.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4659422/>
PMC
6. Mason, B. M., & *iNaturalist* community. (2025). *iNaturalist accelerates biodiversity research*. *BioScience*.
<https://doi.org/10.1093/biosci/biaf104> OUP Academic
7. Misra, R. P., Misra, R. P., & Ramesh, A. (1989). *Fundamentals of cartography*. Concept Publishing Company.
8. Nampa, I. W., Mudita, I. W., & Kaho, N. P. L. B. R. (2020). The KoBoCollect for research data collection and management: An experience in researching the socio-economic impact of blood disease in banana. *SOCA: Jurnal Sosial Ekonomi Pertanian, 14*(3), 546–557.
<https://doi.org/10.24843/SOCA.2020.v14.i03.p15> ResearchGate

EVALUATION PATTERN

A. CONTINUOUS EVALUATION (INTERNAL) 40 % OR 20 MARKS

I. journal (classroom exercises)	: 5	} 20 marks
II. Project based on Unit 2	: 10	
III. Viva-voce and regularity	: 5	

SEMESTER END QUESTION PAPER PATTERN (60 % or 30 MARKS)

Any 3 questions on Module 1 and 2 (10 marks each)
(Semi lengthy /short notes/data analysis and drawing graphs, etc)

CHANGED REPORT

BEFORE REVISION

UNIT I

Introduction to Map:

1. Definition and characteristics of map
2. Elements of Map, Title, *Map Scale
*~~Locational Input and Base-map~~, *Symbolisation, *Legend / Key
- 3) Primary data collection : Tools and Techniques of Data Collection, Tabulation, *Graphical representation
*~~Preparation of~~ Line graph, Histogram, Pie chart, Dot method, ~~Flow chart etc~~

AFTER REVISION

UNIT 1

- I.-A. Definition and characteristics of map
 - B. Elements of map; Title, map scale, **signs and symbols**, legend / key.
 - C. **Types of map scale and conversion of scale: (Graphical, Verbal, RF),**
 - D. **Map area calculation; distance and time calculation.**
 - E. **Types of maps and map reading:**
 - i. Cadastral
 - ii. Physical / relief maps
 - iii. weather maps
 - iv. Thematic maps
 - v. Topographical maps and reading
- II Data collection, **analysis and interpretation:**(a) Primary data collection: **tools and techniques of data collection: tools and techniques of data collection, sources of secondary data: Census and published reports.**
(b) **Tabulation and graphical representation of data: frequency distribution, line graph, histogram, pie chart, dot method.**