30 HOURS ADD-ON COURSE
on
MATHEMATICAL GEOGRAPHY

Open to all Geography Honours students

Organized by

Department of Geography

Hazi A. K. Khan College

Session: 2021-22

BASIC DETAILS OF THE 30 HOURS ADD-ON COURSE

1.	Course Title	Mathematical Geography
2.	Pre-requisite	All Under-Graduate students of Geography Honours
3.	Course Outcome	After completing the course, the students will be able to- ➢ Assess the significance of Mathematical Geography ➢ Develop the knowledge about the form of the earth ➢ Build knowledge about rotation and revolution of the earth ➢ Idea of time and calendar
4.	Course Commencement Date	April 2022- May 2022
5.	Course Fee	NIL
6.	Intake Capacity	All Under-Graduate students of Geography Honours
7.	Course Duration	One Class (Lecture): 1 Hour 27 Lectures= 27 Hours Screening of relevant videos- 03 and its analysis (You Tube) Final Assessment on the Last day.
8.	Learning Resources	Details given in page
9.	Lesson Plan	Details given in page
10.	Assessment process	Students will be graded on Course-end Assessment, and Attendance
11.	Course Coordinator	Bubai Ghosh
12.	Course Certificate Format	Format given in Page

DETAILED SYLLABUS OF THE ADD-ON COURSE

Module 1: Introduction and evolution of Mathematical Geography and its implications in other branches of Geography. **[TIME: 3 HOURS]**

Module 2: Analysis about the form and shape of the earth **[TIME: 5 HOURS]**

Module 3: Earth's rotation and revolution and impacts of rotation and revolution **[TIME: 5 HOURS]**

Module 4: Details of latitude and longitude of the earth. **[TIME: 9 HOURS]**

Module 5: Concept of time and calendar **[TIME: 5 HOURS]**

LEARNING RESOURCES- ESSENTIAL READINGS

SL.NO.	TITLE OF THE BOOK	AUTHOR(S)
01	Mathematical Geography	W. E. Johnson
02	রিমোট সেন্সিং ও জি.আই.এস	রামপ্রসাদ কুন্ডু ও কৌশিক চন্দ
03	কার্টোগ্রাফিঃ ধারণা ও প্রয়োগ	নীলাদ্রি দাস ও সাহিনা খাতুন

LESSON PLAN

LECTURES	CONTENTS
LECTURE 1 (1 hour)	Introduction of Mathematical Geography
LECTURE 2 (1 hour)	Its Evolution as a branch in Geography
LECTURE 3 (1 hour)	Implications of Mathematical Geography in other branches of Geography
LECTURE 4 (1 hour)	General idea about the shape and form of the earth
LECTURE 5 (1 hour)	Analysis of the earth as a sphere
LECTURE 6 (1 hour)	Analysis of the earth as a spheroid
LECTURE 7 (1 hour)	Analysis of the earth as GEOID
LECTURE 8 (1 hour)	Experiments and observations to determine the real shape of the earth
LECTURE 9 (1 hour)	Concept of earth's rotation and proofs of the earth's rotation
LECTURE 10 (1 hour)	Impacts of the earth's rotation
LECTURE 11 (1 hour)	Concept and proofs of the revolution of the earth
LECTURE 12 (1 hour)	Impacts of earth's revolution
LECTURE 13 (1 hour)	Some important discussions about rotation and revolution of the earth
LECTURE 14 (1 hour)	Concept and characteristics of latitude
LECTURE 15 (1 hour)	Determination of latitude
LECTURE 16 (1 hour)	Relationship between latitude and other geographical phenomena
LECTURE 17 (1 hour)	Concept and features of latitude
LECTURE 18 (1 hour)	Determination of longitude
LECTURE 19 (1 hour)	Longitude and its associated phenomena
LECTURE 20 (1 hour)	Relationship between longitude and time
LECTURE 21 (1 hour)	Analysis of International Date Line and Antipode
LECTURE 22 (1 hour)	Assessment of seasonal changes of the earth
LECTURE 23 (1 hour)	Determination of time
LECTURE 24 (1 hour)	Some simple calculation to find out time difference in different longitude
LECTURE 25 (1 hour)	Concept of standard time and local time
LECTURE 26 (1 hour)	Concept of calendar and its implications
LECTURE 27 (1 hour)	Idea of Ancient and modern calendar
LECTURE 28 (1 hour)	https://youtu.be/L18-brRutcw?si=pLeZbUdjm-xwT6un
LECTURE 29 (1 hour)	https://youtu.be/IJhgZBn-LHg?si=4TOkTM_AmDYPDesT
LECTURE 30 (1 hour)	https://youtu.be/iPp2KZWBR5k?si=r2_dxp6WjF9mZ9OT

EVALUATION PROCESS FOR THE ADD-ON COURSE

The Evaluation will be done through 2 components –

i) C1- Course-end Assessment [Total Marks:20]

ii) C2 - Attendance [Total Marks: 5]

At the end of the Course, there will be a Course-end Assessment.

MODEL CERTIFICATE