

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (SHIFT II)

(Autonomous)

Re-accredited with A++ Grade by NAAC College with potential for Excellence, Linguistic Minority Institution, Affiliated to University of Madras, Arumbakkam, Chennai – 600 106

POST GRADUATE DEPARTMENT OF PHYSICS

Details of Department Activities (2023-2024)

S.No	Date	Department Activities
1.	03/07/2023 - 10/07/2023	Deeksharambh - Student Induction Programme - 2023
		(B.Sc. PCA)
2.	24/8/2023	Seminar- A Journey into the Crystal Planes through X-
		Rays
3.	09/09/2023	Parents Teacher Meeting
4.	20/09/2023	Skill training on Present and Future Technology in Solar
		Photovoltaic System
5.	03-01-2024	Student Welfare Activity - Quantum Expedition from
		Matter Waves to Qubits
6.	09-01-2024	Training program - Instrumentation and Data Processing
		on FT-IR and UV-Visible spectroscopy
7.	10-01-2024	Seminar on Health and Wellness
8.	01-02-2024	RADIATE 2024 – An Intercollegiate Event
9.	14-02-2024	Parents Teacher Meeting
10.	28-02-2024	State level Science Exhibition to commemorate
		National Science Day
11.	8/8/2023 -9/3/2024	10 Value added courses conducted

Department Activities (2023-2024)

1. Name of the program : Deeksharambh – Student Induction Programme - 2023

(B.Sc. PCA)

Date : 03/07/2023 to 10/07/2023

Resource Persons:

1) Mr. J. Pragadesh Junior Scientific Officer, Forensic Science

2) Mr. Rathnaker, Motivational Speaker

Total number of Participants: 50

Detailed Report of the Program:

Day 1 July 3rd 2023, Deeksharambh Student Induction Programme 2023 started holistically after prayer in Dwaraka Auditorium in the presence of the Esteemed Guest Mrs. Bharathi Baskar, Debate Orator, Motivational Speaker, Vice President, Citi Bank. Adding to this, the significance of this event was filled with informative and motivational sessions followed by an introduction about the Department and faculty members headed by Dr. B. Sylaja, which sets the stage for a collaborative and engaging academic journey within the Department. The Student Club Coordinators role is crucial in facilitating the activity of introduction and understanding the student interest, ensuring every student gets an opportunity to introduce themselves and to run the session smoothly. On Day 2 - The session on Self-esteem and Self-empowerment was led by Dr. B. Santhosh Kumar, who likely facilitated discussions and activities aimed at boosting student confidence. Dr. A. Chinnamal Janaki led the session on Student aspirations towards their goals. Additionally, the students club coordinator took charge of introducing the department clubs. This session aimed to familiarize students with the various clubs available within the department, their objectives, and their achievements. On Day 3 - The activities began with a lecture conducted by subject experts, headed by Mr. J. Pragadesh, providing valuable insights and knowledge. This was followed by an interactive session where senior students engaged with the audience. Finally, a talent expo has been organized by the students club coordinator which showcased the diverse skills and talents of the students. On Day 4 - Lt. Dr. P. Arularasan explained on Placement opportunities, value-added courses, and career prospects. This was followed by an Alumni talk by Mr. Salai Agamiya Kamiyan and Ms. Kanushka Sharma, who shared their experiences. The day concluded with role-playing,

debating, games and activities organized by the students club coordinator. On Day 5 - The activities started with a Club introduction session held in the Dwaraka Auditorium, where various clubs were introduced to the audience. This was followed by a session on handling peer pressure, specifically focusing on mentor-mentee relationships headed by Dr. C. Yogeswari. The day concluded with a talent expo organized by the students club coordinator, exposing the talents and skills of the students. On Day 6 - The event began with a lecture by Mr. Rathnaker, a motivational speaker, focusing on Career orientation and motivation. This was followed by a session on Humans and Societal values led by Dr. T. Sivaranjani. The day concluded with reports from the freshers sharing their overall feedback and experiences of the event.

Outcome of the programme/event:

- 1. The students drew a good opinion of the institution and the course.
- 2. Students grasped the experience from the alumni.
- 3. The students volunteered to actively participate in the departmental activities and they were able to coordinate and mingle with one another





2. Name of the program: Seminar- A Journey into the Crystal Planes through X-

Rays

Date : 24/08/2023

Resource Persons: Dr. N. Aparnadevi Assistant Professor, Department of Physics,

Ethiraj College for Women, Chennai

Total number of Participants: 148

Detailed Report of the Program:

The main objective of the seminar is to expose the students to the concepts and

applications of X-rays and make them easily understandable. The speaker Dr. N.

Aparna Devi gave a presentation about X-rays and explained the production of X-

rays, the difference between scattering and diffraction, difference between

characteristic spectrum and continuous spectrum, crystal lattice and Miller indices.

She also explained about how Bragg's law can be applied. She gave a detailed note on

crystallographic planes, Bragg's peaks and Fourier transformation. She described

about the importance of X-rays and highlighted the applications of X-rays in the

medical field. She mentioned that X-ray plays an important role in the fight against

cancer, with high-energy radiation used to kill cancer cells and shrink tumours. She

motivated students to do research on the latest technology in X-rays. The program

ended with a vote of thanks.

Outcome of the programme/event:

1. The program was interesting and interactive. It enabled students to improve their

knowledge about X-rays.

2. This program enlightened the students about the characteristics of X-rays and

importance of X-rays.

3. This program helped students to realize the difference between characteristic

spectrum and continuous spectrum.





3. Name of the program : Parents Teacher Meeting

Date: 09/09/2023

No of Students Participants: 27

Detailed Report of the Program: Parents Teacher Meeting was organized on 09.08.2023 from 2.00 p.m to 5.00 p.m for I PCA students. Staffs had a very good interaction with the parents. We collected feedback form from parents. Most of the Parents were happy for their wards to be in this college. This meeting helps to understand better about student's activities at home and helps to take remedial measures in developing student's knowledge level.

Outcome of the programme/event:

- 1. One to One Interaction between Parents and Class Teachers.
- 2. students are improving in academics, mental stability and social interaction after joining the dept





4.Name of the program : Skill training on Present and Future Technology in Solar

Photovoltaic System

Date : 20/09/2023

Resource Persons: Mr. G.K. Shanmugasundaram Managing Partner, GEMCO

Renewable Energy Training Institute & GEMINI Scientific Company.

Total number of Participants: 155

Detailed Report of the Program:

The main objective of this skill training program is to gain knowledge of solar cell principles and manufacturing technology of solar panels. The speaker Mr. G. K. Shanmugasundaram gave presentation about how the Photovoltaic (PV) panels convert the sunlight energy directly to electrical energy and elucidated the connection between the solar cells. He gave a detailed note on how a series connection is made by connecting the positive terminal of one panel to the negative terminal of another. He also briefed about why we do the itching process for conducting materials. He mentioned the types of solar cells like mono crystalline, poly crystalline & thin film and described the different types of manufacturing technology like traditional method and new technology method. He also explained the current scenario of the Indian and Global market of solar cells and detailed about the different testing parameters and installation method of solar panels. He motivated the students to do research in coating materials of solar cell to increase the efficiency of solar panels. The program ended with doubt clarifying session.

Outcome of the programme/event:

- . 1. The program was interactive and informative. It enabled students to improve their knowledge in solar cells and its materials.
- 2. This program enlightened the students about the connection of solar cells and importance of solar panel.
- 3. This program helped students to identify the present manufacturing technology in solar panels.





5. Name of the program : Student Welfare Activity - Quantum Expedition from Matter Waves to Qubits

Date : 03/01/2024

Resource Persons: Dr G. Sreekumari Assistant professor, Department of Physics, Loyola College

Total number of Participants: 89

Detailed Report of the Program: The Chief Guest Dr G Sreekumari delivered a talk on "Quantum Expeditions from Matter Waves to Qubits" on 03/01/2024 for the student community during the Student Welfare Activity. Various competitions were conducted for students such as Debate, Picturesque and Essay Writing to enrich their knowledge. The chief guest awarded the prize winners.

Outcome of the programme/event:

- 1. Various competitions were conducted for students to enrich their knowledge
- 2. Students got information about applications of quantum mechanics in real life such as qubits





6. Name of the program : Training program- Instrumentation and Data Processing on FT-IR and UV-Visible spectroscopy

Date : 09-01-2024

Resource Persons: Dr A.Kosiha, Assistant professor, Dept of Physics, VISTAS, Chennai

Total number of Participants: 146

Detailed Report of the Program: Dr A.Kosiha delivered a brief note on FTIR Spectroscopy, an analytical technique used to identify the functional groups of organic, polymeric and inorganic materials of unknown samples. She explained elaborately about the FTIR spectrum which is used to identify the functional groups of the active components present in the extract based on the peak values in the region of IR radiation. More details about UV-Vis Spectroscopy, which is a quantitative technique used to measure the number of discrete wavelengths of UV or visible light are given by the resource person.

Outcome of the programme/event:

- 1. The main objective of the training program is to impart knowledge about FT-IR and UV spectroscopy.
- 2. Identification of unknown samples using FT- IR spectrum for damage analysis, composition analysis and forensics.
- 3. FT-IR and UV spectroscopy provide valuable information about the qualitative and quantitative formulation of plant species and their pattern of recognition by chemometrics.





7. Name of the program : Seminar on Health and wellness

Date : 10-01-2024

Resource Persons: Dr. P. Chitra, Medical Co ordinator, Apollo Hospitals

Total number of Participants: 149

Detailed Report of the Program:

The PG Department of Physics has conducted a seminar on Health and Wellness on 10-01-2024 at 2.30 pm. Dr. P. Chitra, Medical Coordinator, Apollo Hospitals gave presentation about the diet to be followed, the breathing method and the importance of Yoga and exercise to maintain good health. This wellness program is for the benefit of students to adopt healthy behaviour and lifestyle. This helps the students to show positive results in their academic performance as well as social life.

Outcome of the programme/event:

- 1. This Health and wellness programe improves Physical, Mental and Social Well being.
- 2. Students are able to manage the stress
- 3. Students were able to maintain healthy social relationship





8. Name of the program : RADIATE 2024 – An Intercollegiate Event

Date : 01/02/2024

Resource Persons:

1) Dr.B.Muthuraaman, Assistant Professor and Head I/C, Department of Energy, University of Madras, Chennai

2) Dr.R.D.Eithiraj, Associate Professor, Division of Physics, School of Advanced Science, Vellore Institute of Technology, Chennai

Total number of Participants: 290

Detailed Report of the Program:

RADIATE-2024 is an inter-collegiate competition held on 1st February 2024 at Dwaraka Auditorium. It was overwhelming to see that 140 participants participated from various colleges in this fest. The inaugural address was given by Dr. B. Muthuraaman inspired the students with his thought-provoking motivational speech. Our beloved Principal Captain Dr. B. Santhosh Baboo offered the presidential address and felicitated the Chief Guest. The Head i/c of PG department of Physics Dr. B. Sylaja has given the welcome address. The schedule of the program was planned such that nine competitions (Rivalry of witz, Razzmatazz, potpourri, mimoumai, view through concave, pantomime, etc.,) were organized in parallel sessions in separate rooms. The participants were rated on a rating scale of 30 marks and based on the average score of the judges the first three winners were finalized. Dr. R. D. Eithiraj presided over the Valedictory function. The winners securing the first, second and third positions in each event were awarded memento and certificates. The trophies were distributed to the overall winner and runner. The response received from various colleges and the feedback of the participants were positive, which is a great boost for our institution. Overall the event was well organized and successful.

Outcome of the programme/event:

- 1. Radiate 24 provides a place for the students to come together to share their ideas and accomplish common goals.
- 2. It develops skills for their career
- 3. Students have opportunities to improve their leadership and interpersonal skills which increases their self-confidence.





9. Name of the program : Parents Teacher Meeting

Date : 14/02/2024

Total number of Participants: 172

Detailed Report of the Program: Parents Teacher Meeting was organized on 14.02.2024 from 2.00 p.m. to 6.00 p.m. for all UG and PG students. We had a good interaction with parents. We discussed about the academic results (Previous semester result and CIA-I - current semester) with the parents. Disciplinary issues faced by some students were discussed with their parents. We informed about the lack of attendance of some students with their parents. We have insisted about time management and remedial measures taken with slow learner parents. The improvement in the slow learners have been acknowledged and shared with the parents. Parents are encouraged to give their continuous support to the ward for their metal well-being.

Outcome of the programme/event:

- 1. One to One Interaction between Parents and Class Teachers.
- 2. students are improving in academics, mental stability and social interaction after joining the dept
- 3. Parents were happy to know about placements provided within the campus



10. **Name of the program : S**tate level Science Exhibition to commemorate national science day

Date: 28-02-2024

Resource Persons:

- M.V. Sankaranarayanan Professor Emeritus Department of Chemistry, IIT Madras.
- 2. K.Anbazhagan Scientist F, Joint Director, Regional Public Relations Officer, Head Exhibition & Media intraction service, CVRDE, DRDO, AVADI, Chennai
- 3. Dr. S. Srikrishnan M.E., Ph.D., Assistant Vice President Defence Operations Garuda Aerospace Private Limited

Total number of Participants: 2924

Detailed Report of the Program:

Dr. A.P.J Abdul Kalam, Dr. M S Swaminathan, Sir C V Raman, Dr. Somnath and Mr.Kumaravel are eminent scientists from India and rich history of encouraging science enthusiasts and contributing to science is followed by Dwaraka Doss Goverdhan Doss Vaishnav College, Arumbakkam, Chennai, conducted a Science exhibition on the National Science Day on 28 February 2024. The exhibition conducted by the Department of Physics with computer applications (Shift II) in the campus received a footfall of around 1500 students from various schools in the city. The little science buffs were thrilled to see India soaring in the defence arena. The key attraction of the science fair was the display of myriad ammunition in the arsenal of the Indian defence sector. Military vehicles like Arjun Armoured Recovery and Repair Vehicle, Armoured Ambulance, MBT Arjun Mk 1 and Retractable Landing Gear System for Rustom II were displayed in the exhibition. The drones in Indian Air Force Drones like Agricultural drone, Fixed Wing and Surveillance were also displayed. drones fascinated the visitors. The Principal, Capt. Dr. S. Santhosh Baboo and the Secretary of the college, Dr. Ashok Kumar Mundra were the key impetus for the success of the event. The Joint Director and Head of CV DE- DRDO, Dr. Anbazhagan along with his team brought the exhibits to the exhibition and educated students about their functions and efficiency. Garuda Aerospace, a drone manufacturing company, also contributed models to the exhibition under the efforts of Dr. Sri Krishnan, Assistant Vice President - Defence Operations, Garuda Aerospace Private Limited.

Outcome of the programme/event:

- 1. The main objective is to educate and engage the students by explaining the concepts, discoveries, innovations and experiments.
- 2. The key attraction of this science fair was the display of myriad ammunition in the arsenal of the Indian defence sector.





PG DEPARTMENT OF PHYSICS Active MOUs-2023-2024

The Post Graduate Department of Physics has signed four MoU's for Value added course with

- Aptitude Buster
- Sindujaa Academy for Science and Maths
- Astrone Solutions and Services
- Ingu's Knowledge Academy Pvt. Ltd. ("SkillsDA") for value added course.



Aptitude Buster

Astrone Solutions and Services



Sindujaa academy for science and maths



Skillsda

VALUE ADDED COURSES-10

I B.Sc Physics with Computer Applications

1. Name of the Program : Advanced Excel with Data Visualization and Power

Bi

Date : 01/09/2023 to 15/09/23(30 hrs)

Resource : Sindujaa Academy for Science and Maths

Venue : III B.Sc Classroom (ET 29)

Participants : I B.Sc PCA - 36 Students

Detailed Report of the Program

The value added course "Advanced Excel with Power Bi" was conducted for 30 hours. It covered interacting methods to Dashboards, compares Excel and Power Bi Desktop services. It included various modeling activities such as Cardinality and Cross- Filtering, Creating Calculated Columns, Desktop Visualizing, Refresh on datas etc., The sessions made the students to apply the knowledge in real life. Individual Tasks and mini projects were given for Assessments and based on it certificates were awarded according to grading system.

Outcome of the Programme:

The following are the outcome of the students participated

- 1. Students learnt to import, clean, and transform data for analysis.
- 2. Participants have understood how to create data models for more complex analyses.
- 3. Participants gained Knowledge of how to integrate Power BI with various data sources and other Microsoft tools.
- 4. Participants have enhanced their ability to solve business problems using datadriven insights.
- 5. Improved job prospects and career advancement in roles related to data analysis and visualization.





I B.Sc Physics with Computer Applications

2. Name of the Program : App Development

Date : 05/02/2024 to 17/02/24 (30 Hrs)

Resource : Sindhuja Academy for Science and Maths

Venue : III B. Sc Classroom (ET 29)

Participants : I B. Sc (PCA) -36 students

Detailed Report of the Program

The This value added course "App Development" was conducted for 30 hours in which the course covers test to speech, check box, Media Palette, Usage of Timer, Designing Age Calculator App, Designing Random Math Number App etc.,. Lively and interactive sessions made the students understand the concepts. Individual Tasks and mini projects were given. Power point presentation was also given for Assessment based on which Certificates were given.

Outcome of App Development Course

- 1. Build enterprise level mobile applications with MIT App Inventor.
- 2. Understand Designer and Block section of the MIT App Inventor.
- 3. Understand both the basic and advanced concepts of MIT App Inventor.
- 4. Install and configure MI2 AI2 Companion App.
- 5. Explain and use key programming concepts.
- 6. Innovate their own mobile application for day to day usage.





II B.Sc Physics with Computer Application

3. Name of the Program : Machine learning essentials, Python for data

science and design issues in ML

Date : 08.08.2023 – 22.08.2023(30 Hrs)

Resource : Astrone Solutions and Services

Venue : I MSc classroom

Participants : II B.Sc PCA - 34 Students

Detailed Report of the Program

The PG Department of Physics has organized a Value added course on "Machine learning essentials, Python for data science and design issues in ML" for II PCA students. This is 30 hour course on Machine Learning Fundamentals which covers python for data science and its advanced features. Tutors are more efficient in rendering lectures on Machine learning fundamentals and Data Wrangling. They also taught about Statistics for Data Science, Linear Regression, Logistic Regression and tree based algorithms. Students have very good interactive sessions with mentors. Individual practical sessions were also given for each student. In addition, Design Issues in Machine Learning were dealt in detail, so that the students will be able to solve business problems efficiently using the learnt Data Science skills.

Outcome of the programme:

- 1. Proficient with supervised and un-supervised algorithms and data.
- 2. To solve business problems efficiently using the learnt Data Science skills.
- 3. To execute statistical analysis with professional statistics software.





II B.Sc Physics with Computer Applications

4. Name of the Program : Artificial Intelligence and Computer Vision

Date : 22.02.2024 – 15.03.2024 (30 Hrs)

Resource : Sindhujaa Academy for Science and Maths

Venue : I MSc classroom

Participants : III B.Sc PCA - 34 Students

Detailed Report and Outcome of the Program

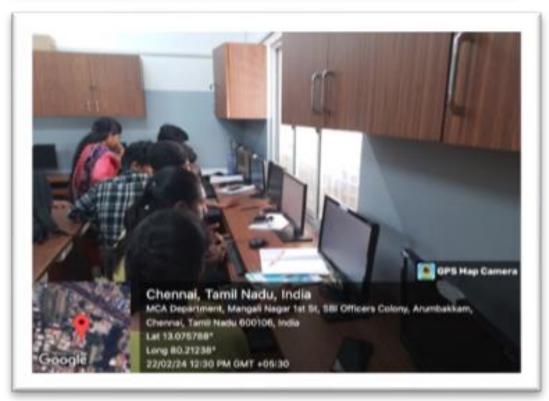
The PG Department of Physics has organized a second Value added course on "Artificial Intelligence and Computer Vision" for II PCA students. Artificial Intelligence and Computer vision is scheduled for 30 hours. This covered Image processing and data transformation. Tutors taught about field specific applications in AI. Practical Sessions on object detection in Live Webcam Part 1 and Part 2 were also conducted. They had given lectures and students did their assessment based on neural network. Certificates were awarded according to grading system.

Outcome of the programme:

Students are able to

- 1. work in Open CV, Tensor Flow, Keras.
- 2. Image Processing and Transformation.
- 3. Create and deploy Applications using AI
- 4. Deep Dive into the Concepts of Neural Networks with Hands on Experience.
- 5. Design and develop practical and innovative image processing and computer vision applications or systems.





III B.Sc Physics with Computer Applications

5. Name of the Program : Campus Recruitment Training Program

Date : 08.08.2023 to 23.08.23(30 Hrs)

Resource : Aptitude Buster

Venue : III B.Sc Classroom

Participants : III B.Sc PCA - 39 Students

Detailed Report of the Program

The PG Department of Physics has organized a Campus Recruitment Training Programme for II M.Sc. Physics and III B.Sc PCA students from 08.08.2023 to 23.08.23 as a part of their Value-Added Course. Aptitude Buster conducted this training programme. Students were trained to solve Various Aptitude tests, which helps them to appear for their Placement test. At the end of this training programme, mock tests have been conducted and students have been provided with the certificates based on their performance

Outcome of the programme:

- 1. Improved Problem-Solving Skills: Participants learnt on how to break down problems into smaller components, identify patterns, and apply logical reasoning to solve them effectively.
- 2. Career Advancement: It improved problem-solving and critical thinking skills, which leads to better job performance and career growth opportunities.
- 3. Academic Success: The skills developed through aptitude training can be applied to a wide range of academic challenges.
- 4. Better Decision Making: The logical reasoning and critical thinking skills acquired during training can contribute to better decision-making in both personal and professional contexts.
- 5. Improved Time Management: Students can manage their time more effectively, especially in high-pressure situations





6. Name of the Program : Python , Kali Linux , Cyber Security

Date : 08.02.2024 – 09.03.2024(30 Hrs)

Resource : SKILLSDA

Venue : II M.Sc Classroom

Participants : III B.Sc PCA - 39 Students

Detailed Report of the Program

The PG Department of Physics has organized a Value added course II on "**Python, Kali Linux and Cyber security**" for III B.Sc PCA and II M.Sc Physics students from 8th February 2024 to 9th March 2024. Ingu's Knowledge Academy Pvt. Ltd. (Skills DA) conducted this software training program. Two resource persons from Ingu's Knowledge Academy taught this software and its applications. The instructor explained the introduction of Python and its data types, control flow, loops condition and packages. They also taught Kali Linux, Cyber security, ethical hacking and defensive security. An online assessment has been conducted and students have been provided with the certificates based on their performance.

Outcome of the programme:

- 1. Students were trained to build basic programs using fundamental programming constructs like variables, conditional logic looping and functions.
- 2. Work with user input to create fun and interactive programs.
- 3. Able to develop applications and systems that can help predict outcomes, visualize data, and understand different trends.
- 4. Effectively communicate in a professional setting to address information security issues.





I M.Sc Physics

7. Name of the course : Certified Ethical Hacking

Date : 29.11.2023 to 19.12.2023

Resource : Astrone Solutions and Services

Venue : I M.Sc. Classroom (Room No. ET 30)

Participants : I M.Sc. Physics – 27 students

Detailed Report of the Program

The PG Department of Physics has organized a Value added courses on "Certified Ethical Hacking Program" for I M.Sc. Physics students from 29th November 2023 to 19th December 2023. AICL conducted this Ethical Hacking Training Program. Resource persons from AICL conducted this training program and gave hands on training. Ms. Vani explained about the Introduction to Cyber world and Ethical Hacking, Session Hijacking, Social Engineering, Hacking Web servers, Hacking Web Applications, SQL Injection and Hacking Wireless Networks. This course fortified the application knowledge of security officers, auditors, security professionals, site administrators, and anyone who is concerned about the integrity of the network infrastructure.

Outcome of the Programme:

The following are the outcomes framed from the responses of the students participated in the Programme.

- Students were trained on SQL Injection to websites and able to apply and procure Global Certification for CEH – US Based, to use tools like: Burp Suite, Metasploit, Nmap, Wireshark.
- 2. Students learnt to secure and manage websites and web pages with high level of confidentiality and Certified Ethical Hacker certification.





8. Name of the course : Data Analytics

Date : 05.02.2024 to 21.02.2024

Resource : Sindhuja Academy of Science and Maths

Venue : I M.Sc. Classroom (Room No. ET 30)

Participants : I M.Sc. Physics – 27 students

Detailed Report of the Program

The PG Department of Physics has organized a Value added courses on "Certified Ethical Hacking Program" for I M.Sc. Physics students from 5th February 2024 to 21st February 2024. Sindhujaa Academy of Science and Maths conducted the Data Analytics Course. Ms. Charulatha explained about the various types of DATA, their usage and their application in particular field. The Data presentation through various software s namely Rstudio, SQL, Qlick View have been taught to the students practically.

Outcome of the Programme:

- 1. Students were trained to analyze different kinds of data using Rstudio.
- 2. Students were able to perform animation techniques.
- 3. Students were trained to create animations like story telling using Qlick View.





II M.Sc Physics

9. Name of the Program : Campus Recruitment Training Programme

Date : 08.08.2023 to 23.08.23(30 Hrs)

Resource : Aptitude Buster

Venue : III B.Sc Classroom

Participants : II M.Sc Physics - 25 Students

Detailed Report of the Program

The PG Department of Physics has organized a Campus Recruitment Training Programme for II M.Sc. Physics and III B.Sc PCA students from 08.08.2023 to 23.08.23 as a part of their Value-Added Course. Aptitude Buster conducted this training programme. Students were trained to solve Various Aptitude tests which helps them to appear for their Placement tests. At the end of this training programme, mock tests have been conducted and students have been provided with the certificates based on their performance

Outcome of the programme:

- 1. Improved Problem-Solving Skills: Participants learnt on how to break down problems into smaller components, identify patterns, and apply logical reasoning to solve them effectively.
- 2. Enhanced Critical Thinking: Participants learnt on how to evaluate information, make informed decisions, and consider multiple perspectives before arriving at conclusions.
- 3. Increased Mental Agility: It improved their mental flexibility and adaptability which led to better performance in tasks that require quick thinking and the ability to switch between different modes of thought.
- 4. Career Advancement: It improved problem-solving and critical thinking skills which led to better job performance and career growth opportunities.
- 5. Academic Success: The skills developed through aptitude training can be applied to a wide range of academic challenges.





10. Name of the Program : Python, Kali Linux, Cyber Security

Date : 08.02.2024 – 09.03.2024(30 Hrs)

Resource : SKILLSDA

Venue : II M.Sc Classroom

Participants : II M.Sc Physics - 25 Students

Detailed Report and Outcome of the Program

The PG Department of Physics has organized a Value added course II on "Python, Kali Linux and Cyber security" for II M.Sc Physics and III B.Sc PCA students from 8th February 2024 to 9th March 2024. Ingu's Knowledge Academy Pvt. Ltd. (Skills DA) conducted this 30 hour software training program. Two resource persons from Ingu's Knowledge Academy taught this software and its Applications. Ms.Narmada explained the introduction of Python and its data types, control flow, loops condition and packages. Mr.Ajith taught Kali Linux, Cyber security, ethical hacking and defensive security. Students were trained to write programs which will help to place them in cyber security related jobs. At the end of this training program, online assessment has been conducted and students have been provided with the certificates based on their performance.

Outcome of the programme:

- 1. Students were trained to build basic programs using fundamental programming constructs like variables, conditional logic looping and functions.
- 2. Work with user input to create fun and interactive programs.
- 3. Able to develop applications and systems that can help predict outcomes, visualize data, and understand different trends.
- 4. Effectively communicate in a professional setting to address information security issues.



