### Report of Certificate Course on

# 'Global Challenges to Mosquito-borne Diseases and their Controlling Approaches'



Organized by
Post Graduate Department of Zoology
Banwarilal Bhalotia College, Asansol, West
Bengal, India
Under the aegis of IQAC

**Course Mode: Blended Mode** 

**Duration: 40 hours** 



Constituent College of the Kazi Nazrul University

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#### COLLEGES WITH POTENTIAL FOR EXCELLENCE

Asansol-713303, West Bengal (India)

**(**0341) 2274842, 2275414

**☎**IGNOU:2274563,

☎ NSOU: 2274250

Fax: (0341) 2274529

#### **NOTICE**

The Department of Zoology of our College is going to organize a Certificate Course on Global Challenges to Mosquito-borne Diseases and their Controlling Approaches from 15.11.2022 to 15.12.2022. The interested candidates are requested to register their names before 10.11.2022.

Chrish

Signature
Dr. Rajrupa Ghosh
Head Of the Department
P.G.Zoology
B.B.College
Asansol-713303

Signature
Dr. Amitava Basu
Principal
B.B.College
Asansol-713303



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Asansol-713303, West Bengal (India)

■ NSOU: 2274250 Fax: (0341) 2274529

**☎**IGNOU:2274563,

**2274842**, 2275414

To, The Principal through IQAC, Banwarilal Bhalotia College, Asansol-713303, WB, India

Subject: Departmental meeting regarding framing of the detailed Syllabus, Schedule and Board Of Studies (BoS) for the Certificate course on Global Challenges to Mosquito-borne Diseases and their Controlling Approaches to be held by the Department of Zoology.

#### Respected Sir,

In the meeting held by the IQAC, Banwarilal Bhalotia College, with all the HODs of all the departments on 28.09.2021 regarding the introduction of Certificate course in academic session 2021-2022, it was decided after discussion that our department of Zoology will introduce a certificate course on Global Challenges to Mosquito-borne Diseases and their Controlling Approaches for this session. In this connection, the P.G.Department of Zoology held a meeting with all faculties of the department to frame detailed Modules, Syllabus & schedule of the said certificate course. Following resolutions are made in the meeting -

- I. The course will comprise of 41 hours with 29 hours of theory and 12 hours of Practical.
- II. The detailed syllabus with modules for this course was chalked out in this meeting.
- III. There will be 29 continuous theory classes during which the students will be introduced to the subject matter and make their concept about the topic.
- IV. The Remaining 12 will be their practical classes and full demonstration about the techniques.
- V. A Board of Studies (BoS) for this purpose was also constructed for the smooth running of the program. This Board included faculty members of our Department with Co ordinators. The structure of the BoS is as follows:
  - Dr. Rajrupa Ghosh (Head of the Department).
  - Dr. Sangita Lahiry (Course Coordinator).
  - Dr. Atrayee Dey (Course Coordinator).
  - Dr. Zarqua Jamal.
  - Smt. Saswati Chakraborty.
  - Sri Koushik Kumar Mandal (Course Coordinator).
  - Sri Pankaj Dutta.
  - Sri Raja Mukherjee.
  - Smt.Sananda Chanda.

V. The course is scheduled to start on 15.11.2022 and to end on 15.12.2022 with the valedictory session and certificate distribution.

There on behalf of all the faculty members of the department I request you to give us permission for the above-mentioned course with its given syllabus and modules.

Thanking you,

Dr. Rajrupa Ghosh Head of the Department Assistant Professor P.G. Department of Zoology Banwarilal Bhalotia College, Asansol-03

#### **CERTIFICATE COURSE ON**

# "GLOBAL CHALLENGES TO MOSQUITO BORNE DISEASES AND THEIR CONTROLLING APPROACHES"



Course opening date: 15th November, 2022 (41 hours long)



### Organised by

Banwarilal Bhalotia College Post Graduate Department of Zoology Asansol, West Bengal, India (Under the aegis of IQAC)

#### Aim of the Course:

In this course, the students will learn to identify different species of mosquito and their role as vector in vector borne diseases. Malaria, Zika virus and Dengue fever are of global concern and there is a need of strategic World-wide approaches to controlling mosquitoes and mosquito borne diseases. Students will also learn about how mosquito borne diseases are distributed, and the suitability of vector control practices designed to prevent the spread of these dangerous diseases.

#### Chairperson:

Dr. Amitava Basu, Principal, Banwarilal Bhalotia College, Asansol.

#### **Course Coordinators:**

Dr. Sangita Lahiry, Assistant Professor, Post Graduate Department of Zoology, Banwarilal Bhalotia College, Asansol.

Dr. Atrayee Dey, Assistant Professor, Post Graduate Department of Zoology, Banwarilal Bhalotia College, Asansol.

Sri Koushik Kumar Mandal, Assistant Professor, Post Graduate Department of Zoology, Banwarilal Bhalotia College, Asansol.

### **Invited Speakers:**



Prof. Goutam Chandra
Professor

Department of Zoology
The University of Burdwan
West Bengal, India



Professor Dhiraj Saha Professor

Department of Zoology University of North Bengal West Bengal, India

#### **Important Notes:**

Course Type: Interdisciplinary Certificate Course

Target Group: UG/PG students of all discipline Course Opening date: 15th November, 2022

Course mode: Blended Mode (Online & Offline both)

Class timing: 6-8 PM (IST)

Course duration: 15.11.2022-15.12.2022

Exam: MCQ test

Registration link: <a href="https://forms.gle/FrrMejnbBdS9U4cg8">https://forms.gle/FrrMejnbBdS9U4cg8</a>
(Open till 10<sup>th</sup> November, 2022)

CERTIFICATE WILL BE AWARDED ON COMPLETION OF THE COURSE



Constituent college of the KAZI NAZRUL UNIVERSITY, Asansol (GOVT. SPONSORED U G & P G College) ASANSOL - 713303, WEST BENGAL (INDIA)

Dr Amitava Basu, M Com, Ph D Principal

Date: 12.11.2022

To **Prof. Goutam Chandra** Department of Zoology The University of Burdwan Burdwan-713104, West Bengal, India

Subject: Invitation as a Resource Person for Certificate Course on 21st November, 2022

Sir,

With immense pleasure, we would like to inform you that the Post Graduate Department of Zoology, Banwarilal Bhalotia College, Asansol, India, is going to organize a Certificate Course on "Global Challenges to Mosquito Borne Diseases and their Controlling Approaches" from 15.11.2022 to 15.12.2022. We shall be honored to have you with us as an Invited Speaker on 21st November, 2022 and grant us the opportunity to be enriched by your eloquence and profundity.

Thanking you in anticipation of an affirmative.

Yours Sincerely

Dr. Amitava Basu

Principal

Banwarilal Bhalotia College

Asansol-713303

DR. AMITAVA BASU Principal, B. B. College Ushayram, Asansol, P Bardhaman West Bengal - 713303

Phone: 0341-2274842 Web: www.bbcollege.ac.in

Fax: 0341-2274529E-mail: bbcollege1944@gmail.com, naac.hec@gmail.com

Mobile: 9932940169





Constituent college of the KAZI NAZRUL UNIVERSITY, Asansol (GOVT. SPONSORED U G & P G College) ASANSOL - 713303, WEST BENGAL (INDIA)

Dr Amitava Basu, M Com, Ph D Principal

Date: 12.11.2022

To Prof. Dhiraj Saha Department of Zooloy **North Bengal University** Raja Rammohunpur West Bengal-734014

Subject: Invitation as a Resource Person for Certificate Course on 17th November, 2022

Sir.

With immense pleasure, we would like to inform you that the Post Graduate Department of Zoology, Banwarilal Bhalotia College, Asansol, India, is going to organize a Certificate Course on "Global Challenges to Mosquito Borne Diseases and their Controlling Approaches" from 15.11.2022 to 15.12.2022. We shall be honored to have you with us as an Invited Speaker on 17th November, 2022 and grant us the opportunity to be enriched by your eloquence and profundity.

Thanking you in anticipation of an affirmative.

Yours Sincerely

Dr. Amitava Basu

Principal

Banwarilal Bhalotia College

Asansol-713303

DR. AMITAVA BASU Principal, FL B, College Ushagram, Asansol, P. Bardhaman West Bengal - 713303



Phone: 0341-2274842 Web: www.bbcollege.ac.in

Fax: 0341-2274529E-mail: bbcollege1944@gmail.com, naac.hec@gmail.com

Mobile : 9932940169

### Syllabus for Certificate Course on

## GLOBAL CHALLENGES TO MOSQUITO-BORNE DISEASES AND THEIR CONTROLLING APPROACHES

Organized by
Post Graduate Department of Zoology
Banwarilal Bhalotia College, Asansol, West Bengal, India
Course Mode: Blended Mode

**Title of the Certificate Course:** Global Challenges to Mosquito-borne Diseases and

their Controlling Approaches

Target Group: UG & PG level students from all discipline,

Banwarilal Bhalotia College

**Duration of the Course:** 41 hours

**Session:** 2022-2023

**Date:** 15.11.2022 to 15.12.2022

**Timing:** 6 pm to 8 pm

**Objective of the course:** The course will be inductive for the students to

learn about different species of mosquitoes, their identification and their role as vector in vector-borne diseases. The lectures will cover various mosquito-borne diseases which are of global concern. Students will learn about their strategic controlling methods, and the suitability of vector control practices designed to prevent the spread of

these dangerous diseases.

#### **Content of the course:**

Module 1: Overview on Mosquitoes and their Role as Vector

#### **Unit 1: Fundamentals of Mosquito (6L)**

*	Identification of Adult and Larval forms of Anopheles, Culex and Aedes	1L
*	Morphological identification of male and female adult mosquitoes	1L
*	What is the purpose of mosquito & why do they exist?	.1L
*	The ecological role of mosquito larvae in aquatic environments	1 L
***	Life Cycle of Anopholes Culey and Andes	2 I

*	Basic Concepts of Vector	.1L
*	Concept on Infectious disease, virus, non-infectious disease, incubation per	
.•.	pathogen	
	Mosquito as a Vector	
		nsect
	Vector	L
*	Mosquito and Human Health: A Global Con2L	ceri
*	Current scenario of Mosquito Vector Management: Concern	and
	Prospects2L	
	tle 2: Controlling Approaches  S: Novel control strategies for mosquito-borne diseases (71)	
√ 3	Biological Control of Mosquito-Borne Diseases . 2 Household-level vector control strategies . 2 Biotechnological control of mosquitoes	2L 2L
Jnit 3	Biological Control of Mosquito-Borne Diseases	2L 2L
Jnit 3	Biological Control of Mosquito-Borne Diseases. 2 Household-level vector control strategies. 2 Biotechnological control of mosquitoes. 2 The future of vector control. 2  Biological Demonstration on Different Aspects of Mosquitoes (12L)	2L 2L
Jnit 3	3: Novel control strategies for mosquito-borne diseases (7L)  Biological Control of Mosquito-Borne Diseases	2L 2L

Day	Date	Time	Topic	Speaker
01	15.11.2022	6.00-6.15 pm	Inauguration Speech	Dr. Amitava Basu
		6.15-6.30 pm	Introduction to	Shri Koushik
		6.30-7.15 pm	Mosquitoes What is the	Kumar Mondal Dr. Atrayee Dey
		0.30-7.13 pm	purpose of	DI. Adayce Dey
			mosquitoes and	
			why do they exist?	
			Break	
		7.30-8.00 pm	Continue	Dr. Atrayee Dey
02	16.11.2022	6.00-6.45 pm	Concept of	Dr. Sangita
			Infectious disease	Lahiry
			Break	
		7.00 - 8.00  pm	Life cycle of	Smt. Sananda
		•	mosquito	Chandra
			(Anopheles, Culex, Aedes)	
03	17.11.2022	6.00-8.00 pm	Mosquito and	Prof. Dhiraj
		•	Human health;	Saha (NBU)
			Current scenario	
			of Mosquito Vector	
			Management	
04	18.11.2022	6.00-7.00 pm	Mosquito borne Diseases	Smt Saswati
				Chakraborty
		<b>7.15</b> .0.00	Break	
		7.15-8.00 pm	Continue	Smt Saswati Chakraborty
05	21.11.2022	6.00- 8.00 pm	Mosquito, it's	Prof. Goutam
			role as vector,	Chandra (BU)
			Global challenges and	
			control	
06	22.11.2022	6.00-6.45 pm	Identification of	Shri Koushik
			Mosquitoes	Mondal
		7.00.000	Break	C1 ' 17 1'1
		7.00-8.00 pm	Continue	Shri Koushik Mondal
07	23.11.2022	6.00-6.45 pm	Basic concepts	Shri Raja
			of Vector	Mukherjee
			Break	
		7.00-8.00 pm	Continue	Shri Raja
08	24.11.2022	6.00-7.00 pm	The Future of	Mukherjee Dr. Zarqua
00	∠ <del>T</del> .11.2022	0.00-7.00 pm	Vector control	Jamal
			Break	
			Dicar	

		7.15-8.00 pm	Ecological role of mosquito larvae in aquatic environments	(Research
09	29.11.2022	6.00-8.00 pm	Biological control of mosquitoes	Shri Pankaj Dutta
10	30.11.2022	6.00-8.00 pm	Biotechnological control of mosquitoes	Dr. Shubhamay Panda
11	01.12.2022	6.00-8.00 pm	Transmission of MBD and role of Insect vector	3
12	2.12.2022- 13.12.2022	Mosquitoes by S	nstration on Diffe Shri Rajesh Kumar Zoology, The Unive	Malla, Research

#### **Schedule for Certificate Course on**

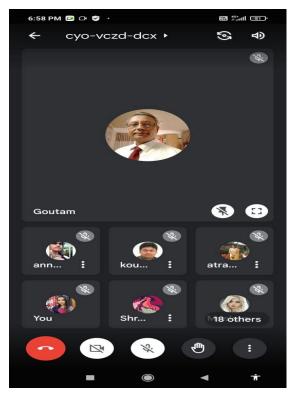
# GLOBAL CHALLENGES TO MOSQUITO-BORNE DISEASES AND THEIR CONTROLLING APPROACHES

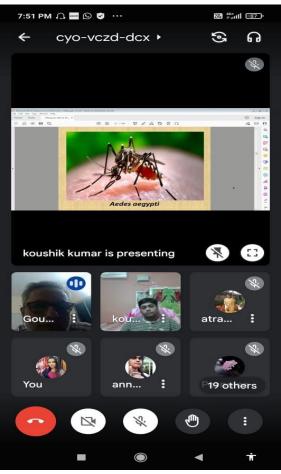
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Post Graduate Department of Zoology
Banwarilal Bhalotia College, Asansol, West Bengal, India
Course Mode: Blended Mode

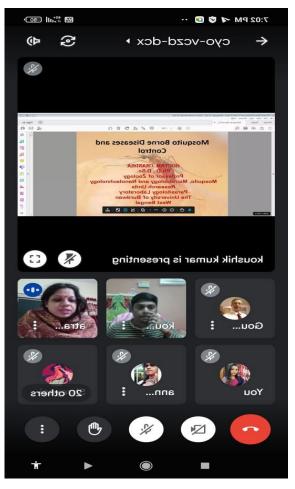
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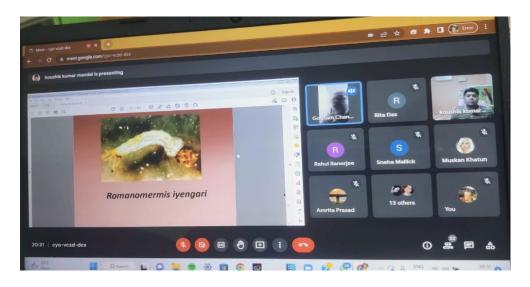
### Screenshots of online classes



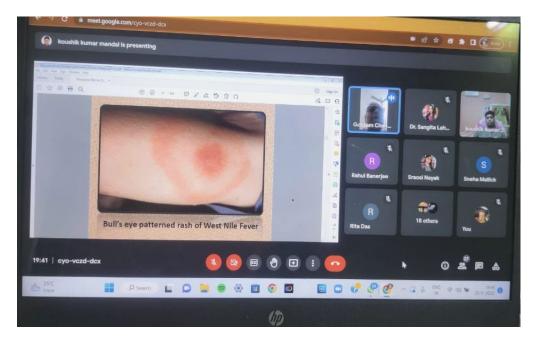






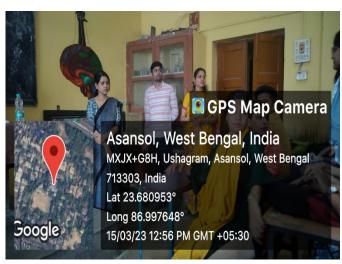






#### **Pictures of valedictory ceremony**











### **Certificates**





### **CERTIFICATE COURSE**



GLOBAL CHALLENGES TO MOSQUITO-BORNE DISEASES
&
THEIR CONTROLLING APPROACHES



### Letter Of Appreciation

То

The Course Coordinator,

#### Dr. Sangita Lahiry

Assistant Professor
Department of Zoology
Banwarilal Bhalotia College
Asansol, West Bengal.

Dear Ma'am,

On behalf of the organizing team and other Coordinators of the certificate course, organized in blended mode by the Department of Zoology under the aegis of IQAC, **Banwarilal Bhalotia College**, Asansol, on **December, 2022**. I would like to extend my gratitude for your support and efforts in making the course a successful one.

Warm Regards,

(Dr. Amitava Basu ) Principal

Banwarilal Bhalotia College Asansol, West Bengal. India