



GOVERNMENT OF WEST BENGAL
OFFICE OF THE PRINCIPAL
Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: <https://maulanaazadcollegekolkata.ac.in>

Summary Report, Meeting Notice, Meeting Resolution, Course
Brochure/Curriculum, Course outcomes, Sample Certificate

26. Hands-on Training on Biomedical Techniques

Summary Report

Course Name: **Hands-on Training on Biomedical Techniques**

Course Code: **AD-ZOO-22-23-02**

Organizing Department: **Department of Zoology**

Course Duration: **30 Hours (07.07.2023-11.07.2023)**

No. of Enrolled Students: 14

No. of student completed the course: 14

Course Overview:

This course is designed to provide practical, hands-on experience with a variety of biomedical techniques commonly used in research and clinical laboratories. Participants will gain an understanding of the principles behind each technique, as well as proficiency in performing the procedures themselves.

Outcome:

By the end of the course, participants will able to learn:

- Hands-on experience with essential biomedical techniques.
- A solid understanding of the principles behind each method.
- Confidence to apply these techniques in a research or clinical setting.



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Departmental Meeting Notification

Maulana Azad College, Kolkata
Post Graduate Department of Zoology

Notice

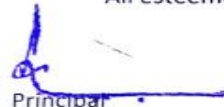
No Z/Gen/73


Date 05.6.2023




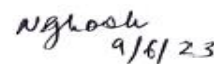
This is to notify that a DC meeting will be held on 9.6.23 at 12.15 pm in the department's room to discuss the following agenda:

1. Add-on-Course for the session 2022-2023
2. Matters arising

All esteemed colleagues are requested to attend the meeting.


Principal
Maulana Azad College
Principal
Maulana Azad College
Govt. of West Bengal


Head
Department of Zoology
HEAD
P.G. Department of Zoology
Maulana Azad College
Govt. of West Bengal
Kolkata -700013

1.  9/6/23
2.  9.6.23
3.  9/6/23
4.  9/6/23
- 5.




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Meeting Resolution

Maulana Azad College, Kolkata
Post Graduate Department of Zoology

Resolution adopted in the meeting:

1. An add-on Course on "Hands-on-Training on Biomedical techniques" will be offered for UG Semester 6 students (both in-house and external students) which will be of 30 hours duration.
2. Time schedule : 7th July, 2023 to 11th July, 2023, from 11am to 4pm
3. It has been resolved that Dr. Susanta Roy Karmakar, Dr. Abhishek Mukherjee, Dr. Rajarshi Ghosh, Dr. S.K. Bhowal and Dr. Nabanita Ghosh, faculty members of this department will act as Resource person for the aforementioned course.
4. The Syllabus framed by the faculties has also been approved.

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Maulana Azad College

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Govt. of West Bengal

R. Ghosh
9/6/23

Department of Zoology
HEAD
P.G. Department of Zoology
Maulana Azad College
Govt. of West Bengal
Kolkata -700013



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Course Brochure / Curriculum

- **Title:** Add on Course on 'Hands-on training on Biomedical Techniques'
- **Venue:** Department of Zoology, Maulana Azad College, Kolkata -13
- **Duration:** 7th July, 2023- 11th July, 2023.
- **Span of the Course:** 30 hours
- **Brief introduction of this Course:** To give the students a hands-on exposure on some topics which they theoretically studied in their course curriculum but didn't have practical exposure.
- **Outcome of the course:** On completion of the course the participants will gain a brief hands-on exposure to some vital biomedical techniques (mentioned in the syllabus). They will gain the detailed technical know-how of the techniques. This may help them in their higher studies and also to pursue a career in the field of biomedical diagnostics.
- **Resource persons:** Dr. Rajarshi Ghosh, Dr. Abhishek Mukherjee, Dr. Susanta Roy Karmakar, Dr. Sujit Kumar Bhowal, & Dr. Nabanita Ghosh
- **Participants:** 24 students (10 external, 14 in-house)
- **Facility requirements within college premises:** all facilities will be provided by the department.
- **Full Marks for this Course:** 20
- **Mode of Examination:** Offline MCQ test at the final day of the course
- **Books, Study materials, Journals & other necessary references:** softcopy of study materials provided to the participants
- **Syllabus:**
 - Determination of some hematological parameters
 - Effect of pH on enzyme activity
 - Mitotic chromosome preparation from bone marrow of albino rat (*Rattus* sp.)
 - Demonstration of human chromosome with special reference to its applications
 - Rna isolation from animal tissue using trizol reagent
- **Certificates:** Formats enclosed



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Program Schedule:

PROGRAMME SCHEDULE

[7TH JULY - 11TH JULY, 2023]

DURATION: 11 AM - 4 PM

(TOTAL COURSE DURATION = 30Hrs.)

7TH JULY

- Welcome address: By Prof. Subir Ch. Dasgupta, HOD, Department of Zoology, Maulana Azad College and Dr. Dipak K. Som, IQAC Co-Ordinator, Maulana Azad College
- Hands on training on “**Determination of Some Haematological Parameters**” by Dr. Rajarshi Ghosh, Assistant Professor in Zoology (WBES), Department Of Zoology, Maulana Azad College.
(Training: 11 am -3 pm; Evaluation: 3 pm-4pm)

8TH JULY

- Hands on training on “**Effect of pH on Enzyme Activity**” by Dr. Abhishek Mukherjee, Assistant Professor in Zoology (WBES), Department Of Zoology, Maulana Azad College.
(Training: 11 am -3 pm; Evaluation: 3 pm-4pm)

9TH JULY

- Hands on training on “**Mitotic chromosome preparation from bone marrow of albino rat (*Rattus sp.*)**” by Dr. Susanta Roy Karmakar, Associate Professor in Zoology (WBES), Department Of Zoology, Maulana Azad College.
(Training: 11 am -3 pm; Evaluation: 3 pm-4pm)

10TH JULY

- Hands on training on “**Demonstration of human chromosome with special reference to its applications**” by Dr. Sujit Kumar Bhowal, Associate Professor in Zoology (WBES), Department Of Zoology, Maulana Azad College.
(Training: 11 am -3 pm; Evaluation: 3 pm-4pm)

11TH JULY

- Hands on training on “**RNA isolation from animal tissue using TRIzol reagent**” by Dr. Nabanita Ghosh, Assistant Professor in Zoology (WBES), Department Of Zoology, Maulana Azad College.
(Training: 11 am -3 pm; Evaluation: 3 pm-4pm)



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Evolution procedure.

It has been resolved that the evaluation process consist of the following.

- Question preparation (MCQ / Practical): Full Marks 20
- For theory paper there will be short answer type and long answer type questions and time of examination 3 hours.
- For practical paper time of examination 4 hours.
- Evaluation of answer scrips and Tabulation as decided by the coordinator.

(e) Grade and Marks as per following table:

Grade Scale	Grade	Performance Indicator
90-100	AA	Outstanding
80-89	A+	Excellent
60-79	A	Very Good
40-59	B	Satisfactory
< 40	D	Disqualified

. Issue of Certificate

It has been resolved that the certificate will be issued to those candidates who have successfully completed the course. The coordinator should prepare a brief report of the course after taking feedback from the participants and the difficulties if any for smooth running the course.



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ADD-ON COURSE
ORGANIZED BY
DEPARTMENT OF ZOOLOGY, MAULANA AZAD COLLEGE, KOLKATA-700013

ASSESSMENT

Answer the following MCQ: $10 \times 2 = 20$

- Haemocytometer is used to determine
 - Differential count of leucocytes
 - Hemoglobin
 - Total count of leucocytes
 - Haematocrit
- The colour of oxidized tetramethylbenzidine during Benzidine test of fresh blood sample is
 - Black
 - Green
 - Red
 - Purple
- What is the pH of salivary amylase activity?
 - pH 6.8
 - pH 9
 - under pH 3
 - none of them
- Why pH affects enzyme activity?
 - because enzymes are proteins that get their molecular structure via interactions between the charges of the amino acids that form the protein chains
 - because enzymes are proteins that are negatively charged
 - because enzymes are proteins that are positively charged
 - Dose not effective at all
- Name a culture medium and mitogen for human blood lymphocyte culture.
 - DMEM and NGF
 - RPMI-1640 and PHA
 - RPMI and BDNF
 - DMEM and CSF



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**Feedback form for Hands-on Training on
Biomedical Techniques**

Date:

1. Name with home address: SOUMYADIP SARKAR
9/1, SARAT BOSE LANE, P.O. - RAJBARI COLONY, KOLKATA - 700081

2. Name of the College you study: MAULANA AZAD COLLEGE

3. Subject you study: ZOOLOGY

4. Present position: B.Sc. ZOOLOGY (SEMESTER-VI) (U.G.)

5. Mail address and Phone number: soumyadipsarkar2003@gmail.com
9051768310

6. Overall experience about the program:

1. Poor 2. Fair 3. Good 4. Very good 5. Excellent

7. Your suggestion for betterment of the program:

This training can be more student intensive, by making the students
more to work on some machines on their own.

8. Write in brief how helpful would be the course in your career:

This course would help us to learn those topics
that were not usually included in the syllabus and
would make us aware about the research methodologies
and its steps.

Signature:

Soumyadipsarkar



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Sample Certificate

	<p><i>Maulana Azad College</i> 8, Rafi Ahmed Kidwai Road, Kolkata-700013, India.</p>	
No. _____		
<i>Course Completion Certificate</i>		
<p><i>This is to certify that -----, bearing Enrollment No. ----- has actively participated and successfully completed 30 hours add-on course on "Hands-on Training on Biomedical Techniques" organized by the Department of Zoology in association with IQAC, in the period 7th July, 2023 to 11th July, 2023 and secured grade ---.</i></p>		
 Course Coordinator	 IQAC Coordinator	 Principal



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