



30 HOURS ADD ONOURSE
on
FUNDAMENTALS OF HYDROLOGY

Open to all Geography Honours students

Organized by

Department of Geography
Hazi A. K. Khan College

Session: 2020-21

BASIC DETAILS OF THE 30 HOURS ADD-ON COURSE

1.	Course Title	Fundamentals of Hydrology
2.	Pre-requisite	All Under-Graduate students of Geography Honours
3.	Course Outcome	After completing the course, the students will be able to- <ul style="list-style-type: none"> ➤ Get the idea about the significance and relevance of hydrology ➤ Develop the knowledge about hydrological cycle and its role ➤ Build knowledge about run-off, infiltration, evaporation and transpiration and their role in the environment ➤ Realise the determining factors of storage of ground water and its significance ➤ Build the knowledge about different types of aquifers ➤ Construct idea about hydrograph and its importance
4.	Course Commencement Date	May 2021-June 2021
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 and its analysis (You tube) = 3 Hours (According to course requirements) Total Course Duration = 30 (27+3) Hours. 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	Protyus Kumar Ghosh
12.	Course Certificate Format	Format given in Page

DETAILED SYLLABUS OF THE ADD-ON COURSE

Module-1: Nature and scope of Hydrology and its relevance [Time: 3 Hours]

Module- 2: Concept of Global Hydrological cycle & Basin Hydrological cycle
[Time: 6 Hours]

Module-3: Factors of run-off and its types and runoff cycle [Time: 4 Hours]

Module- 4: Concept and Factors influencing infiltration, evaporation and transpiration
[Time: 8 Hours]

Module- 5: Components, factors and processes of controlling storage and movement of ground water, aquifers & Analysis of Hydrography [Time: 6 Hours]

LEARNING RESOURCES- ESSENTIAL READINGS

SL.NO.	TITLE OF THE BOOK	AUTHOR(S)
01	ভূ-জলবিদ্যা	সমীর আদক ও সুলেখা আদক
02	জলবিজ্ঞান	সুভাষ রঞ্জন বসু ও বিশ্বজিৎ বেরা
03	Fundamentals of Hydrology	Savindra Singh

LESSON PLAN

LECTURES	CONTENTS
LECTURE 1 (1 hour)	Nature of Hydrology
LECTURE 2 (1 hour)	Scope and content of Hydrology
LECTURE 3 (1 hour)	Relevance and implications of this branch of Geography
LECTURE 4 (1 hour)	Global Hydrological Cycle
LECTURE 5 (1 hour)	Significance of that hydrological cycle
LECTURE 6 (1 hour)	Concept of Basin hydrological cycle
LECTURE 7 (1 hour)	Factors influencing the basin hydrological cycle
LECTURE 8 (1 hour)	Importance of that hydrological cycle
LECTURE 9 (1 hour)	Relationship between global and basin hydrological cycle
LECTURE 10 (1 hour)	Concept of runoff and factors influencing this
LECTURE 11 (1 hour)	Significance of runoff and other associated issues
LECTURE 12 (1 hour)	Types of runoff
LECTURE 13 (1 hour)	Outline of runoff cycle
LECTURE 14 (1 hour)	Concept and factors influencing infiltration
LECTURE 15 (1 hour)	Measurement of infiltration
LECTURE 16 (1 hour)	Concept of evaporation
LECTURE 17 (1 hour)	Factors affecting evaporation
LECTURE 18 (1 hour)	Measurement of evaporation
LECTURE 19 (1 hour)	Concept and significance of transpiration
LECTURE 20 (1 hour)	Types and mechanism of transpiration
LECTURE 21 (1 hour)	Factors controlling transpiration
LECTURE 22 (1 hour)	Ground water: concept and significance
LECTURE 23 (1 hour)	Zonation and sources of ground water
LECTURE 24 (1 hour)	Controlling factors of ground water
LECTURE 25 (1 hour)	Types of aquifers
LECTURE 26 (1 hour)	Ground water recharge
LECTURE 27 (1 hour)	Analysis of hydrograph
LECTURE 28 (1 hour)	https://youtu.be/FtfyBBGIlFA?si=0Hz2UkGvrIwAVt3o
LECTURE 29 (1 hour)	https://youtu.be/MsYXFm1lhLw?si=VJTCX1zrGc2OpvM5
LECTURE 30 (1 hour)	https://youtu.be/NAAZnRWJV-k?si=UdIqVI3WMSZvmU25

EVALUATION PROCESS FOR THE ADD-ON COURSE

The Evaluation will be done through 2 components –

- i) C1- Course-end Assessment [Total Marks:30]
- ii) C2 - Attendance [Total Marks: 5]

At the end of the Course, there will be a Course-end Assessment. Attendance Component Marks will be calculated based on the actual Attendance Percentage of the Students during the classes of the Course.

ATTENDANCE PERCENTAGE (%)	MARKS ALLOTTED
ABOVE 90	5
80 - 89	4
75 - 79	3
70 - 74	2
60 - 69	1
BELOW 60	NOT ELIGIBLE FOR CERTIFICATE

GRADING & DIVISION:

PERFORMANCE	SCORE ON 100% POINTS	LETTER GRADE
Outstanding	90to100	0
Excellent	80 to < 90	E
Very Good	70 to <80	A
Good	60 to <70	B
Above Average	50 to <60	C
Average/Pass	40 to <50	D
Fail	Below 40	F
Absent	-	AB

MODEL CERTIFICATE



HAZI A.K. KHAN COLLEGE

CERTIFICATE OF ACHIEVEMENT



This certificate is awarded to.....of
.....Semester, Registration No.....Session.....from
Department of Geography who has successfully completed Add-on course on "*Fundamentals
of Hydrology*" offered by the Department of Geography from May to June, 2021 for 30 hours
duration.

We appreciate your presence and wish you all the best for your future.

Protyus Kumar Ghosh
Course Coordinator
Department of Geography
Hazi A.K. Khan College

Dr Krishnendu Munsí
Coordinator
IQAC
Hazi A.K. Khan College

Dr Goutam Kumar Ghosh
Principal
Hazi A.K. Khan College
Hariharpara, Murshidabad