

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: PAGEO12

Semester I

Geography Paper - II: Principles of Climatology

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 of 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-II: Principles of Climatology

Teaching Hours **60** + Notional Hours **60**= Total hours **120**

COURSE CODE: PAGE012

Credits - 04

Learning Objectives			
<ul style="list-style-type: none"> ➤ The course provides an overview of the climatology, insolation, temperature, air pressure and air masses. ➤ It aims to shed light on the definition, nature, and scope of Climatology, composition of the atmosphere, insolation and heat budget, impact of temperature on weather and climate. Atmospheric pressure and circulation, air masses and special weather conditions. ➤ The course shall further focus on the climatic classification. 			
COURSE CONTENT			
Topic No.	Content	Credits	No. of Lectures
1	Climatology and Atmosphere <ul style="list-style-type: none"> ○ Nature and scope of Climatology ○ Relationship of Climatology with Meteorology ○ Structure and composition of Atmosphere ○ Weather elements and climatic controls 	01	15
2	Insolation and Temperature <ul style="list-style-type: none"> ○ Insolation and heat balance of the Earth ○ Temperature - Vertical, horizontal and seasonal variations ○ Processes of heat energy transport ○ Inversion of temperature 	01	15
3	Atmospheric pressure and Circulation <ul style="list-style-type: none"> ○ Atmospheric pressure – vertical and horizontal distribution ○ General Circulation of atmosphere ○ Types of winds – Geotropic, Gradient, and local winds ○ Modern views about space wind system, Tri-cellular meridional circulation, Jet stream ○ Origin of Monsoon: classical and recent views 	01	15
4	Humidity and Precipitation <ul style="list-style-type: none"> ○ Air masses: Origin, classification, types ○ Fronts: frontogenesis and frontolysis – classification of fronts ○ Extra-tropical cyclones: formation and impacts ○ Climatic Classification: Koppen and Thornthwaite 	01	15
Total		04	60

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 explain the definitions, nature, and scope of Climatology, insolation, temperature, atmospheric pressure, air circulation, and classification of the air masses, frontogenesis and cyclones.

Skills

The student can explain the weather and climate of the region with geographical reasoning.

General competence

The student can find out the correlation between, insolation, temperature, air pressure and other weather conditions of the region.

Required Previous Knowledge

The concept of weather and climate should be clear also students should know the correlation between insolation, temperature and other weather phenomena.

Access to the Course

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

Forms of Assessment

The assessment will be external as well as internal. **The pattern of external and internal assessment will be 70:30.** The question paper pattern will be as given below.

External evaluation (70 Marks)

Question Paper Pattern

Time: 2.5 hours

Question No.	Unit/s	Question Pattern	Marks
Q.1	All	Fill in the Blanks	14
Q.2	All	Explain Any four concepts from the following (Out of six) (Knowledge-Based Question)	20
Q.3	All	Attempt Any two questions from the following (Out of four) (Skill-Based Question)	20
Q.4	All	Attempt any one question from the following (Out of four) (Long Answer Question based on General Competence)	16
Total			70

Internal evaluation (30 Marks)

Sr. No.	Description	Marks
1	Test (Preferably Online Test with Fifteen Minutes Duration- MCQ, Match the following, True or False, etc.)	10
2	Project Report/ Seminar/ Group Discussion/ Any other assignment as allocated by the teacher	10
3	Overall Conductance	10
	Total	30

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

References:

1. Barry, R.S. & Chorley, R.J. (1971): Atmosphere, Weather and Climate, ELBS, Methuen & Co. Ltd., U.S.A.
2. Griffiths, J.F.(1966): Applied Climatology-An Introduction, Oxford University Press, London.
3. Lal, D.S.(1997):Climatology, Sharda Pustak Bhawan, Allahabad.
4. Mather, J. R.(1974): Climatology: Fundamentals and Applications, McGraw Hill Book Co. New York.
5. McBoyle, G.(1973): Climate in Review, Houghton Mifflin Co., Boston.
6. Subrahmanyam, V.P.(ed)(1983): Contribution to Indian Geography, Heritage Publishers, New Delhi, a) Vol. III - General Climatology b) Vol. IV- Applied Climatology
7. Harp, H.J. and Trinidade, O.D. (eds) (1990): Climate and Development, Springer Verlag, U.S.A.
8. Oliver, J.E. and Hidose, J.J. (1984): Climatology - An Introduction, Charles and Merrill, U.S.A.
9. Robinson, P.J. and Hendersen-Sellers, A.(1999): Contemporary Climatology, Pearson Education, London