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, Evaluation Process, Sample Certificate

13. Basic Mathematics in Daily Life

Summary Report of the Course

Course Name: **Basic Mathematics in Daily Life.**

Course Code: **AD-MTM-22-23-01**

Organizing Department: **Department of Mathematics**

Course Duration: **30 Hours (04.11.2022 - 30.11.2022)**

No. of Enrolled Students: 53

No. of student completed the course: 37

Course Objectives:

The objective of the course "Basic Mathematics in Daily Life" is to equip students with fundamental mathematical concepts and skills that are essential for solving everyday problems and making decisions. The course aims to demonstrate the practical applications of mathematics in various aspects of daily life, including personal finance, time management, and home maintenance. By fostering numerical literacy and critical thinking, the course seeks to enhance students' confidence and competence in using mathematics to navigate real-world situations.

Learning Outcomes:

By the end of the course, students will be able to:

1. The basic concepts, Set Theory, basic operations on sets, number system, and integer theory.

2. They can understand the principles of algebra, geometry, and basic statistics.

3. Drawing of graphs of functions using software.

4. The real-life application of the above concepts in several fields.

5. The students can understand and interpret graphs, charts, and statistical data presented in media and reports. Make informed decisions based on quantitative information and probability.

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Govt. of West Bengal

Principal
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<u>Departmental Meeting Notice</u>

Notice: Date: July 18, 2022

A meeting will be held on July 25, 2022 at 3.30 p.m. in the department of Mathematics to introduce the following ADD-ON courses for the benefit of the students. All are requested to attend the meeting positively.

Sl. No.	ADD-ON Course Name	Course Code	Year of Implementation
1	BASIC MATHEMATICS IN DAILY LIFE	AD-MTM-22-23-01	2022-23
2	HANDS-ON TRAINING THROUGH CALCULATOR AND COMPUTER FOR SOLVING ODE AND PDE	AD-MTM-22-23-02	2022-23

Agenda:

1. Selection of course coordinator(s).
2. Syllabus formation.
3. Evolution procedure.
4. Issue of certificate.

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Department of Mathematics

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Departmental Meeting Resolution

Ref. No………………..   Date: 26th July, 2022

In reference to the notice dated 18-07-2022 the following teachers have attended the meeting held on 25-07-2022 at 3.30 p.m.

Name of the Teacher	Signature
1. Dr. Kartik Chandra Basak	*Kartik Chandra Basak*
2. Dr. Somnath Bandyopadhyay	*Somnath Bandyopadhyay*
3. Dr. Babli Saha	*Babli Saha*
4. Dr. Nanda Das	*Nanda Das*

Minutes of the meeting:

All the teachers agreed unanimously for smooth running of the proposed ADD-ON courses to enhance the skills our students.

1. **Agenda 1**. Selection of course coordinator(s).

After detail discussion, the department has decided that the teachers of this department will act as ADD-ON course coordinator as per following:

Sl. No.	Course Code	Course Coordinator	Duration	Duration Hours
1	AD-MTM-22-23-01	Dr. S. Bandyopadhyay	04-11-2022 - 30-11-2022	30
2	AD-MTM-22-23-02	Dr. Nanda Das	02-05-2023 - 31-05-2023	30

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Evaluation Procedure

2. Agenda 2. <u>Syllabus formation.</u>

It has been resolved that the respective course coordinator will be responsible for Syllabus formation with the help of other faculty members and coordinate with IQAC time to time.

3. Agenda 3. <u>Evolution procedure.</u>

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

(a) Question preparation (Theory /Practical): Full Marks 100

(b) For theory paper time of examination 3 hours.

(c) For practical paper time of examination 4 hours.

(d) 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

Agenda 4. <u>Issue of Certificate</u>

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.

K. C. Besak

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Department of Mathematics

Syllabus for "Basic Mathematics in Daily Life".

Unit-I: Basics Concept of Set Theory [8 Hours]

Definition of sets, subsets and set operations (Union, Intersection, Complementation, Subtraction); Statements of basic laws of set algebra, Venn diagrams. Cardinality of a set and the formula $n(A \cup B) = n(A) + n(B) - n(A \cap B)$ and its application in daily life.

Unit-II: Mathematical logic [8 Hours]

Proposition, propositional variables and propositional Logic.

Logical Connectives: NOT (Negation), OR (Disjunction), AND (Conjunction), Exclusive OR(XOR), IMPLICATION (If p then q) and BI-IMPLICATION (If and only if) and their Truth Tables; Truth value of a proposition, Truth tables of expressions involving more than one logical connective; Tautology, logical consequence, logical equivalence, contradiction;

Unit-III: Basics of Operations Research [14 Hours]

Idea of Linear Programming Problems: Objective function, decision variables, constraints. • Formulation of daily life problems as an LPP (e.g. Carpenter problem, preparation of mixtures of chemicals, diet problems etc.); • Solution of an LPP by graphical method. (only bounded region) • Definition of Game, Examples from daily life Two person zero sum game, Strategy, Payoff, Saddle point, Solution of a game problem with saddle point (only elementary problems)

References:

[1] A Book of SET THEORY CHARLES C. PINTER Emeritus Professor Bucknell University.

[2] Elliott Mendelson; Introduction to Mathematical Logic; Chapman & Hall; London,1997

[3] M. Chakraborty; Lecture note: A journey through the logic wonderland, IIEST Shibpur, 2016

[4] Paul R. Thie and G. E. Keough, An Introduction to Linear Programming and Game Theory; John Wiley & Sons, INC., Third Edition, 2008

[5] J. G. Chakraborty and P.R. Ghosh, Linear Programming and Game Theory, Moulik Library, 2009

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Permission from HOI

To   Date: 26.07.2022

The Principal

Maulana Azad College, Kolkata

Respected Sir,

The Department of Mathematics, Maulana Azad College, has resolved in the online meeting held on 25.07.2022 that an add-on course for B.Sc.(H) students will be conducted from 04.11.2022 to 30.11.2022 on **'Basic course on Excel & LaTeX'**. The details of the proposed course are attached. We Shall remain grateful if you very kindly give permission to pursue the aforesaid course.

    With regards,

    Yours Faithfully,

K. C. Bagak,
Head
Department of Mathematics
Maulana Azad College, Kolkata
Govt. of West Bengal

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Sample Certificate

MAULANA AZAD COLLEGE

8, Rafi Ahmed Kidwai Road, Taltala, Kolkata 700013.

Completion Certificate

Session : 2022-2023

This is to certify that _____
has actively participated and successfully completed 30 hours ADD-ON course on "**Basic Mathematics in daily Life**" (Course Code: AD-MTM-22-23-01), organized by the **Department of Mathematics** in association with IQAC, in the period 04.11.2022 - 30.11.2022 and secured Grade ___ .

Course Coordinator   IQAC Coordinator   Principal

Principal
Maulana Azad College
Kolkata-13