Academic Council
Item No: _____

Devrukh Shikshan Prasarak Mandal's

NYA. TATYASAHEB ATHALYE ARTS, VED. S.R. SAPRE COMMERCE &

VID. DADASAHEB PITRE SCIENCE COLLEGE, DEVRUKH

[AN AUTONOMOUS COLLEGE AFFILIATED TO UNIVERSITY OF MUMBAI]

Syllabus for First Year of M.A./ M. Sc.

Program: M.A./ M. Sc.

Course: Geography Course Code: PAGEO15

Semester I

Geography Paper - V: Practical Paper-I (Tools and Techniques of Spatial Analysis -I)

Credit Based Semester and Grading System with the Effect from

Academic Year 2019-20

M.A./ M. Sc. General (Semester Pattern)
First Year M.A./ M. Sc.
Semester-I
GEOGRAPHY – CURRICULUM

Paper Code	Paper	Lectures /Practical	Evaluation Weightage			Credits
			External	Internal	Total	
PAGEO11	Geography Paper-I Principles of Geomorphology	60 Contact + 60 Notional	70	30	100	04
PAGEO12	Geography Paper-II Principles of Climatology	60 Contact + 60 Notional	70	30	100	04
PAGEO13	Geography Paper-III Perspectives in Human Geography	60 Contact + 60 Notional	70	30	100	04
PAGEO14	Geography Paper-IV Spatial Organisation of Economic activities	60 Contact + 60 Notional	70	30	100	04
PAGEO15	**Practical Paper-I Tools and Techniques Spatial Analysis - I**	**60 Contact + 60 Notional**	**100**			**04**
PAGEO16	Practical Paper-II Tools and Techniques of Spatial Analysis - II	60 Contact + 60 Notional	100			04

Syllabus for First Year M.A./ M. Sc. Programme in the subject of Geography
(With effect from the academic year 2019-2020)
Semester-I, Geography Paper – V: Tools and Techniques of Spatial Analysis I (Based on Theory Papers: 11 and 12)
COURSE CODE: PAGEO15 Credits - 04

(No. of Credits 4 Hours of Practical experience 60+ Notional Hours 60 Total 120 hours)

1. Techniques of Geomorphic Analysis (30 hours)

A. Drawing Profiles:

i. Longitudinal
ii. Composite and Projected
iii. Profiles using Global Mapper Software

B. Methods of Slope Analysis:

i. Wentworth's method of average slope determination
ii. Robison's method of slope analysis'
iii. G. H. Smith's method of slope analysis
iv. Slope analysis using Global Mapper Software

C. Altimetry Analysis:

i. Ring contour method
ii. Highest grid-cell elevation method
iii. Contour Generation using Global Mapper Software

2. Techniques of Soil Analysis (10 hours)

i. Textural analysis
ii. Chemical Analysis – pH and moisture determination

3. Techniques of Climatic Data Analysis (20 hours)

1. Rainfall dispersion diagrams
2. Wind roses
3. Water surplus-deficiency graphs
4. Climograph
5. Hyther graph,
6. Taylor's climograph
7. Index of aridity and index of moisture
8. Isopleth Maps
9. Water budget and its graphical analysis.
10. Erogographs **(Crop Calendar)**

Learning Outcomes

On completion of the course the student should have the following learning outcomes defined in terms of knowledge, skills and general competence:

Knowledge

The student can draw profiles based on contours, can analyze the slope, altimetry, and soil and also explain climatic data using various techniques given the syllabus.

Skills

The student can plan and carry out a geomorphological and climatic field investigation in the locality and apply the techniques of profiles, slope analysis, altimetry analysis, slope analysis, and climatic data analysis. It will create scientific temperament among the students.

General competence

The student can apply these techniques in terms of geomorphological and climatic processes with context to the Konkan region.

Required Previous Knowledge

Knowledge of fundamentals of Geomorphology and Climatology is necessary before to start to learn the course

Access to the Course

The course is compulsory and it is available for all the students admitting for the Master of Arts in Geography.

Forms of Assessment

The pattern assessment will be for 100 marks. 70 marks will be for the examination and 30 marks will be for the timely completion of the practical's and quality of the journal. The question paper pattern will be as given below.

External evaluation (100 Marks)
Question Paper Pattern
Time: 5 hours

Note: Solve **any four questions** from question number **1 to 6.**

Q. I	Solve the following practical Problems. **(Attempt any four out of six)**	60
	1. Solve the following practical problem.	
	2. Solve the following practical problem.	
	3. Solve the following practical problem.	
	4. Solve the following practical problem.	
	5. Solve the following practical problem.	
	6. Solve the following practical problem.	
Q. II	Viva Voce and evaluation of the quality of the journal by the external examiner (10 + 10).	20
Q.III	Evaluation of Journal by the internal examiner based on timely completion and submission	20

Grading Scale

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

References:

1. King, C. A. M. (1978): Techniques in Geomorphology, Edward Arnold, London.
2. Miller, A.A. (1966): The Skin of the Earth, Methuen, London.
3. Monkhouse, F.J. and Wilkinson, H.R. (1971): Maps and Diagrams, Methuen, London.
4. Cole, J.R and King, C.A.M. (1968): Quantitative Geography, John Wiley And Sons, London.
5. Goudie, A. (1981): Geomorphological Techniques, George Alien And Unwin, London.
6. Hammond, R. And McCullagh, P.S. (1974): Quantitative Techniques in Geography: An Introduction, Oxford University Press, London.
7. Mahmood Aslam (1977): Statistical Methods in Geographical Studies, Rajesh Publication, New Delhi.
8. Singh, Gopal (2001): Map Work and Practical Geography, Vikas Publishing House Pvt. Ltd.
9. Singh, L.R. (2011): Fundamentals of Practical Geography, Sharda Pustak Bhavan, Allahabad.
10. Singh, R.L. and Singh, R. B. (2004): Elements of Practical Geography, Kalyani Publishers, New Delhi – Ludhiana.