SYLLABI AND SCHEME OF EXAMINATIONS FOR MINORCOURSES FOR UNDER GRADUATE PROGRAMS (SINGLE MAJOR / MULTIDISCIPLINARY PROGRAMS)

(Based on Curriculum and Credit Framework for UG Programs under NEP)

WITH EFFECT FROM THE SESSION 2024-25

MAHARSHI DAYANAND UNIVERSITY ROHTAK (HARYANA)

SYLLABI AND SCHEME OF EXAMINATIONS FOR MINOR COURSES FOR

UNDER GRADUATE SINGLE MAJOR/MULTIDISCIPLINARY PROGRAMS/ SINGLE MAJOR PROGRAM AFTER 2nd SEMESTER OF MULTIDISCIPLINARY PROGRAM

Minor Courses (MIC)/ Minor (Vocational) Course MIC(VOC)	Type of Program				Credits Distribution			Total Credits	Workload			Total Workload	Marks				
	SINGLE MAJOR PROGRAM	Multidisciplinary Program / Single Major Program After 2nd Semester Of Multidisciplinary Program	Nomenclature of Course	Course Code	L	T	P		L	T	P		Theory		Practical		Total Marks
	SEMESTER	SEMESTER											Internal	External	Internal	External	
MIC 1 @ 4 credits	1	1	Introduction to Geography & Elements of Map	24GEO401MI01	2		2		2		4	6	15	35	15	35	100
MIC 2 @ 4 credits	2	3	Introduction to Climatic Elements &Measurement and Representation of Climatic Data	24GEO402MI01	2		2		2		4	6	15	35	15	35	100
MIC 3 @ 4 credits	3	5	Basics of	25GEO403MI0	2		2		2		4	6	15	35	15	35	100

			Weather Map & Interpretation of Weather Map	1													
MIC 4 (VOC) @ 4 credits	4	4	Introduction to Remote Sensing and GIS &Interpretation of Aerial Photographs and Satellite Imageries	25GEO404MV01	2		2		2		4	6	15	35	15	35	100
MIC 5 (VOC) @ 4 credits	5	5	Map Reading & Interpretation of Toposheets	26GEO405MV01	2		2		2		4	6	15	35	15	35	100
MIC 6 (VOC) @ 4 credits	6	6	Environmental Awareness & Case Studies/ Field Study of Environmental Issues	26GEO406MV01	2		2		2		4	6	15	35	15	35	100

L: Lecture; T: Tutorial; P: Practical

Note:

1. The Syllabi and Scheme of Examinations (SOE) for Minor (Vocational) Courses for UG Semester 7 and Semester 8 will be same as applicable for Vocational Course in Post Graduate semester 1 and semester 2 respectively.

2. Course coding of Minor courses for Single Major Programs will be applicable for Multidisciplinary Programs/ Multidisciplinary Programs after 2nd semester irrespective of their offering in any semester.
3. The student who select any Minor Course (MIC) of any discipline in first semester should study the Minor courses (MIC) in the same discipline in the subsequent semesters. However, while exercising the option for choosing Minor Vocational Course MIC (VOC), the student may opt the discipline either related to the discipline of Minor Course or the discipline of Major Course or any other discipline as per his/her choice.

Syllabi for Minor Course (s) in Geography

Semester-I

Session: 2024-25

Name of Program		**Program Code**	
Name of the Course	Introduction to Geography (Part-A)& Elements of Map (Practical) (Part-B)	**Course Code**	24GEO401MI01
Introduction to Geography (Part-A)			
Hours per Week	**02**	**Credits**	**02**
Maximum Marks:50	Internal Assessment (Max. Marks:15) Attendance: 05 Sessional Examination:10	End Semester Examination (Max. Marks:35)	**Time of Examinations:03 Hours**

Note:
Examiner will set nine questions and the candidates will be required to attempt five questions in all. Question number one will be compulsory containing short answer type questions from all units. Further, examiner will set two questions from each unit and the candidates will be required to attempt one question from each Unit. All questions will carry equal marks.

Course Learning Outcomes (CLO):

CLO 1:To acquire a conceptual knowledge of general geography background of the concepts of land surveying.

CLO 2:To have a base of wide range of ideas and current issues ingeography.

CLO 3:To acquire a comprehensive knowledge and future scope of specialization in the course.

Unit 1: Geography: nature, scope and branches; place of geography in the classification of sciences; geography and others disciplines; career opportunities for geographers.

Unit 2: Core geographic concepts: location, direction, patterns, world time-zones, Indian standard time, international date-line; interior of the earth; plate-tectonic theory; meaning and classification of rocks: igneous, sedimentary and metamorphic.

Unit 3: Composition and structure of the atmosphere; elements of weather and climate; atmospheric temperature; insolation and heat budget; vertical and horizontal distribution of pressure; wind circulation: planetary, periodic and local winds.

Unit 4: Atmospheric moisture: humidity, evaporation and condensation; hydrological cycle; types of precipitation, distribution of rainfall; atmospheric pollution:causes, consequences and measures to control; atmospheric pollution and global warming.

References:

- Singh, S. (1998) Geomorphology, Prayag Pustakalaya, Allahabad.
- Strahler, A. N., Strahler, A. H. (1992) Modern Physical Geography; John Wiley &Sons, New York.
- Lal, D.S. (in English & Hindi, 1986) Climatology, Chaitanya Publications, Allahabad.
- Singh, S. (2006) Jalwayu Vigyan, Prayag Pustak Bhawan, Allahabad.
- Goutam, A. (2016) JalwayuAvam Samudra Gyan, Sarda Pustak Bhawan, Allahabad.

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Name of Program		**Program Code**	
Name of the Course	Introduction to Geography (Part-A) & Elements of Map (Practical) (Part-B)	**Course Code**	24GEO401MI01
Elements of Map(Practical)(Part-B)			
Hours per Week	**04**	**Credits**	**02**
Maximum Marks: 50	Internal Assessment (Max. Marks:15) Attendance: 05 Practical Assignments/Practical File:10	End Semester Examination (Max. Marks: 35) Lab Test: 21 Practical Record: 07 Viva-voce: 07	**Time of Examination: 03 Hours**

Note:
At least eight exercises are to be prepared from all the units covering entire syllabus. In the examination, the lab test shall comprise of six questions in all, with three questions from each unit. The candidate has to attempt three questions, selecting at least one question from a unit.

Course Learning Outcomes (CLO):
CLO 1:To have a systematic knowledge of surveying methods.
CLO 2: To know the historical development of cartography.
CLO 3: To understand the map classification.

Unit 1:
Nature, subject matter and historical development of cartography; basic concepts of cartography; classification and applications of maps: distribution maps.

Unit 2:
Elements of map: title, direction, index, conventional signs and symbols (point, line and area), scale, latitudes and longitudes.

References:

- Singh L. R. (2016) Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
- Sarkar, A. (2015) Practical geography: A systematic approach, Orient Black Swan Private Ltd., New Delhi.
- Robinson, A.H., Morrison, J. L., Muehrcke, P. C., Kimerling, A. J. and Guptill, S. C. (1995) Elements of Cartography, John Wiley, New York.
- Sharma, J.P. (2016) PrayogikBhugol, Rastogi Publications, Meerut.
- Kannan, M. and Yadav, S. (2022) Practical Geography, Rawat Publications, Jaipur.

Session: 2024-25

Name of Program		**Program Code**	
Name of the Course	Introduction to Climatic Elements (Part-A) & Measurement and Representation of Climatic Data (Practical) (Part-B)	**Course Code**	24GEO402MI01
Introduction to Climatic Elements (Part-A)			
Hours per Week	02	**Credits**	02
Maximum Marks:50	Internal Assessment (Max. Marks:15) Attendance: 05 Sessional Examination:10	End Semester Examination (Max. Marks:35)	**Time of Examinations:** 03 Hours

Note:
Examiner will set nine questions and the candidates will be required to attempt five questions in all. Question number one will be compulsory containing short answer type questions from all units. Further, examiner will set two questions from each unit and the candidates will be required to attempt one question from each Unit. All questions will carry equal marks.

Course Learning Outcomes (CLO):
CLO 1: Toacquire a conceptual knowledge of weather and climate.
CLO 2:Tohave a systematic knowledge of atmospheric circulation.
CLO 3:Tohave a base of wide range of ideas and current issues of weather and climate.

Unit 1:
Climate: meaning and definitions; climate and weather; elements of weather and climate; climate and human habitat.

Unit 2:
Factors affecting climate: latitude, altitude, relief features, vegetation, prevailing winds and distance from sea; climate and human habitat.

Unit 3:
Major climatic elements: meaning and introduction; temperature- maximum, minimum and average; atmospheric pressure and pressure belts; humidity: types; precipitation: types, process of precipitation.

Unit 4:
Wind: dynamics of wind circulation, wind circulation and impact on local weather conditions; wind circulation and Indian monsoon system.

References:

- Critchfield, H. J. (1987) General Climatology, Prentice Hall of India, New Delhi.
- Trewartha, G.T. and Horne, L. H. (1980) An Introduction to Climate, McGraw Hill.
- Lal, D.S. (2006) Jalvayu Vigyan, Prayag Pustak Bhawan, Allahabad.
- Vatal, M. (1986) Bhautik Bhugol, Central Book Depot, Allahabad.
- Singh, S. (2009) Jalvayu Vigyan, Prayag Pustak Bhawan, Allahabad.
- Singh, S. (2009) Climatology, Prayag Pustak Bhawan, Allahabad.

Session: 2024-25

Name of Program		**Program Code**	
Name of the Course	Introduction to Climatic Elements (Part-A) & Measurement and Representation of Climatic Data (Practical) (Part-B)	**Course Code**	24GEO402MI01
Measurement and Representation of Climatic Data (Practical) (Part-B)			
Hours per Week	04	**Credits**	02
Maximum Marks:50	Internal Assessment (Max. Marks:15) Attendance: 05 Practical Assignments/Practical File:10	End Semester Examination (Max. Marks: 35) Lab Test: 21 Practical Record: 07 Viva-voce: 07	**Time of Examinations:** 03 Hours

Note:
At least eight exercises are to be prepared from all the units covering entire syllabus. In the examination, the lab test shall comprise of six questions in all, with three questions from each unit. The candidate has to attempt three questions, selecting at least one question from a unit.

Course Learning Outcomes (CLO):
CLO 1:To have a systematic knowledge of weather and climate.
CLO 2: To know the presentation of climatic data.
CLO 3: To understand the Indian weather phenomena.

Unit 1:
Representation of climatic data: concepts and requirements; weather instruments: types and applications; temperature measurements: simple thermometer, six's maximum-minimum thermometer, dry & wet bulb thermometer, thermograph; humidity measurements: absolute humidity and relative humidity, hygrograph; precipitation measurement: using rain gauge; atmospheric pressure measurement: barometer and barograph.

Unit 2:
Representation of climatic data: line graph, combined line and bar graph, climograph, hythergraph; isotherms: world mean temperatures-January to July; India mean temperatures - January to July; isobars: India mean pressure - January to July.

References:

- Bhat, L. S. and Mahmood, A. (2009) Field Work Laboratory Techniques in Geography– A practical Geography Text Book NCERT, New Delhi.
- Mishra, R. P. and Ramesh, A. (2002) Fundamentals of Cartography, Concept Publishing Company.
- Kannan, M. and Yadav, S. (2022) Practical Geography, Rawat Publications, Jaipur.
- Saha, P. and Basu, P. (2021) Advanced Practical Geography, Books and Allied Pvt. Ltd.