



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

## DEPARTMENT OF PHYSICS SF (ACADEMIC YEAR 2022-2023)

### Introduction

In the dynamic landscape of higher education, the adoption of student-centric methods has become imperative for institutions committed to providing a holistic and enriching learning experience. Student-centric approaches play a very significant role in shaping a learning environment that caters to the diverse needs and aspirations of students. Three key student-centric methodologies are—Experiential Learning, Participative Learning, and Problem-Solving Methodologies—and their transformative impact on education.

Participative learning involves active involvement and engagement of students in the learning process, fostering collaboration, discussion, and shared exploration. It includes activities like debates, seminars, group discussions, interactive workshops and so on. Experiential learning is an educational approach that engages students in direct experiences, encouraging reflection and the application of knowledge to real-world situations. It includes different methods like internships, field trips, making of products, fests, simulation etc. Problem-solving methodologies involve teaching students' systematic approaches to address complex issues, emphasizing critical thinking and analytical skills.

Department of physics SF conduct innovative programs which stimulate the creative ability of students and provide them a platform to nurture their problem-solving skills and ensure participative learning.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

2.3.1	2.3.1(a) Participative Learning	2.3.1(b) Experiential Learning	2.3.1(c) Problem Solving Methodologies
1.	Industrial Visits-VSSC	Project Presentations	Projects
2.	Industrial Visits- ISRO	Energy Survey	
3.	Lecture Series on Recent Advances in Physics	Laboratory Sessions	
4.	Invited Talk on Introduction to Robotics	Yoga	
5.	Seminar Presentations	Seminar Presentations	
6.		Open House Visits	

### Participative Learning 1 - Industrial Visit to VSSC

#### Programme Objectives

- Understanding Space Research and Technology: Gain insights into the research and development activities related to space technology, satellite launches, and space exploration conducted at VSSC.
- Exploring Space Science Facilities: Visit the various facilities at VSSC, such as the Space Physics Laboratory, the Rocket Fabrication Facility, and the Propellant Fuel Complex, to understand the infrastructure and technologies used in space research.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	<b>Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:</b>

- Learning about Rocket Launch Vehicles: Learn about the different types of launch vehicles developed and launched from VSSC, including the PSLV (Polar Satellite Launch Vehicle) and GSLV (Geosynchronous Satellite Launch Vehicle).
- Understanding Satellite Technology: Gain knowledge about satellite technology, including satellite design, fabrication, testing, and integration processes.
- Interaction with Scientists and Engineers: Interact with scientists, engineers, and researchers at VSSC to understand their roles, experiences, and contributions to space research and technology.
- Career Opportunities in Space Science: Explore career opportunities in the field of space science and technology, and understand the skills and qualifications required to pursue a career in this field.
- Inspiration and Motivation: Get inspired by the achievements of VSSC and its contributions to India's space program, and understand the importance of innovation, dedication, and teamwork in the field of space research.
- Networking: Build professional networks with experts in the field of space science and technology, which can be beneficial for future career prospects and collaborations.
- Promoting STEM Education: Encourage interest in science, technology, engineering, and mathematics (STEM) among students and young professionals through exposure to real-world applications of these disciplines in space research.
- Awareness about India's Space Program: Increase awareness about India's space program, its achievements, and its contributions to the global space community.

### Report:

An industrial visit to the Indian VSSC, Thumba was organized for BSc Physics students of Christ College (Autonomous), Irinjalakuda on 20.07.2022. The visit aimed to provide students with



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

practical insights into the workings of ISRO and its contributions to space research and technology. 23 students along with faculty members of department Prof. V P Anto & Mr. Jose Sunny participated in the Programme.


### Programme Outcomes:

- Practical Exposure: The visit provided students with practical exposure to the concepts they study in their physics curriculum, helping them visualize real-world applications.
- Career Insights: Interaction with scientists and engineers gave students insights into potential career paths in the field of space research and technology.
- Motivation: The visit motivated students to pursue further studies in physics and related fields, inspiring them to aim for careers in research and innovation.
- Networking: Students had the chance to network with professionals in the industry, potentially opening future opportunities for internships or collaborations.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Attendance:



## CHRIST COLLEGE (AUTONOMOUS)

(Regn. No. 137/75; No.F.22-1/2015/AC.U.G.C.)  
Affiliated to University of Calicut and Accredited by NAAC 'A' Grade  
IRINJALAKUDA - 680 125, KERALA, INDIA  
Office (0480) 2825258 | Res : 2825384 | 2828241  
office@christcollegeijk.edu.in www.christcollegeijk.edu.in

---


No. 40A/2022 18-07-2022  
From  
The Principal  
To  
The Deputy Director  
Management Systems Area  
Vikram Sarabhai Space Centre, TVM

Respected Sir,  
Sub:- Regarding visit of V<sup>th</sup> semester B.Sc. Physics (unaided) students to VSSC. - വിദ്യാർത്ഥി ID No - 207119

With due respect, we would like to inform you that the V<sup>th</sup> semester (2020-2023) students of B.Sc. Physics (unaided) will be visiting VSSC on 20/07/2022 as a part of their industrial visit. We humbly request you to grant us permission to visit the rocket launching premises also.

Sl. No	NAME	AGE	AADHAR No.	Sl. No.	NAME	AGE	AADHAR No.
1	AISWARYA DINESAN	20	xxxx 3431	15	JOEL JOJU	20	xxxx 3254
2	AKHILA U A	20	xxxx 6011	16	KARTIKA ANILKUMAR A	20	xxxx 2818
3	AKSHAY GOPAN M	20	xxxx 1038	17	KAVYA C VARMA	20	xxxx 2058
4	AKSHAY S	20	xxxx 1119	18	MANUEL JOSH VADAKKETHALA	20	xxxx 7567
5	AKSHAYA THOMAS	20	xxxx 9932	19	MEGHNA MARIYA K B	20	xxxx 7534
6	AMAL P SAJEEV	20	xxxx 3477	20	NEHA T S	20	xxxx 2960
7	ANN MARIYA	20	xxxx 0182	21	SHAHBAS SHIHABUDHEEN	20	xxxx 5838
8	ANSLIN JOHNSON	20	xxxx 8492	22	SREENIDHI	20	xxxx 5930
9	ARANDA NOMA ROCHA	20	xxxx 7863	23	TWINKLE SHAJU	20	xxxx 9581
10	ARYADAS K H	20	xxxx 2400	<b>ACCOMPANYING STAFF</b>			
11	DEVIKA K R	20	xxxx 0978	24	V P ANTO	59	xxxx 5325
12	HARISANKAR S	20	xxxx 0790	25	JOSE SUNNY	26	xxxx 4473
13	JISS SABU VARGHESE	20	xxxx 5943	26	CLINTA P S	33	Xxxx 0626
14	JOE PAYYAPPILLY	20	xxxx 9211	27	T I THOMAS	59	xxxx 0818

Copy to Director

Yours faithfully,  
  
PRINCIPAL  
In-charge of Principal  
Christ College (Autonomous)  
Irinjalakuda



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

## Geotag photos



## Participative Learning 2 - Industrial Visit to ISRO

### Programme Objectives

- Exposure to Space Research: To provide students with firsthand experience of the facilities and technologies used in space research and exploration.
- Practical Knowledge: To enhance students' understanding of theoretical concepts by showcasing their practical applications in the field of physics.
- Career Guidance: To offer insights into various career opportunities available in the field of space research and related industries.
- Networking: To facilitate interactions with professionals and researchers in the field, allowing students to build contacts and explore potential future collaborations or career paths.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

- Inspiration: To inspire students by showcasing the achievements and contributions of ISRO to the field of space exploration, motivating them to pursue careers in similar fields.
- Skill Development: To provide opportunities for students to develop skills such as critical thinking, problem-solving, and communication through interactions and observations during the visit.
- Understanding of Technology: To understand the advanced technologies used in space missions, which can broaden their perspective on the applications of physics in real-world scenarios.

### Report:

An industrial visit to the Indian Space Research Organisation (ISRO) in Bangalore was organized for BSc Physics students of Christ College (Autonomous), Irinjalakuda on 27.02.2023. The visit aimed to provide students with practical insights into the workings of ISRO and its contributions to space research and technology. 28 students along with faculty members of physics department Mr. Jose Sunny and Ms. Simmy Jose accompanied the students.

### Programme Outcome:

The industrial visit to ISRO Bangalore was a valuable learning experience for the BSc Physics students of Christ College. It provided them with insights into the practical applications of physics in the field of space research and technology. The visit also inspired the students to explore career opportunities in the space sector.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Permission letter

**U. R. RAO SATELLITE CENTRE  
BANGALORE**

Shreyala Rathnakar  
Head, TAVD  
Programme, Planning & Evaluation Group

☎ 080-2508 2126  
email: [ppegoffice@ursc.gov.in](mailto:ppegoffice@ursc.gov.in)

17 February 2023

To,  
Christ College  
Irinjalakuda – 680 125  
Kerala India  
Email: [physicsself@christcollegeijk.edu.in](mailto:physicsself@christcollegeijk.edu.in)

Sir / Madam,

**Sub: Permission to visit U R Rao Satellite Centre – Req.**

We are in receipt of your email letter dated February 15, 2023 requesting permission to visit URSC. Accordingly, you are permitted to visit on the **following date and time.**

27-02-2023	10:00 AM to 11:00 AM
------------	----------------------


Please provide details of your team members and faculty members along with an authorization letter from Head of the Department restricted to **32** members per batch only, subject to the following conditions:





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

**Attendance**



**CHRIST COLLEGE (AUTONOMOUS)**  
(Regn. No. 137/75; No.E-22-1/2015/AC.L.G.C.)  
Affiliated to University of Calicut and Accredited by NAAC 'A' Grade  
IRINJALAKUDA - 680 125, KERALA, INDIA  
☎ Office (0480) 2825258 | ☎ Fax : 2825384 | 2818041  
✉ office@christcollegeijk.edu.in | www.christcollegeijk.edu.in

---

No. 34/2022 15-02-2023

From  
The Principal

To  
Group Director  
PPEG  
URSC/ ISRO


Subj- Visit of IV<sup>th</sup> Sem. B.Sc. Physics students to ISRO – Regarding

Respected Sir,


With due respect, we would like to inform you that the IV<sup>th</sup> Semester (2021-2024) students of B.Sc. Physics wish to visit ISRO, Bangalore on 27/02/2023 around 10 a.m. as a part of their industrial visit. There are total of 28 students and 4 accompanying staff. Details of the same are given below. I hereby request you to give permission for the same.

Sl. No	NAME	DESIGNATION	Sl. No	NAME	DESIGNATION
1	ADITHYAN NARAYAN KN	STUDENT	17	ITHILAKRISHNAN M	STUDENT
2	ADITHYAN M M	STUDENT	18	KIRAN K	STUDENT
3	ADARSH P	STUDENT	19	NANDANA VINOD	STUDENT
4	ALISHA JOSE	STUDENT	20	NAVYA BHAVIA C	STUDENT
5	ALISHA JOY	STUDENT	21	ROHITH Y V	STUDENT
6	ANAGHA M S	STUDENT	22	SANDRA P VINOD	STUDENT
7	ANEENA BERLIN	STUDENT	23	SHAUN SHOBY	STUDENT
8	ANGEL P A	STUDENT	24	SABIQ MAHMOOD	STUDENT
9	ARJUN GREESHAL	STUDENT	25	SHOBITH JABRA	STUDENT
10	ATHIRA V	STUDENT	26	SPIA SANTHOSH	STUDENT
11	BHARITHA I	STUDENT	27	SUJITHA V S	STUDENT
12	C J DHANUSHEE	STUDENT	28	VASUDEVA K J	STUDENT
13	CHACKOCHAN JOE	STUDENT	29	Mr V P ANTO	TEACHER
14	EDWIN C DENNY	STUDENT	30	Ms JOHNSY JONES	TEACHER
15	HENJO HENRY	STUDENT	31	Mr JOSE HENNY	TEACHER
16	HEESHKISH DEVRAJ	STUDENT	32	Ms SIDHA JOSE	TEACHER

Yours faithfully,

  
Principal  
Associate Professor  
In-charge of Principal  
Christ College (Autonomous),  
Irinjalakuda

Encl: Details of students with Aadhar Number



**Geotagged photos**



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:



### **Participative Learning 3 - Lecture Series on Recent Advances in Physics**

#### **Programme Objectives:**

1. Participants got an insight into the exciting field of quantum dots
2. Various research and higher studies opportunities were been discussed
3. It helped to ignite the scientific temper and curiosity of the young learners.

#### **Programme Report:**

To enlighten the knowledge and expand the interest of students Department of Physics SF, Christ College Irinjalakuda(Autonomous), introduced a programme of conducting a series of Lectures on recent advancements in physics. The inaugural ceremony was held on 19<sup>th</sup> October 2022, 11.00 Am at St. Chavara seminar hall. The lecture was on the topic “The opportunities and challenges in Quantum dots” by Dr. Pradeep K.R, Post Doctoral Researcher, University of Duisberg- Essen



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

Germany. The programme started with the blessing of God. Dr. V.P. Joseph, delivered the welcome speech. Prof. V.P. Anto, Head of the Department Physics(Unaided) delivered the presidential address. The programme was inaugurated by Dr. Jolly Andrews CMI (Principal, Christ college). Fr.Dr. Wilson Tharayil CMI( Director ,Self financing Programs), Dr. Shaju K.Y (Vice-Principal & HOD of aided Department of Physics) and Dr. T. Vivekanandan (Coordinator, Self financing Programs) delivered the felicitations. Ms. Anju Sebastian, Convenor of the programme, introduced the invited speaker, Dr. K. R. Pradeep. The official inaugural ceremony was concluded by vote of thanks, by Ms. Flower Mary, Student coordinator. After the inauguration ceremony the most awaited and scintillating part of the programme was held, the first talk of the lecture series, on the topic “Opportunities & challenges in quantum dots”. Dr. Pradeep K.R gave an interesting talk about the properties, application, etc. of quantum dots. Students from various departments also participated in the event. After the talk, an interactive session also was held in which various opportunities and options for higher studies were discussed. Event was very fruitful and it helped to ignite the student interests and spread light on to the vast wide opportunities of research.

### **Programme Outcome:**

1. Participants got an insight into the exciting field of quantum dots.
2. Various research and higher studies opportunities were been discussed.
3. It helped to ignite the scientific temper and curiosity of the young learners.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

**Brochure:**

**Inauguration of "Lecture Series on Recent Advances in Physics" and Invited Talk on "Opportunities and Challenges in Quantum Dots"**

Organized by  
**Department of Physics(Unaided)**  
**Christ College (Autonomous), Irinjalakuda**  
(Re-Accredited by NAAC with A++)

**Date : 19 October 2022**  
**Time : 11 AM**  
**Venue: Chavara seminar hall**

Invited Speaker  
**Dr. Pradeep K R**  
Post- Doctoral researcher  
University of Duisburg- Essen,  
Germany

**Rev. Dr. Jolly Andrews CMI**  
Principal

**Rev. Dr. Wilson Tharayil CMI**  
Director

**Ms. Anju Sebastian**  
Convenor

**Ms. Aparna K & Ms. Flower Mary**  
Student coordinators

**Prof. V. P. Anto**  
HOD  
Organizing Committee  
Dr. V.P Joseph  
Ms. Simmy Jose  
Mr. Jose Sunny  
Ms. Anjali Joby  
Ms. Johnny F. Johnson  
Ms. Aswathi K Sivarajan

**Attendance:**

REGISTRATION FORM  
Department of Physics(Unaided)  
CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA  
"LECTURE SERIES ON RECENT ADVANCES IN PHYSICS"  
Topic: " Opportunities and Challenges in Quantum Dots"  
DATE & TIME: 19<sup>th</sup> OCTOBER 2022, 11.30 PM

SL NO	Name of the Participant	Designation	Signature
60	MANUEL JOSHY VADAKAR -THALA	3 <sup>rd</sup> BSc PHYSICS (SF)	[Signature]
61	ARANDA NOMA ROCHA	3 <sup>rd</sup> BSc PHYSICS (SF)	[Signature]
62	DEVIKA K.R	3 <sup>rd</sup> BSc PHYSICS	[Signature]
63	Annamalya	3 BSc Phy SF	[Signature]
64	Roshika Anilkumar	3 <sup>rd</sup> BSc Physics	[Signature]
65	Shashika Anilkumar		[Signature]
66	Athira V	2 <sup>nd</sup> B.Sc Physics(SF)	[Signature]
67	Chackachan Jayi	3 <sup>rd</sup> BSc Physics(SF)	[Signature]
68	ARTUN GREESHAL	2 <sup>nd</sup> BSc. Phy (SF)	[Signature]
69	HENJO HENRY	2 <sup>nd</sup> BSc. Phy (SF)	[Signature]
70	Denet Davis	PhD physics student	[Signature]
71	Navya Bhavani C	2 <sup>nd</sup> BSc PHYSICS(SF)	[Signature]
72	ANAGHA M.S.	3 <sup>rd</sup> BSc PHYSICS(SF)	[Signature]
73	Catherine Mary Paul	Research Student	[Signature]
74	APARNA K	2 <sup>nd</sup> Yr MSc PHY	[Signature]

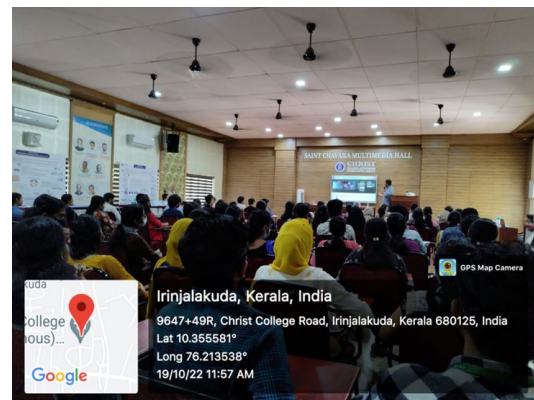


CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

REGISTRATION FORM  
Department of Physics(Unaided)  
CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA  
"LECTURE SERIES ON RECENT ADVANCES IN PHYSICS"  
Topic: "Opportunities and Challenges in Quantum Dots"  
DATE & TIME : 19<sup>th</sup> OCTOBER 2022, 1.30 PM

SL NO	Name of the Participant	Designation	Signature
1	Dr. V.P. Durgam	Asst. Prof.	[Signature]
2	Dr. Edwin Jose	Asst. Prof.	[Signature]
3	Dr. Xavier Joseph	Asst. Professor	[Signature]
4	Adhwaith Narayan K.N	2nd year BSc physics	[Signature]
5	Jithu Krishna M	2nd year BSc physics	[Signature]
6	Flower Mary	Student	[Signature]
7	Rohini Jayaraj	"	[Signature]
8	Aparna K.S	"	[Signature]
9	Lakshmi V.S	"	[Signature]
10	Affan	"	[Signature]
11	Angel Manya L	2nd msc physics (arts) student	[Signature]
12	Teja Maria Joy	"	[Signature]
13	Hansa Myrath	"	[Signature]
14	Aiya Sunil	1st msc physics (art) student	[Signature]
15	Shreya Jayaprakash	1st msc physics (S)	[Signature]

Geotag photos





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:



**Participative Learning 4 - Invited Talk on “Introduction to Robotics”**

**Programme Objectives:**

1. Participants were really got fascinated bout Robotics
2. Various international events based on Robotics were introduced
3. As it was an inter collegiate event, students from other colleges also were benefited.
4. Collaboration with IEEE student chapter gave the students a familiarization with it.

**Programme Report:**

In association with APT and IEEE Student chapter, Christ College of Engineering, Irinjalakuda, Department of Physics(unaided), Christ College(Autonomous), Irinjalakuda organized an invited talk on the topic “Introduction to Robotics”. This is the second talk in the event “Lectures series on recent advancements in physics.” The inaugural ceremony and the talk was held on 06<sup>th</sup> February 2023, from 1 pm onwards at Rev. Dr. Jose Thekkan A/C seminar hall. The programme started with the blessing of God. Prof. V.P. Anto, Head of the Department Physics (Unaided)



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

delivered the welcome speech. Fr. Dr. Wilson Tharayil CMI ( Director ,Self financing Programs), delivered the presidential address. The programme was inaugurated by Dr. T. Vivekanandan (Coordinator, Self financing Programs) Ms. Nafia, II MSc Physics student, introduced the invited speaker, Mr.Sunil Paul (Director, Christ Centre for Innovation & Open Learning,Christ College of Engineering, Irinjalakuda). The official inagural ceremony was concluded by vote of thanks, by convenor of the programme, Ms. Anju Sebastian.

After the inauguration ceremony, Mr. Sunil Paul delivered an interesting talk on the topic “Introduction to Robotics”. He also emphasized on the various opportunities in the field of Robotics and various international events based on Robotics. Participants were thought provoked and fascinated with the emerging field of robotics, which is going to be a part of our day to day life. Mr. Sunil who serves as the Director of Shrishti Robotics and Christ Centre for Innovation & Open Learning, Christ College of Engineering, Irinjalakuda was truly an inspiration. Students from various colleges also participated in the event. After the talk, an interactive session also was held in which various opportunities and options for Robotics were discussed. Various demonstrations of Robots designed by Mr.Sunil Paul and his team like line follower, model of underwater robot etc were demonstrated. Event was very fruitful and it helped to ignite the student interests and spread light on to the vast wide opportunities of research. Majority of the students demanded for a follow up workshop where they can get hands on experience with Robotics. Students also involved in the feedback sessions actively. Certificates were provided to the participants.

**Programme Outcome:**

1. Participants were really got fascinated about Robotics
2. Various international events based on Robotics were introduced
3. As it was an inter collegiate event, students from other colleges also were benefited.




CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:



4. Collaboration with IEEE student chapter gave the students a familiarization with it

**Brochure:**



Lecture Series on Recent Advances in Physics : Invited Talk- II



**CHRIST**  
COLLEGE (AUTONOMOUS)  
IRINJALAKUDA, KERALA  
Reaccredited by NAAC with 'A++' grade

Department of Physics (Unaided)  
in association with APT & IEEE  
Organizes **Invited talk & workshop** on  
**Introduction to Robotics**

Invited Speaker : **Mr. Sunil Paul**  
Director, Christ Centre for Innovation & Open Learning,  
Christ College of Engineering, Irinjalakuda  
On **February 6, 2023** from **1.00 pm to 4.00 pm**  
at **Fr. Dr. Jose Thekkan A/C Seminar Hall**

Rev. Dr. Jolly Andrews CMI  
Principal

Rev. Dr. Wilson Tharayil CMI  
Director

Sri. V. P. Anto  
HoD

Ms. Anju Sebastian  
Convenor

Ms. Afnan  
Student Co-ordinator

**Organizing Committee**  
Dr. V. P. Joseph, Ms. Simmy Jose, Mr. Jose Sunny, Ms. Anjali Joby, Ms. Johnsy E. Johnson, Ms. Aswathy K. S.  
Contact Details : 9497433067, physicsself@christcollegeijk.edu.in





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

## Attendance:

REGISTRATION FORM  
"LECTURE SERIES ON RECENT ADVANCES IN PHYSICS: Invited Talk II"  
An inter collegiate event organized by  
Department of Physics (Unaided)  
CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA  
In association with APT & CCE IEEE Student Branch  
Topic: "Introduction to Robotics"  
Speaker: Mr. Sunil Paul (Director, Christ Centre for Innovation & Open Learning,  
Christ College of Engineering, Irinjalakuda)  
DATE & TIME: 6<sup>th</sup> February 2023, 1 pm to 4 pm

Sl. No.	Name of the participant	Department	Designation	Course/Batch	Signature
1	Godwin vs	Bvoc-IT	Student	Bvoc-IT 2nd year self financing	<i>[Signature]</i>
2	Catherine Darily Varghese	Bvoc IT	Student	Bvoc IT, 2nd year	<i>[Signature]</i>
3	Jolna prakash	Physics unaided	Student	I Bsc physics self financing	<i>[Signature]</i>
4	Sanath K.D	Bvoc IT	Student	2nd semester Bvoc IT	<i>[Signature]</i>
5	Ashik shibu	Bvoc. IT	Student	Bvoc IT (self financing)	<i>[Signature]</i>
6	ARUNDHATHY DEVI M	PHYSICS	Student	BSc Physics (self financing)	<i>[Signature]</i>
7	Lakshmi V S	Physics (self finance)	Student	I MSc Physics (self financing)	<i>[Signature]</i>
8	Fathimathul Haaifa V S	Bsc physics unaided	Student	I Bsc physics self financing	<i>[Signature]</i>
9	Paulmon T Jaison	Physics	Student	II Msc Physics (Aided)	<i>[Signature]</i>
10	Arya sunil	Physics	Student	I Msc physics self financing	<i>[Signature]</i>

11	Abhijith C Preej	Physics Self Finance	Student	I MSc Physics Self Financing	<i>[Signature]</i>
12	ANITA JOY	Physics	Student	2 MSc Physics aided	<i>[Signature]</i>
13	ALEENA K J	Physics	Student	1 MSc Physics (aided)	<i>[Signature]</i>
14	Afnan	Physics	Student	1 Msc Physics (Self Financing)	<i>[Signature]</i>
15	Vaishnavi V G	B Sc physics	Student	Self	<i>[Signature]</i>
16	JERIN P J	Physics	Student	1 Msc Physics (self financing)	<i>[Signature]</i>
17	E A Athira	Physics	Student	Msc Physics (aided)	<i>[Signature]</i>
18	Sujitha v.s	Physics	Student	II BSc Physics (self financing)	<i>[Signature]</i>
19	Shreya Jayaprakash	Physics self financing	Student	1 MSc Physics self financing	<i>[Signature]</i>
20	Monica M S	Physics	Student	1 MSc Physics (Aided)	<i>[Signature]</i>
21	Tinto shaju	Bsc physics self finance	Student	1 bsc physics self finance	<i>[Signature]</i>
22	Akshaya P Anil	Physics self	Student	Bsc physics self	<i>[Signature]</i>
23	Aasif seethy	B.voc IT	Student	II B.VOC IT	<i>[Signature]</i>
24	Gautam Krishna MS	B.Voc IT	Student		<i>[Signature]</i>
25	Aneena Berlin	Physics self	Student	2 nd yr physics self	<i>[Signature]</i>
26	FARHAN A F	Physics	Student	1 Msc physics (self financing)	<i>[Signature]</i>



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

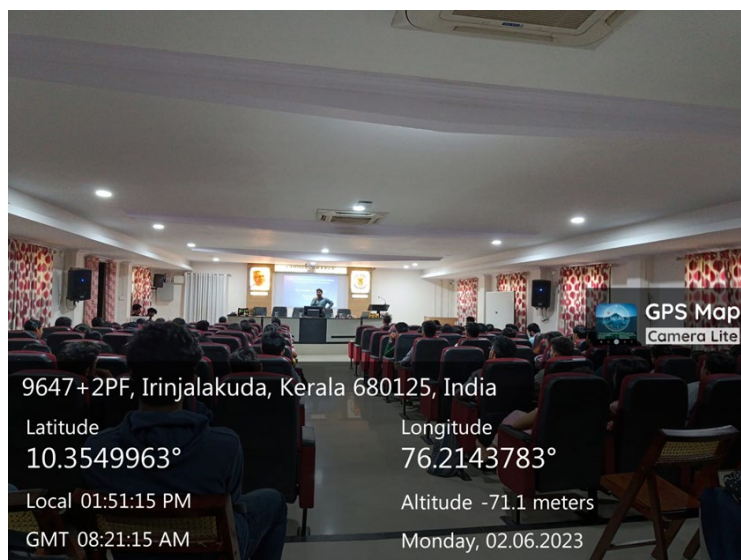
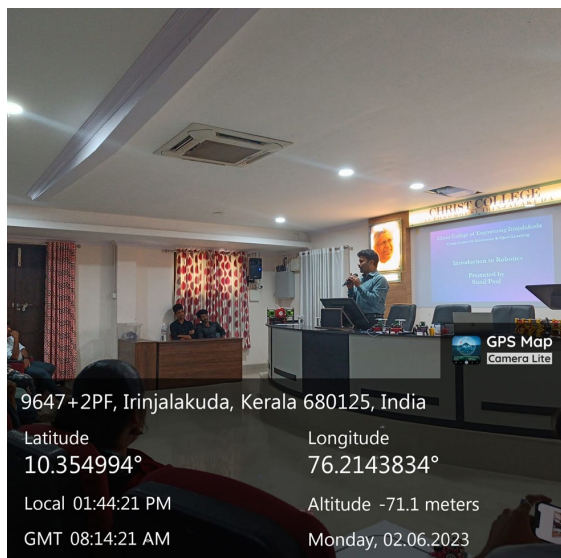
27	Alvin Sebastian	Computer science	Student	B.voc It (self financing) second year	Alvin
28	Sanigha T T	Physics	Student	Msc Physics (aided)	Sanigha
29	Naveen KR	IT	Student	II BVOC IT (unaided/self financing)	Naveen
30	Arjun Hari C	Physics	Student	1 Msc physics self	Arjun
31	Aparna.k.s	Physics	Student	1Msc Physics self financing	Aparna
32	Lenus	Bvoc it	Student	Bvoc it self	Lenus
33	Hiba.T.K	Physics	Student	2 Msc Physics (Aided)	Hiba
34	Athul ps	Physics (SF)	Student	1st year BSc physics self financing	Athul
35	Vishnu Madhavan V M	B Voc IT	Student	2 B Voc IT / self financing	Vishnu
36	Adithyan.K.R.	Bsc.physics self	Student	Bsc physics self finance	Adithyan
37	Krishnapriya T.L	Physics	Student	1Msc Physics (aided)	Krishna
38	Leen mariya	B.voc	Student	B.voc it , second year	Leen
39	Anjana A B	Physics	Student	Bsc physics self 1st year	Anjana
40	ARUNDHATHY DEVI M	PHYSICS	Student	1 BSc Physics ( self financing )	Arundhathy
41	Sam Chiriyankandath	physics	Student	1 BSC PHYSICS SELF FINANCED	Sam

42	Dinu Denny	Physics self	Student	Self financing	Dinu
43	Aleena A S	Physics (aided)	Student	1 MSc Physics Aided	Aleena
44	Akhila Raphael	Physics	Student	1 Msc Physics	Akhila
45	Avinash k A	Physics	Student	Bsc Physics self financing	Avinash
46	JESSE RAJUMON	BSc physics	Student	1 BSc physics (Self financing)	Jesse
47	Gladiya Dixon	Bsc physics (self )	Student	Bsc physics self financing	Gladiya
48	Milan Roy	IT	Student	2 Bvoc IT	Milan
49	Alfred Sonvin	Physics Unaided	Student	1 Bsc Physics Unaided	Alfred
50	ATHIRA V M	Bsc physics( self)	Student	1 BSc physics self financing	Athira
51	Arya Anil A.	Bsc physics self	Student	Bsc physics self financing	Arya
52	Riya Shaju	Bsc physics self	Student	1 bsc physics self	Riya
53	Suryapriya Cs	Physics	Student	Bsc physics self financing	Surya
54	Nandhana ps	Bcs physics self	Student	1 year BCS physics self financing	Nandhana
55	Alan Antony K. J	Msc. Physics	Student	1 Msc Physics (self)	Alan
56	SIYA SANTHOSH	BSC PHYSICS	Student	2 BSC PHYSICS (SELF FINANCING)	Siya
57	Chackochan Joji	Physics (unaided)	Student	2 Bsc. Physics (self financing)	Chackochan



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Geotag photos



### Experiential Learning 1- Project Presentation Contest

#### Programme Objectives:

- Students gained the ability to demonstrate the skills necessary to develop and present a PowerPoint presentation in a professional manner.
- It helped students to build the confidence and courage to deliver ideas to the public.
- Helped to strengthen the relationship between students.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Programme Report:

A presentation contest was organized for the MSc Physics (Self) students of 2020-2022 batch based on the MSc Project topics done during their course.

Dr. V.P Joseph, Associate Professor, Dept. of Physics (Self), Christ College (Autonomous), Irinjalakuda has delivered the welcome address along with a brief description on the contest. The meeting was inaugurated by Prof. V.P. Anto, Head of the Department, Physics(Self).

Oral presentations were judged for originality and creativity, organization of content, oral presentation, knowledge of material, clarity of artwork (charts, graphs, slides), and overall presentation. Students were given 20 minutes for their presentation and 5 minutes for answering questions from the judges and audience. Mrs. Anju Sebastian and Mrs. Johnsy E Johnson, Asst. Professor (Adhoc) evaluated the presentations of the participants. Eight students presented their project related presentations on various topics including metamaterials, astrophysics, atmospheric physics, and nano science.

After judgement of all the presentations, it was decided to share the first prize between two students: Hithun K H and Anjali P M. Cash prize of Rs. 750 each along with the certificates were distributed by Dr. V. P. Joseph and Prof. V.P. Anto. Participation certificates were distributed among the participants. Students of III Sem PG Physics (Self) and teachers of the department were present as audience. Program was a great success and provided a platform for the PG students to get familiar with various fields of science.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

**Programme Outcome:**

1. Gain the ability to demonstrate the skills necessary to develop and present a PowerPoint presentation in a professional manner.
2. Build the confidence and courage to deliver ideas to the public.
3. Strengthen the communication skill among students.

**Brochure:**





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### List of participants

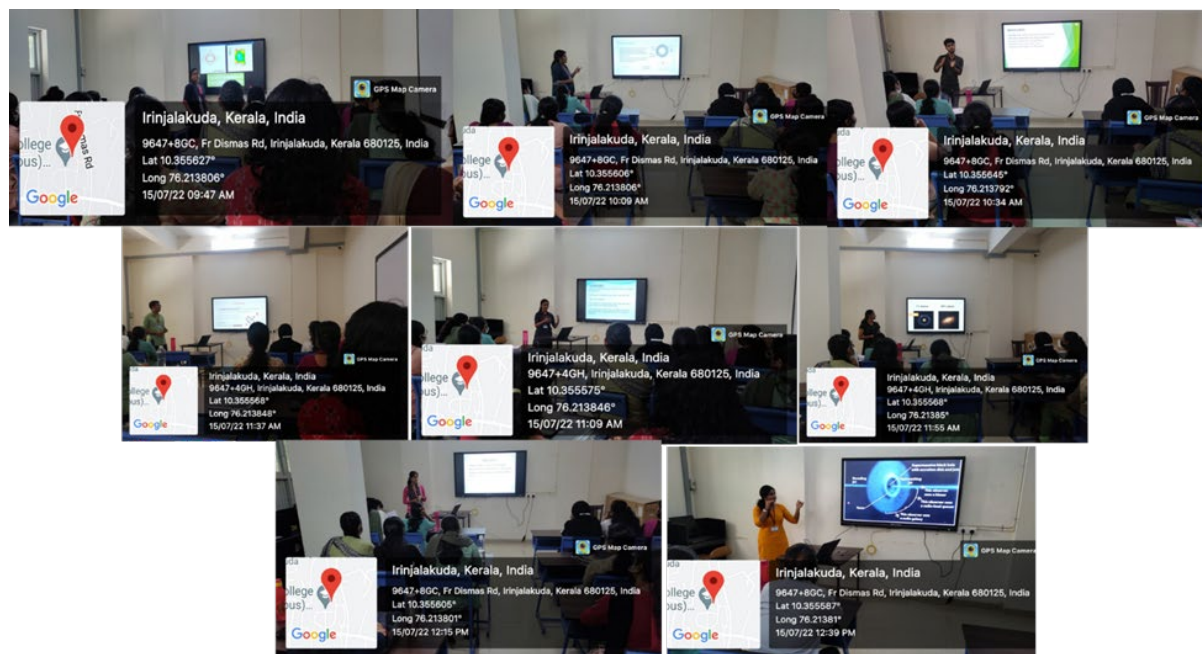
SL. NO.	Name of the Participant	Title of the Presentation	Points
1	Akhila K Paul	Attempt to unify the electrical and magnetic resonances of split ring resonator metamaterial structure using elliptical geometry.	85
2	Anjali P M	Water Vapour Transport over the West Coast of Kerala for Different Intensity of Rainfall.	99
3	Aswathy K Sivarajan	Spectral Studies of Selected Samples of Radio Galaxies.	98
4	Catherine Mary Paul	Study of Elliptical SRR Metamaterial Structure for Enhanced Sub-Wavelength Resolution.	90
5	Govind Narayanan K	Structural, Microstructural and Morphological Analysis of 0.50PMN- 0.50PT	82
6	Hithun K H	Structural and Microstructural Analysis of Lead based 0.40PMN-0.60PT Ceramics.	99



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

7	Jayasree C J	Synthesis and Crystal Structure Characterization of $\text{Li}_2\text{Zn}_{(1-x)}\text{A}_x\text{Ti}_3\text{O}_8$ (A=Cu, Ni) Ceramics	93
8	Sneha Prasad	Study of Radio Properties of a Sample of FR II Radio Sources.	98

### Geotag photos



Presentation by participants with teachers and students as audience



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:



**Prize Distribution ceremony**

**Experiential Learning 2 - Energy Survey-ENERGY IS LIFE, CONSERVE IT**

**Programme Objectives:**

1. Identifying Energy Usage: Determine how energy is being used within a system or building, including electricity, heating, cooling, and other energy sources.
2. Energy Efficiency Assessment: Evaluate the efficiency of energy-consuming systems and equipment to identify areas for improvement.
3. Cost Savings: Identify opportunities to reduce energy consumption and costs through energy efficiency measures.





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

4. Environmental Impact: Assess the environmental impact of energy usage, including greenhouse gas emissions and other pollutants.
5. Renewable Energy Potential: Identify opportunities for integrating renewable energy sources to reduce reliance on fossil fuels.

### Programme Report:

An energy survey was organized by department of physics self in association with K. S.E.B. which was conducted among the residents of Sakthi Nagar Colony, ward, 23. Irinjalakuda municipality. The aim of our survey was to make awareness about the energy conservation in daily life among the people as well as the students.

The official inauguration of the Programme was done by Sri. P Jayachandran (Assistant executive engineer KSEB, Irinjalakuda) on 30th September 2022. Our third-year students actively participated in the survey. They split into 6 small groups and collected data from Sakthi Nagar Housing colony. It provided an experiential learning for the students.

### Programme Outcome:

1. Energy Savings: Implementation of energy efficiency measures identified during the survey can lead to reduced energy consumption and cost savings over time.
2. Improved Energy Performance: By identifying and addressing inefficiencies, the energy survey can lead to improved overall energy performance of the system, building, or organization.
3. Environmental Impact Reduction: Reduced energy consumption and increased use of renewable energy sources can lead to a reduction in greenhouse gas emissions and other environmental impacts.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

4. Compliance with Regulations: Ensure compliance with energy efficiency standards and regulations, avoiding penalties and improving overall operational compliance.
5. Risk Mitigation: Identify and mitigate risks related to energy supply and consumption, such as supply disruptions or price volatility.
6. Enhanced Sustainability: Contribute to organizational or regional sustainability goals by reducing energy consumption and environmental impact.
7. Improved Operational Efficiency: Energy surveys can lead to improved operational efficiency, as energy-efficient systems often require less maintenance and operate more reliably.
8. Employee and Stakeholder Engagement: Increase awareness and engagement among employees and stakeholders regarding energy conservation practices and the importance of energy efficiency.
9. Data-driven Decision Making: Provide data and insights for informed decision-making regarding energy planning, management, and investment



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:


**Brochure:**

CHRIST COLLEGE (Autonomous) IRINJALAKUDA  
PHYSICS (Self-Finance) DEPARTMENT

**“ENERGY IS LIFE,  
CONSERVE IT!”**

**ENERGY SURVEY IN  
ASSOCIATION WITH KSEB**

DATE | 30TH SEPTEMBER 2022  
TIME | 9.30 AM  
VENUE | SHAKTI NAGAR HOUSING COLONY  
PREMISES, IRINJALAKUDA



**WELCOME Sri. JAISON PAREKKADAN**  
STANDING COMMITTEE CHAIRMAN OF PUBLIC WORKS AND  
COUNCILLOR, WARD 23, IRINJALAKUDA MUNICIPALITY

**PRESIDENTIAL ADDRESS Rev. Dr. WILSON THARAYIL**  
DIRECTOR, SELF FINANCE STREAM, CHRIST COLLEGE  
(Autonomous) IRINJALAKUDA

**INAUGURATION Sri. P. JAYACHANDRAN**  
ASSISTANT EXECUTIVE ENGINEER, KSEB, IRINJALAKUDA

**VOTE OF THANKS Prof. V.P. ANTO**  
COORDINATOR, DEPARTMENT OF PHYSICS (Self-Finance)  
CHRIST COLLEGE (Autonomous) IRINJALAKUDA



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

**Attendance:**

30/9/2022

Energy Survey

Reg.No	Name	Attendance
CCAUSPH050	AKSHAY GOPAN	Akshay
CCAUSPH051	AMAL P SAJEEV	Amal
CCAUSPH052	ARANDA NOMA ROCHA	Aranda
CCAUSPH053	JISS SABU VARGHEES	Jiss
CCAUSPH054	JOE PAYYAPPILLY	Joe
CCAUSPH055	KAVYA C VARMA	Kavya
CCAUSPH056	MANUEL JOSHY VADAKKETHALA	Manuel
CCAUSPH058	AISWARYA DINESAN	Aiswarya
CCAUSPH059	AKSHAY S	Akshaya
CCAUSPH060	AKSHAYA THOMAS	Akshaya
CCAUSPH061	ANSLIN JOHNSON	Anslin
CCAUSPH062	ARYADAS K H	Aryadas
CCAUSPH063	DEVIKA K R	Devika
CCAUSPH064	JOEL JOJU	Joel
CCAUSPH065	MEGHNA MARIYA K B	Meghna
CCAUSPH066	NEHA T S	Neha
CCAUSPH067	AKHILA U A	Akhila
CCAUSPH068	ANNMARIYA	Annamariya
CCAUSPH069	HARISHANKAR S	Harishankar
CCAUSPH070	KARTHIKA ANILKUMAR A	Karthika
CCAUSPH071	SHAHBAS SHIHABUDHEEN	Shahbas
CCAUSPH072	SREENIDHI	Sreenidhi
CCAUSPH073	TWINKLE SHAJU	Twinkle



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

**Geotag photos**



**Experiential Learning 3- Physics Laboratory sessions**

**Programme Objectives:**

- Apply and illustrate the concepts of properties of matter through experiments
- Apply and illustrate the concepts of electricity and magnetism through experiments
- Apply and illustrate the concepts of optics through experiments
- Apply and illustrate the concepts of spectroscopy through experiments
- Design and construct electronic circuits using diodes and transistors
- Design and construct electronic circuits using OPAMP
- Design and construct electronic circuits using IC -555
- Design and construct digital electronics circuits



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Programme Report:

Practical of third year BSc Physics students, both electronics and general experiments conducted successfully and all the students submitted the practical record. At the end of the semester practical examinations were conducted.

### Programme Outcome:

- Understanding of Concepts: Through hands-on experiments, students gain a deeper understanding of physics concepts such as electricity, magnetism, optics, and mechanics.
- Experimental Skills: Students develop skills in setting up experiments, using various instruments like oscilloscopes, multimeters, and optical benches, and analyzing data.
- Problem-Solving: Practical work often involves troubleshooting and solving problems that arise during experiments, improving students' problem-solving abilities.
- Critical Thinking: Students learn to critically evaluate experimental results, identify sources of error, and improve experimental techniques.
- Teamwork: Many experiments require students to work in teams, enhancing their teamwork and communication skills.
- Laboratory Safety: Students become familiar with laboratory safety protocols and practices, ensuring they can conduct experiments safely.
- Report Writing: Students learn to write scientific reports, including stating objectives, describing methods, presenting data, and drawing conclusions, improving their scientific communication skills.
- Application of Theory: Practical work helps students see the application of theoretical concepts in real-world situations, reinforcing their understanding of physics principles.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

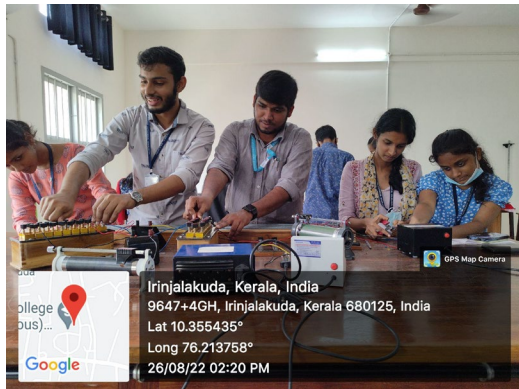
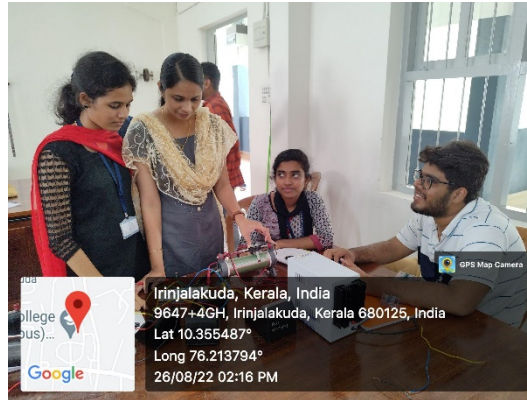
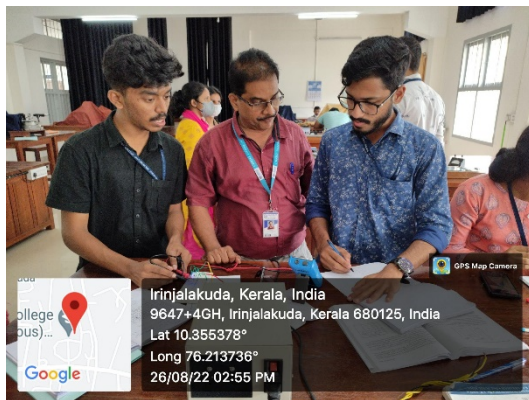
### Attendance

CONSOLIDATED REPORT ( 01-12-2022 - 31-03-2023 )																		
Batch : BSC PHY SF 2020																		
Faculty(s) : Simmy Jose																		
Created date: 20-02-2024																		
Sl.No.	Roll No	Name	Gender	Dec - 2022			Jan - 2023			Feb - 2023			Mar - 2023			Aggregate		
				TW	TDP	TDP(%)	TW	TDP	TDP(%)	TW	TDP	TDP(%)	TW	TDP	TDP(%)	TW	TDP	TDP(%)
1	1145	AISWARYA DINESAN	FEMALE	2	2	100	13	12	92.31	18	14	77.78	10	7.5	75	43	35.5	82.56
2	1146	AKHILA U A	FEMALE	2	2	100	13	11	84.62	18	14	77.78	10	8.5	85	43	35.5	82.56
3	1147	AKSHAY GOPAN. M	MALE	2	2	100	13	11.5	88.46	18	15	83.33	10	6.5	65	43	35	81.40
4	1148	AKSHAY S	MALE	2	1.5	75	13	10	76.92	18	13.5	75	10	8	80	43	33	76.74
5	1149	AKSHAYA THOMAS	FEMALE	2	1.5	75	13	10	76.92	18	13	72.22	10	7.5	75	43	32	74.42
6	1150	AMAL P SAJEEV	MALE	2	1	50	13	10	76.92	18	14	77.78	10	9	90	43	34	79.07
7	1151	ANIMARIYA	FEMALE	2	1.5	75	13	12	92.31	18	16	88.89	10	8	80	43	37.5	87.21
8	1152	ANSLIN JOHNSON	FEMALE	2	2	100	13	13	100	18	18	100	10	6.5	65	43	39.5	91.86
9	1153	ARANDA NOMA ROCHA	FEMALE	2	2	100	13	12	92.31	18	17.5	97.22	10	8	80	43	39.5	91.86
10	1154	ARYADAS K H	FEMALE	2	2	100	13	10	76.92	18	15	83.33	10	8.5	85	43	35.5	82.56
11	1155	DEVIKA K R	FEMALE	2	2	100	13	11.5	88.46	18	17.5	97.22	10	8.5	85	43	39.5	91.86
12	1156	HARISANKAR.S	MALE	2	1.5	75	13	9	69.23	18	16.5	91.67	10	8	80	43	35	81.40
13	1157	JISS SABU VARGHESE	MALE	2	1	50	13	8.5	65.38	18	14.5	80.56	10	8	80	43	32	74.42
14	1158	JOE PAYYAPPILLY	MALE	2	1.5	75	13	11	84.62	18	14.5	80.56	10	8.5	85	43	35.5	82.56
15	1159	JOEL JOJU	MALE	2	2	100	13	10.5	80.77	18	16.5	91.67	10	9	90	43	38	88.37
16	1160	KARTHIKA ANILKUMAR A	FEMALE	2	2	100	13	11.5	88.46	18	14	77.78	10	8	80	43	35.5	82.56
17	1161	KAVYA C VARMA	FEMALE	2	2	100	13	11.5	88.46	18	13	72.22	10	8	80	43	34.5	80.23
18	1162	MANUEL JOSHY VADAKKETHALA	MALE	2	2	100	13	11.5	88.46	18	15	83.33	10	8.5	85	43	37	86.05
19	1163	MEGHNA MARIYA K B	FEMALE	2	1.5	75	13	9.5	73.08	18	13	72.22	10	7.5	75	43	31.5	73.26
20	1165	NEHA. T. S	FEMALE	2	2	100	13	12.5	96.15	18	14.5	80.56	10	8.5	85	43	37.5	87.21
21	1166	SHANBAS SHIHABUDHEEN	MALE	2	1	50	13	7.5	57.69	18	10.5	58.33	10	6	60	43	25	58.14
22	1167	SREENIDHI	FEMALE	2	1.5	75	13	11	84.62	18	15.5	86.11	10	8	80	43	36	83.72
23	1168	TWINKLE SHAJU	FEMALE	2	1.5	75	13	11.5	88.46	18	16	88.89	10	6.5	65	43	35.5	82.56



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Geotag photos



### Experiential Learning 4 - YOGA Class

#### Programme Objectives:

- Stress Reduction: Help students reduce stress and anxiety, which can improve overall well-being and academic performance.
- Improved Concentration: Enhance students' ability to focus and concentrate, which can benefit their studies and research.





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

- Physical Health: Improve students' physical health, including flexibility, strength, and posture, which can help prevent injuries and improve overall health.
- Mental Clarity: Enhance mental clarity and awareness, which can aid in problem-solving and critical thinking skills.
- Mindfulness: Teach students mindfulness techniques to help them stay present and focused, which can reduce distractions and improve productivity.
- Relaxation: Provide students with tools and techniques to help them relax and unwind, which can improve sleep quality and overall well-being.
- Stamina and Endurance: Build students' stamina and endurance, which can help them stay energized and focused throughout long study sessions or exams.
- Community Building: Foster a sense of community and connection among students, which can improve their overall experience and support system.
- Self-Care Skills: Teach students self-care skills that they can incorporate into their daily lives to manage stress and improve overall health and well-being.
- Life Balance: Help students learn how to balance their academic responsibilities with self-care and relaxation, which can lead to a more balanced and fulfilling life.
- Improved Overall Well-being: Regular yoga practice can contribute to a sense of well-being, balance, and harmony in students' lives, which can positively impact their academic performance and overall quality of life.
- Lifelong Healthy Habits: Introducing yoga to BSc Physics students can also help them develop healthy habits that they can carry forward into their professional lives, promoting long-term physical and mental well-being.

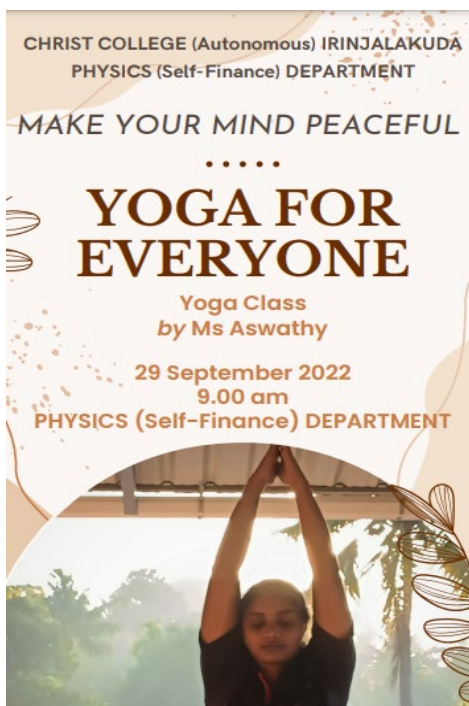


CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

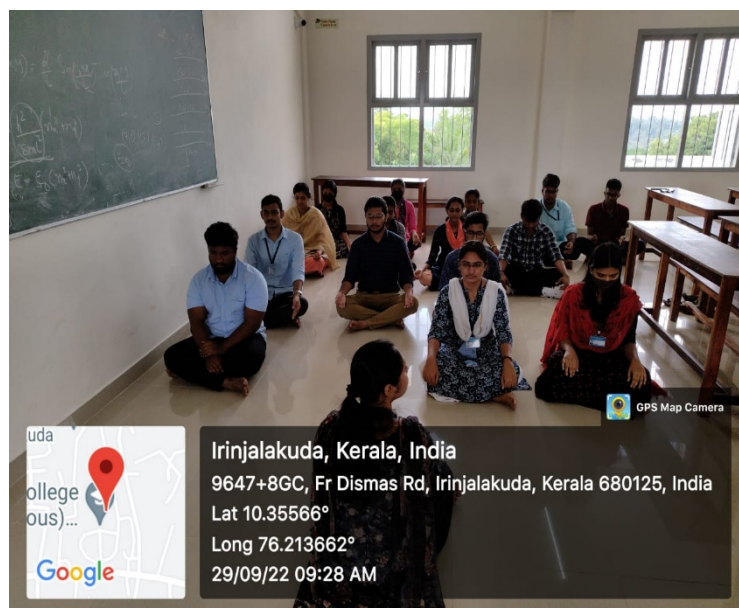
**Programme Report:**

On 29th September 2022, Yoga classes are organized to provide students with a peaceful and serene mind so that they can concentrate on their studies by Ms. Aswathi K Sivarajan.

**Brochure:**



**Geotag photo**





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Attendance:

Reg.No	Name	Attendance
CCAUSPH050	AKSHAY GOPAN	Akshay
CCAUSPH051	AMAL P SAJEEV	Amal
CCAUSPH052	ARANDA NOMA ROCHA	Aranda
CCAUSPH053	JISS SABU VARGHEES	Jiss
CCAUSPH054	JOE PAPPAPPILLY	Joe
CCAUSPH055	KAVYA C VARMA	Kavya
CCAUSPH056	MANUEL JOSHY VADAKKETHALA	Manuel
CCAUSPH058	AISWARYA DINESAN	Aiswarya
CCAUSPH059	AKSHAY S	Akshay
CCAUSPH060	AKSHAYA THOMAS	Akshaya
CCAUSPH061	ANSLIN JOHNSON	Anslin
CCAUSPH062	ARYADAS K H	Aryadas
CCAUSPH063	DEVIKA K R	Devika
CCAUSPH064	JOEL JOJU	Joel
CCAUSPH065	MEGHNA MARIYA K B	Meghna
CCAUSPH066	NEHA T S	Neha
CCAUSPH067	AKHILA U A	Akhila
CCAUSPH068	ANNMARIYA	Annmariya
CCAUSPH069	HARISHANKAR S	Harishankar
CCAUSPH070	KARTHIKA ANILKUMAR A	Karthika
CCAUSPH071	SHAHBAS SHIHABUDHIEN	Shahbas
CCAUSPH072	SREENIDHI	Sreenidhi
CCAUSPH073	TWINKLE SHAJU	Twinkle

### Experiential Learning 5 - General seminar presentation:

#### Programme Objectives:

**Research Skills:** Seminar presentations often require students to conduct research on a specific topic, helping them develop skills in information gathering, critical analysis, and synthesis of information.

**Presentation Skills:** Students gain experience in public speaking and presenting information in a clear, organized, and engaging manner. This includes skills such as structuring a presentation, creating visual aids, and effectively delivering content to an audience.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

Communication Skills: Presenting seminars allows students to improve their verbal communication skills, including articulating ideas, responding to questions, and engaging with an audience. It also helps them develop written communication skills through the preparation of presentation materials.

Critical Thinking: Students learn to critically evaluate information, arguments, and evidence, both in their own research and in the presentations of their peers. This fosters a deeper understanding of complex issues and encourages independent thinking.

Confidence: Presenting in front of an audience can boost students' confidence and self-esteem, especially as they receive feedback and validation for their efforts. Over time, they become more comfortable speaking in public and expressing their ideas.

Time Management: Planning and preparing for a seminar presentation require students to manage their time effectively, setting deadlines for research, content creation, and practice sessions.

Collaboration: In some cases, students may work in teams to prepare and deliver seminar presentations. This promotes collaboration skills, including the ability to delegate tasks, communicate effectively within a group, and resolve conflicts.

Feedback and Adaptation: Presenting seminars offers students the opportunity to receive feedback from peers and instructors, allowing them to identify areas for improvement and adjust their presentation style or content.

Subject Knowledge: Through researching and presenting on a specific topic, students deepen their understanding of the subject matter and become more knowledgeable in their chosen field of study.

Professional Development: Seminar presentations help students develop skills that are highly valued in professional settings, such as critical thinking, communication, and presentation abilities. These skills are transferable to various careers and academic pursuits.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Programme Report:

A general seminar presentation competition was organised on September 13, 2022 at 9:30 am at M.Sc. Physics computational lab. Each student presented a seminar on various relevant and novel topics in physics. The time duration allotted for each student was 20 minutes. An interaction with the audience followed the presentation.

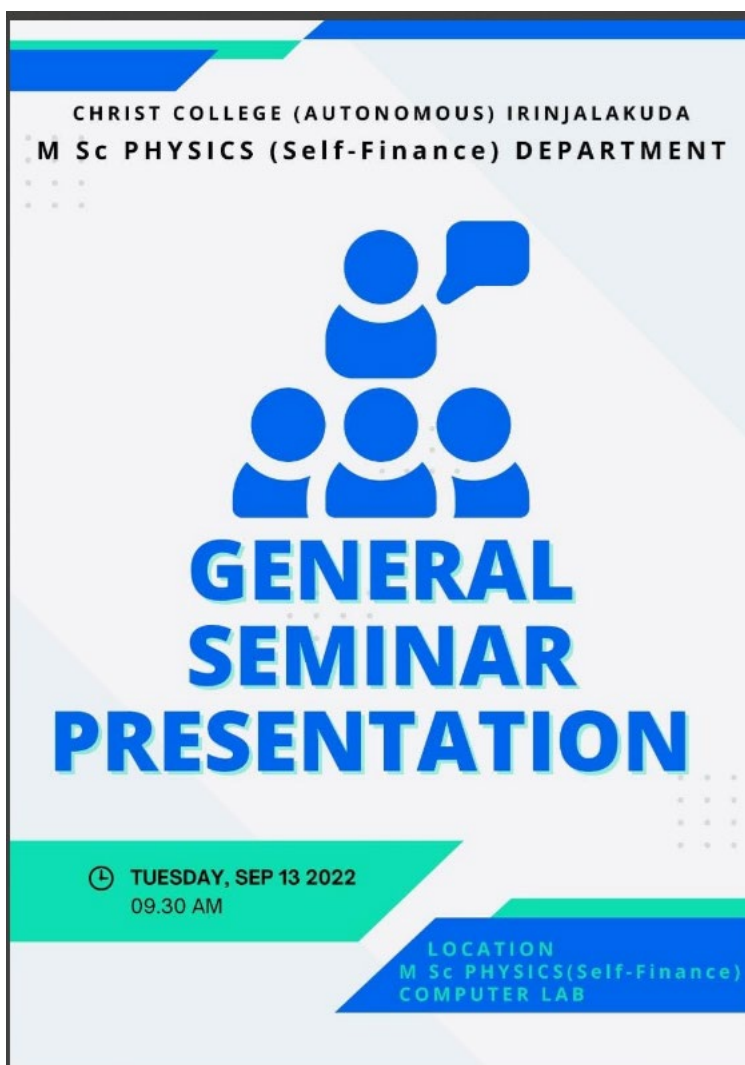
### Programme Outcomes

- Attain valuable learning experience that prepares students for academic, professional, and personal success
- Acquire a variety of valuable skills and knowledge through seminar presentations. Here are some of the key benefits



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

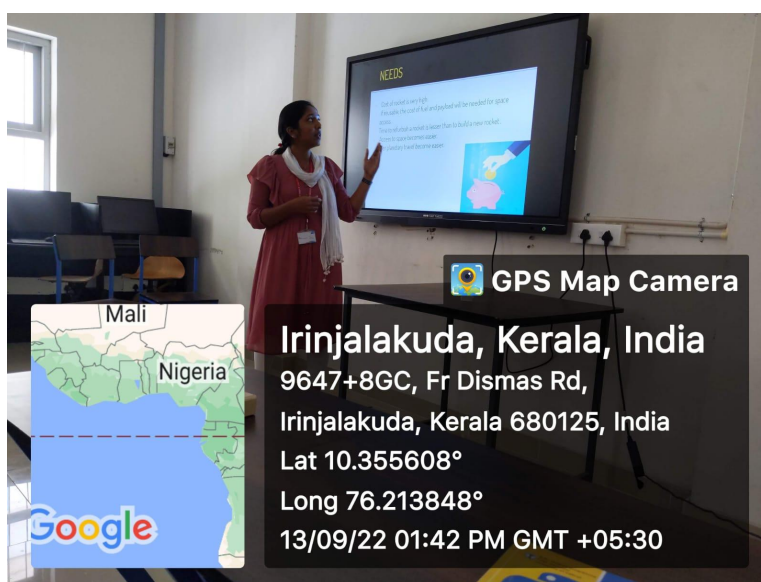
### Brochure





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Geotag photos



### Experiential Learning 6 - Open House Visit to Cochin University of Science and Technology

#### Programme Objectives:

- Exposure to Advanced Lab Equipment: Provide students with exposure to advanced laboratory equipment and facilities available at CUSAT, enhancing their practical knowledge and skills.
- Hands-on Experience: Enable students to gain hands-on experience with experiments and procedures relevant to their physics curriculum, deepening their understanding of theoretical concepts.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	<b>Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:</b>

- Interaction with Faculty and Researchers: Facilitate interaction between students and faculty members or researchers at CUSAT, allowing students to gain insights into ongoing research and career opportunities in physics.
- Application of Physics Concepts: Demonstrate the application of physics concepts in real-world scenarios through experiments and demonstrations conducted at CUSAT labs.
- Promotion of Scientific Temper: Encourage students to develop a scientific temper by observing and analyzing experimental outcomes and drawing conclusions based on evidence.
- Inspiration for Research and Innovation: Inspire students to pursue research and innovation in the field of physics by showcasing cutting-edge research and projects at CUSAT.
- Networking Opportunities: Provide students with networking opportunities with peers and professionals in the field of physics, fostering a sense of community and collaboration.
- Career Guidance: Offer guidance on potential career paths in physics and related fields, including higher studies and job opportunities.
- Skill Development: Develop students' practical skills, such as data analysis, experimental design, and scientific communication, through participation in lab activities at CUSAT.
- Enhancement of Academic Performance: Support students in enhancing their academic performance by reinforcing theoretical concepts through practical application in a laboratory setting.

### Program Report

The open house visit at Cochin University of Science and Technology (CUSAT) on 24th January 2023 provided an exceptional opportunity for students to explore the diverse range of





CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

laboratories and research facilities available at the university. This immersive experience showcased the cutting-edge research, state-of-the-art equipment, and innovative projects undertaken by faculty and students across various disciplines.

### Programme Outcomes:

Visiting laboratories can yield various outcomes depending on the purpose and context of the visit. Here are some potential outcomes:

- Learning Experience: Visitors can gain valuable insights into scientific processes, techniques, and equipment used in the laboratory.
- Networking Opportunities: Visiting laboratories provides opportunities to meet and interact with researchers, scientists, and professionals in the field.
- Inspiration and Innovation: Observing cutting-edge research and technology in action can inspire new ideas and innovations.
- Skill Development: Hands-on experiences or demonstrations in laboratories can help visitors develop practical skills and techniques applicable to their own work or studies.
- Validation and Verification: For stakeholders such as investors, policymakers, or regulators, visiting laboratories can provide assurance about the quality and integrity of research being conducted.
- Educational Outreach: Laboratory visits can serve as educational outreach activities, engaging students, educators, and the public in science and research.
- Feedback and Improvement: Laboratories can gather feedback from visitors to identify areas for improvement or enhancement in their research, operations, or facilities.



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Geo tag photos

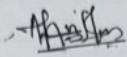


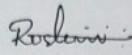

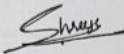


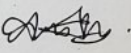
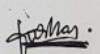






CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Attendance

Open - Hour Visit : CUSAT

1.	AFNAN		Msc Physics SF
2.	LAKSHMI V.S		"
3.	APARNA K.S		"
4.	ROSHINI JAYARAJ		"
5.	AARYA SUNIL		"
6.	SHREYA JAYAPRAKASH		"
7.	ABHIJITH C-PREEJ		"
8.	ALAN K. ANTONY K.J		"
9.	ARJUN HARI . C		"
10.	FARHAN		"
11.	JERIN P.J		"
12.	Anju Sebastian		(Teacher-in-charge).

### Problem Solving Methodologies: Mini Projects

#### Programme Objectives:

- Research the methodology of the project
- Formulate a research project
- Design and implement a research project
- Assess the result of the project
- Compile the scope and limitations of a research project



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

### Programme Report:

Final BSc Physics students were divided into different groups consisting of 3 or 4 members under the guidance of our faculty members. They successfully completed their works on time and submitted the same to the external evaluation.

### Geotag photos



**"Automated Irrigation System Based on Soil  
Moisture using Arduino"**

Project Report submitted to

**CHRIST COLLEGE (AUTONOMOUS)**

*In partial fulfillment of the requirement for the award of the degree of*

**BACHELOR OF PHYSICS**

Submitted by

**AMAL P SAJEEV  
(CCAUSPH051)**

Under the supervision of

**Aswathi K Sivarajan**



DEPARTMENT OF PHYSICS

CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA

UNIVERSITY OF CALICUT



CRITERION	II	Teaching-Learning and Evaluation
KEY INDICATOR	2.3	Teaching - Learning Process
METRIC	2.3.1	Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

DEPENDENCE OF TEMPERATURE ON V-I  
CHARACTERISTICS OF DIFFERENT  
DIODES

Submitted By  
Name: TWINKLE SHAJU  
REG.NO: CCAUSPH073

In Partial Fulfillment of the Requirements for the Degree  
Bachelor of Science in Physics

Supervised by  
Miss. Simmy Jose



Department of Physics  
Christ college Irinjalakuda  
University of Calicut

DEPENDENCE OF TEMPERATURE ON V-I  
CHARACTERISTICS OF DIFFERENT  
DIODES

Submitted By  
Name: TWINKLE SHAJU  
REG.NO: CCAUSPH073

In Partial Fulfillment of the Requirements for the Degree  
Bachelor of Science in Physics

Supervised by  
Miss. Simmy Jose



Department of Physics  
Christ college Irinjalakuda  
University of Calicut



PRINCIPAL

**Fr. Dr. Jolly Andrews**  
Associate Professor -  
In-Charge of Principal  
Christ College (Autonomous)  
Irinjalakuda