

EXPERIENTIAL LEARNING

DEPARTMENT OF MATHEMATICS, COMPUTER SCIENCE & STATISTICS		
SL No.	CONTENT	
1	SKILL DEVELOPMENT COURSES AND SOFT SKILL PROGRAMS	
2	STUDENT PROJECTS	
3	CULTURAL AND HERITAGE PROGRAMMES	
4	INSTITUTION VISITS	
5	EXTENTION ACTIVITIES & COMMUNITY SERVICES	
6	FLIPPED CLASSROOM	
7	NATURE BASED OUTDOOR LEARNING	
8	CIVIC ENGAGEMENT	

1 SKILL DEVELOPMENT COURSES AND SOFT SKILL PROGRAMS

The mathematics department together with the Complementary departments – Computer Science and Statistics, offers a variety of skill development and soft skill programs to enhance both the technical and interpersonal abilities of students. These courses are designed to complement the academic curriculum and equip students with the competencies necessary for both academic growth and professional success. Breakdown of these programs are listed below.

SL	Technical Skill Development Courses	Link
No.		
1	Introduction to Latex	
2	Essential skills in Microsoft Word and Excel	
3	Introduction to Data Analysis using Excel	
4	Fundamentals of R Programming from Basics	
	to Data Analysis	
5	Office Efficiency Systems and Tally	

Soft skill programs offered by the department are designed to develop non-technical skills, that are crucial for personal and professional success. These programs focus on enhancing presentation skills, team work, leadership, problem solving and other inter personal abilities.

SL	Soft Skill Programs	Link
No.		
1	Problem Solving Using Python	
2	Hands on Workshop on Slide Making	
3	Workshop on Pivot tables & Dash boards	
4	Essay Writing Competition	
5	Math games and puzzles	
6	Chess competition	
7	Sudoku competition	
8	Rangoli Making & Freedom Puzzle	
9	Pi puzzle game &	
	Pi creatives	
10	Webinar DNA Computing	
11	Poster making competition	

2 STUDENT PROJECTS

Student projects conducted in the Mathematics Department serve as a vital aspect of experiential learning. By engaging in projects students develop skills in research methodology, data collection and the use of mathematical software tools. Group projects also foster teamwork, communication, and project management skills.

AMBEDKAR COLLEGE OF ARTS AND SCIENCE, WANDOOR				
	DETAILS OF SIXTH SEMESTER STUDENTS PROJECT WORK			
Name o	of the Departme	ent : MATHEMATICS		
Acaden	Academic Year : 2023-24			
SL.NO	GROUP / INDIVIDUAL	NAME OF THE STUDENT	REG: NO	TITLE OF THE PROJECT
1	GROUP	ASNA P P	UFAVSMT002	AI in MATHEMATICS
2	GROUP	HIBA NASRIN V	UFAVSMT007	AI in MATHEMATICS
3	GROUP	NEJIL KALLARA	UFAVSMT019	AI in MATHEMATICS
4	GROUP	VARSHA K	UFAVSMT022	Al in MATHEMATICS
5	GROUP	JUMANA P	UFAVSMT028	Al in MATHEMATICS
6	GROUP	NAFIA V	UFAVSMT034	Al in MATHEMATICS
7	GROUP	FASNA K	UFAVSMT004	FORENSIC MATHEMATICS
8	GROUP	MISANA CK.	UFAVSMT010	FORENSIC MATHEMATICS
9	GROUP	SAFVANA PARVIN TP	UFAVSMT013	FORENSIC MATHEMATICS
10	GROUP	FAYAS KURIKKAL	UFAVSMT015	FORENSIC MATHEMATICS
11	GROUP	ASHJILA V.	UFAVSMT024	FORENSIC MATHEMATICS
12	GROUP	JYOTHIKA V	UFAVSMT030	FORENSIC MATHEMATICS
13	GROUP	BABY NASLA P	UFAVSMT003	FUZZY MATRICES
14	GROUP	JAMSHIYA E	UFAVSMT008	FUZZY MATRICES
15	GROUP	RINSHA MUNDASSERI	UFAVSMT011	FUZZY MATRICES
16	GROUP	ANEENA M	UFAVSMT023	FUZZY MATRICES
17	GROUP	JYOTHI ΑΡ	UFAVSMT029	FUZZY MATRICES

18	GROUP	SANDRA M	UFAVSMT031	FUZZY MATRICES
19	GROUP	FATHIMA LANA K	UFAVSMT005	GRAPH COLORING
20	GROUP	THASNEEM P	UFAVSMT014	GRAPH COLORING
21	GROUP	MOHAMMED FAVAS P	UFAVSMT016	GRAPH COLORING
22	GROUP	SHAMEEM P	UFAVSMT020	GRAPH COLORING
23	GROUP	HAFEEFA P	UFAVSMT026	GRAPH COLORING
24	GROUP	SHAHMA C T	UFAVSMT032	GRAPH COLORING
25	GROUP	AMEERA THASNI K	UFAVSMT001	MODULE THEORY
26	GROUP	FATHIMA NISHVA. A	UFAVSMT006	MODULE THEORY
27	GROUP	MUHAMMED SAHAL V P	UFAVSMT018	MODULE THEORY
28	GROUP	REEFA MOHAMMED K	UFAVSMT021	MODULE THEORY
29	GROUP	HUDA P	UFAVSMT027	MODULE THEORY
30	GROUP	SHEFIN K P	UFAVSMT033	MODULE THEORY

3 CULTURAL AND HERITAGE PROGRAMMES

The department organizes various cultural and heritage programs throughout the academic year, which not only enhance students' academic journey but also foster community spirit, cultural awareness and sense of belonging. These programs are typically organized on occasions like Onam, Independence Day, Christmas freshers' day and farewell day. These helps students to develop skills in event management, teamwork and leadership while celebrating the diversity of traditions and values.





Indian Independence Day Programs



Freshers' Day Cultural Programs



Farewell Day Cultural Programs

4 INSTITUTION VISITS

Institution visit offers students a unique opportunity to experience a new academic environment connect with people and participate in enriching activities like seminars and competitions. These experiences collectively provide a powerful motivation for perusing higher learning and professional growth.



Workshop Participation at Al-Ameen College, Edathala, Kochi



Institution visit to Kerala School of Mathematics

5 EXTENTION ACTIVITIES & COMMUNITY SERVICES

Extension activities and community services of the Mathematics Department allow students to apply their academic knowledge to real world situations, enhancing their skills, social responsibility, and sense of community engagement. Some of the programs conducted by the department mentioned below.

Sl No.	ACTIVITY	LINK
1	Activity based learning session to differently abled	
	children at Buds School Naduvath.	
2	Food Distribution at Government Homeo Cancer	
	Centre (Chethana Hospital), Wandoor.	
3	Activity Based learning at Chadangakulam LP	
	School, Naduvath	

6 FLIPPED CLASSROOM

In flipped classroom model students were assigned reading materials to study independently. This allowed class sessions to focus on deeper engagement with the content through practical experiences and group activities. Students arrive prepared and actively participate in class, leading to richer discussions and collaborative problem- solving.





Flipped Classroom on the topic 'Generation of Computers & Microprocessors'

7 NATURE BASED OUTDOOR LEARNING

Students engage directly with their natural surroundings, applying academic knowledge to real world situations through nature-based activities, field work and exploration. It helps students cultivate a deep respect for nature and leads to a stronger commitment to conservation and sustainability.



Clean Campus Drive..

Students actively participate in initiatives that address real-world social and community issues. It goes beyond theoretical learning, allowing students to apply their academic knowledge in practical settings to create meaningful change.





Drug-free pledge & awareness video shared through social media on International Day Against Drug Abuse and Illicit Traficking



Kerala Public Service Commission- Registration Drive for students and public

PARTICIPATIVE LEARNING

D	DEPARTMENT OF MATHEMATICS, COMPUTER SCIENCE & STATISTICS		
SL			
No.	CONTENT		
1	DAY OBSERVANCES		
2	QUIZ COMPETITIONS		
3	SEMINARS & WORKSHOPS		
4	PEER TEACHINGS		
5	GROUP DISCUSSIONS		
6	INTERACTIVE TECHNOLOGY ENHANCED LEARING		
7	WEBINARS		
8	MATHEMATICS MANUSCRIPT		
9	DEBATE		
10	'KANAKKANU KARYAM' – ONE TEACHER ONE CHILD		

1 DAY OBSERVANCES

Mathematic Department conducts day observance during National Mathematics Day, National Science Day and Pi Day etc. It greatly impacts students by making learning more interacting and engaging. It brings students together for hands on activities and Group projects which helps them understand and apply what they have learned.





National Mathematics Day Observance 2023



Debate, Essay Writing & Quiz Competition held on National Science Day 2022



International Pi – Day Observance 2022 with the students of GLPS Chadangakulam, Naduvath





National Mathematics Day Observance 2021

2 QUIZ COMPETITIONS

Department conducts Quiz competitions as part of various programs. These competitions encourage healthy competition, team work and quick thinking.



Quiz Competition held as part of 'Azadi Ka Amrut Mahotsav'

3 STUDENT-LED SEMINARS & WORKSHOPS

The Mathematics Department arranges seminars & workshops facilitated by students open to both Mathematics majors and students from other disciplines. These student-led seminars and workshops help students by enhancing their understanding of mathematical concepts through peer teaching, fostering collaboration and communication skills, and provides opportunities to engage with diverse perspectives from different departments.



Hands on workshop on slide making

4 PEER TEACHINGS

In the Mathematics Department, students actively engage in peer teaching, where more advanced or proficient students help their peers understand interdisciplinary concepts. This practice benefits both the peer teachers and learners, as teaching reinforces the teachers'own understanding while providing learners with relatable explanations.



Peer teaching on the topic 'Moments of Poisson Distribution'

5 GROUP DISCUSSIONS

Mathematics Department conducts group discussions in academic areas related to Mathematics, Computer Science & Statistics. These discussions encourage critical thinking and diverse perspectives, helping students to understand complex topics through peer inputs.



Group Discussions on the topic 'Official Statistics'

6 WEBINARS

A one week webinar series was conducted by Mathematics Department on Google Meet platform as part of Pi day observance. Teachers and students participated in the webinar which discusses applications of Mathematics in varius sectors.





One week webinar series on 'Applications of Mathematics'

7 MATHEMATICS MANUSCRIPT

The Manuscript prepared by the Mathematics Department students a comprehensive collection of their insights, analyses & reflections on various mathematical concepts.

69 One day my 9th leacher gave me win the math science fair in a tast to person who loves 'MATH GAME'. Being a maths, It was interesting for noe. very I gave maximum win the coropetition .. to So 1 got 1st with A grade that inspired me a lot. After that every year 1 changed the form of the game and participated. With those experience today I'm flying in the world of numbers. H A H I 1342 GAME :

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When I was 10th student, the game is, INSTRUCTIONS:

. There are your ways

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Maths Mania

- 1- Arithmetic Sequence
- 2 Second degree Equation
- 3 Trignometry
- 4 Any Quadrilateral form

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Published a Mathematics Manuscript named 'Mathsmania'

8 DEBATES

The Mathematics Department has actively engaged students in debates centered around various science-related topics .Topics discussed have included the role of mathematics in technological advancements and the impact this on real-world problems.



Debate on the topic "Artificial Intelligence: Friend or Foe"

9 'KANAKKANU KARYAM' – ONE TEACHER ONE CHILD

A program named 'Kanakkanu Karyam' was initiated by Mathematics Department on 18th September, 2022 for giving academic support to the children of Chinkakallu Tribal Village of Chokkad Panchayath. The students of our department visits the village on every Saturdays to provide educational support to students in Maths, English and Hindi subjects.



PROBLEM - SOLVING METHODOLOGIES

DEPARTMENT OF MATHEMATICS, COMPUTER SCIENCE & STATISTICS

SL No.	CONTENT	
1	TECH - TITANS	
2	FIND X	
3	RUBIK'S CUBE SOLVING	

1 TECH - TITANS

A) TIC TAC

The TIC TAC program, organized by the Department of Mathematics at Ambedkar College of Arts and Science, Wandoor, took place on December 20, 2023, at 9:30 AM in the Common Hall on the second floor. The game chosen for the event was the classic Tic Tac Toe, showcasing the intersection of mathematics and technology. The TIC TAC program successfully blended academic enthusiasm with technological innovation, providing a unique platform for students to engage in a mathematically inclined AI gaming experience.





B) MENTI WAR

MENTI WAR was an AI-generated Maths Quiz competition facilitated through the online platform menti.com, adding a technological edge to the traditional quiz format. One of the highlights of "Menti War" was the dynamic scoreboard. After each question, the points were instantly updated and displayed, creating a sense of suspense and anticipation among the participants.



C) SHAPE HUNT

The program aimed to engage students in a challenging and fun competition centred on geometric shapes and mathematical concepts. The event provided a platform for participants to showcase their knowledge, teamwork, and problem-solving skills. There were 5 clues written on papers kept in 5 different places starting from the entrance to the backyard of the college.



D) TELEGRAM POLL MATH GAME

The "TELEGRAM POLL MATH GAME" is a quiz hosted on Telegram with 20 questions, each allowing participants 1 minute to answer. The quiz attracted 30 participants, and the results showcased the top performers with their scores and completion times. The quiz demonstrated a mix of quick thinking and subject knowledge, evident in the diverse completion times.



2 FIND X

The programs conducted were Sharing memories in Math Exhibition, Math games and puzzles, Me and Maths (Sharing memories in Mathematics), Sudoku competition, Quiz competition and Chess competition. The main purpose of these program was to create an interest in Mathematics and to engage students in different problem-solving methods.







3 RUBIK'S CUBE SOLVING

Mathematics Department conducted Rubiks Cube Solving competition on 31st December 2019. Twenty-five students from various departments participated in the competition. Twenty-three participants solved Rubiks cube within the time limit. The winner of the competition was Aamir from first year BA English Who solved the Rubik's cube in 66 seconds.



4 TREASURE HUNT

The Department conducted treasure hunt competition as part of various programs. Ten groups from various departments participated in the competition. Treasure hunt had three preliminary levels. In the first level every group solved a puzzle and one participant from each group ran to the ground and imparted that puzzle sheet to the coordinators. Based on the correct answers and speed of the participants twenty groups were selected to the second levels. In the second level every group faced fifteen general knowledge questions. Ten groups who answered correctly selected for the third level. The third level was memory test. Four groups who got more points were selected for the treasure hunt.



ICT ENHANCED LEARNING

DEPARTMENT OF MATHEMATICS, COMPUTER SCIENCE & STATISTICS

SL No.	CONTENT
1	PROBLEM SOLVING USING PYTHON

- 2 CHAT GPT & AIT
 - **3** ARTIFICIAL INTELLIGENCE IN DIVERSE SECTORS

1 PROBLEM SOLVING USING PYTHON

Students of Mathematics Department organized a seminar series on 12th December, 2023 as a part of celebrating Computer Literacy Day. The seminar was centered on problem-solving using Python aiming a platform for students to share their knowledge on python.

The Presenters were

- Shahid Irfan TP Introduction to Python
- Rinsha V Variables and Basic Codes in Python
- Sibil V Functions
- Hiba Sherin MK Repetitional Structures
- Muhammed Sinan SV Decision Structures and Boolean Logic





2 CHAT GPT & AIT

Department of Mathematics organized a hands-on workshop on "ChatGPT and AIT" on 23rd February 2024. The workshop delved into the practical applications of ChatGPT and AI, offering valuable insights and hands-on experience to the participants.



3 SEMINAR SERIES - ARTIFICIAL INTELLIGENCE IN DIVERSE SECTORS

A one-week seminar series was conducted by students of mathematics department on 'Artificial Intelligence on Diverse Sectors'. The program was held from 20th February to 24th February. Students presented seminar on 'AI in Modern World', 'Artificial Intelligence, Web 3', 'AI in Agriculture', 'AI in Education'& 'AI in Healthcare'.

