

Department of Physics and Electronics

Annual Report 2022- 2023

The college reopened for the academic year 2022-23 on June 6st 2022 for II and III year students and on August 1st 2022 for I years

➤ Student strength for the academic year 2022 - 2023:

<i>S.NO</i>	<i>Class</i>	<i>STRENGTH</i>	<i>Class</i>	<i>STRENGTH</i>
<i>01</i>	I B.Sc. Physics	<i>79</i>	I B.Sc. Electronics	<i>09</i>
<i>02</i>	IIB.Sc Physics	<i>82</i>	II B.Sc Electronics	<i>19</i>
<i>03</i>	III B.Sc Physics	<i>145</i>	III B.Sc Electronics	<i>19</i>
	<i>Total</i>	<i>306</i>	<i>Total</i>	<i>47</i>

➤ Results of II, IV,VI Semesters of 2021 - 2022:

<i>S.No</i>	<i>Class</i>	<i>Pass Percentage</i>	<i>Class</i>	<i>Pass Percentage</i>
01	I B.Sc. Physics	96	I B.Sc. Electronics	100
02	II B.Sc Physics	100	II B.Sc Electronics	100
03	III B.Sc Physics Paper VII	100	III B.Sc Electronics Paper VII	100
04	III B.Sc Physics Paper VIII A ₁	98	III B.Sc Electronics Paper VIII A ₁	100
05	III B.Sc Physics Paper VIII A ₂	100	III B.Sc Electronics Paper VIII A ₂	100
06	III B.Sc Physics Paper VIII A ₃	98	III B.Sc Electronics Paper VIII A ₃	100

➤ **Results of I, III ,V Semesters of 2022 - 2023:**

S.No	Class	Pass Percentage	Class	Pass Percentage
01	I B.Sc. Physics	91.4	I B.Sc. Electronics	77.78
02	II B.Sc Physics	94.52	II B.Sc Electronics	82.35
03	III B.Sc Physics Paper V	100	III B.Sc Electronics Paper V	94
04	III B.Sc Physics Paper VI	100	III B.Sc Electronics Paper VI	94

➤ **Faculty Incharge of Departmental activities:**

- | | | |
|--|---|--------------------------|
| I. Ms. N.Madhuri Rose | - | Secretary |
| II. M. Saraswathi | - | Treasurer |
| III. A. Anantha Lakshmi | - | Department Library |
| IV. Dr. K. Sreelatha, Mrs. M.saraswathi, | - | Physics Lab incharge |
| V. Mrs K.Srilekha | - | Electronics Lab incharge |

- The work load was distributed equally among all the staff members.

Activities of the Department:

1. Field Trip to Industrial Estate:

The Department of Physics and Electronics organized a field Trip on 21st July 2022 for the students of III B.Sc. MPC and MECS.

Around 50 students accompanied by 5 faculty of the department visited two bottle manufacturing industries – **RICHO Industry, IML Polymers**, one **Polymer film manufacturing** unit and a **Unit of Solar Panel grid system** located in and around Eluru.

This field trip gave the students very good knowledge on various machines and exposure to different types of industries. This created an enthusiasm in students to become future entrepreneurs having their own startup industries.



2. Internship :

Nearly 45 students of III B.Sc. MPC & III B.Sc. MECS successfully completed online Internship program on “**Designing Concepts of Embedded systems and it’s Applications**” offered by “**Microlink Information Technoogies**” Vijayawada during July 2022 organized by the department of Physics & Electronics.

3. Celebrations:

a. Independence Day:

All the members of the department participated in the Independence day celebrations “**Azadi ka Amruth Mahotsav**” on **15th August 2022**. Department was incharge of training

students for group song competitions. The chief guest on **15th August** was Dr.A.Nirmala Jyothsna, HOD Dept of Physics and Electronics and she had the honor of hoisting our National Flag.

b. Teacher's day:

Teacher's day celebrations were organized on 5th September 2022 by our department. Dr. D.D. Rajini was felicitated for her completion of 25 years of her service.

4. 103rd IIRS Course :

As our college is a Nodal centre of IIRS outreach Program, Dehradun, ISRO, the Department of Physics & Electronics has coordinated **"103rd IIRS course on Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System"** online during 22nd August 2022 to 23rd November 2022 with Dr. A. Nirmala Jyothsna, as coordinator. Altogether 13 students and 1 faculty have successfully completed this program and obtained certificates from IIRS, ISRO, Dehradun.



5. Guest lecture on "Rocket Science" :

A Guest Lecture on Rocket Science was organized by Department of Physics & Electronics on 2nd September 2022. The resource person was Yalla Siva Prasad, former scientist, Vikram Sarabhai Space centre, ISRO. Nearly 170 final year P.G. & U.G. Physics & Electronics students participated and gained knowledge on various space missions taken up by ISRO and basics of Rocket science. Our Principal Dr. Sr. Mercy emphasized on the need

for research in space Physics to be taken up by present students to make our India stand high in Space technology.



6. Activities of SCOPE club :

The first SCOPE CLUB for the year 2022-23 was conducted on 16th September 2022 at 3 PM. L.Varalakshmi of II B.Sc .MPCS is the president of SCOPE CLUB and A.Jyothi of II.B.Sc.MPC is secretary of the SCOPE CLUB. The students of MPCS

V.Tarani,P.Pallavi,B.Jaya,M.Sujatha have presented the PPT on “THE BIRTH AND JOURNEY OF SATELLITES AND ROCKETS” till the present day in a very innovative way which includes,

- The journey of India’s first satellite launched.
- The first rocket sent into space.
- Deep about “ARYABHATTA, CHANDRAYAN and many other satellites



7. Activities of SCOPE club-2 :

National Energy Conservation day was celebrated by the Department of Physics & Electronics on 14th December 2022 in second SCOPE club at 11AM.

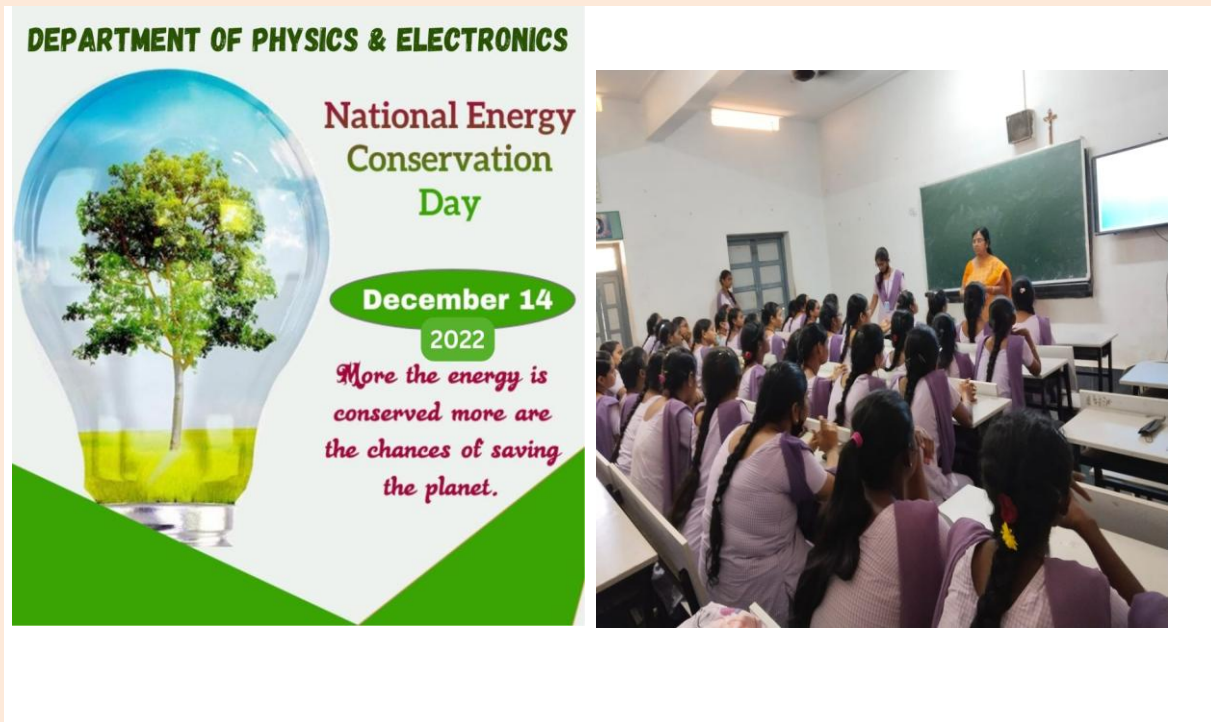
Dr. A. Nirmala Jyothsna, Head, Dept of Physics & Electronics addressed the students in which she stressed on importance of saving energy for future generations and need for research to generate new renewable energy sources which are safe for environment .

As a part of this the students of II B.Sc presented papers related to Energy Conservation and Renewable Energy in the SCOPE Club in which all the UG Physics students are the members.

The PPT presentations are as follows

Name of the student	Topic
T. Yasaswini	Energy Conservation
K. Bhavana	
M. Blessy	Energy Conservation using fuel saving devices and their performances
Y. Harshitha	
D. Poojitha	
D. Varshini	
K. Kavya	Energy Conservation using avoiding heat losses
M. Jahnavi	
G. Ambika	
G. Tejasri	

All the presentations were very informative enlightening the students about various Alternate Energy sources and their application in different fields. All the students of SCOPE club & E-hub were the audience for these PPT presentations.



8. Activities of E-hub:

The title of Electronics association is E-hub It stands for Electronics Hub. The E-hub was inaugurated in the academic year 2022 under the guidance of Dr. A Nirmala Jyothsna, Head of the department of Physics & Electronics and the faculty in the department of Physics & Electronics.

V. Aishwarya, II B.SC Electronics is the president and N.Vineela Deepthi of II B.SC Electronics is the secretary of the E-hub for the academic year 2022- 23. I & II B.Sc Electronics students are the members of E-hub.

On 21/09/2022, the activity was organized in Electronics lab at 02:00PM.

The main objective is to promote students to acquire knowledge on recent trends in Electronics and improve communication skills.

In this, the power point presentations were:

1. **Handheld Projector** by Ch.Gayathri and P.Jagruthi.
2. **OLED and QLED** by Sk. Ayesha Farhana and Sk.Sabeena .
3. **Mini Handheld inkjet printers** by B.Meenakshi



9. Activities of E-hub-2

I B.Sc. Electronics students were given training on LED bulbs manufacturing by M.Sc. Physics students on 9th February 2023.

10. Activities of E-hub-3:

The second meeting of the E-hub was held on 15th February 2023 at 11 AM in Electronics lab. M.Akanksha of II B.SC Electronics is selected as secretary in place of N.Vineela Deepthi who is now in constable Training at Hyderabad. The students presented PPT on following topics:

1. **META Quest Pro** by L. Deepika and K. Soubhagyam.
2. **Robotic vaccum cleaner** by V. Shanthi and K. Manasa.
3. **Arlo video Door bell** by M.Akansha and B. Nirmala Mani.

Dr. A Nirmala Jyothsna, Head of the Department of Physics & Electronics gave her response in this event.



11. Field Trip to “Vijayawada Thermal Power Station” :

Field trips are part of the curriculum and are meant to expose students to practical fields of work where they visit different industries.

In view of this, the department of Physics and Electronics organized an Industrial trip to “Vijayawada Thermal Power Station” to all final year students of Physics & Electronics; from 27th to 29th of October, 2022.

- On 27th October 50 students of III B.Sc MPC-I were accompanied by Dr.K.Srilatha & Ms.A.Ananta Lakshmi.
- On 28th October 50 students of III B.Sc MPC-II, III B.Sc.MECS, were accompanied by Dr.A.Nirmala Jyothsna,Ms.K.Srilekha & Ms.N.Madhuri
- On 29th October 50 students of III B.Sc MPCS & M.Sc Physics were accompanied by Mrs.M.Saraswathi,Mrs B.Deepthi & Mrs.Nishat

On all these days students were taken from our college to VTPS, Eluru by bus starting in the campus around 11.30 AM and reaching VTPS by 1.30PM as the field visit timings are from 2PM to 5PM.



12. Intermediate students visit:

On 23rd January 2023 the students from St. Theresa's Inter college, Eluru has visited our college. The program was held in auditorium and Dr A Nirmala Jyothsna gave a talk on personality development. After the general guidelines in the auditorium the Intermediate science Students visited physics laboratories and electronics lab.

On this occasion the department organized an exhibition of live electronic projects like

1. Accident prevention
2. Automatic Fish food feeder
3. Water level Indicator
4. Alcohol Detection
5. Dancing LED's

The B.Sc. electronics students explained the principle and working of these projects which rouse interest among intermediate students. They were also shown the various electronic components and different apparatus of light & physics and the principles were explained by B.Sc. MPC students.

Students visited optics lab in which they have observed dispersion of light through prism and grating using spectrometer. The students watched short film videos related to launching of rockets planetary motion Newton's laws etc. which they enjoyed a lot.



13. Workshop on “Soldering Techniques”:

A workshop was conducted on “Soldering Techniques” by Mr. M. Srinivas, senior Engineer, Eluru. He demonstrated various techniques, handling skills, maintenance and other precautions while soldering.



14. Workshop on “Demonstration and working of Electrical Appliances”

Department of Physics & Electronics organized a workshop on “**Demonstration and working of Electrical Appliances**” by Sri Srinivasa Rao, Senior Engineer, Industrial Automation works, Eluru on 6th February 2023 to understand the design, applications and practices of various electrical and electronic devices used and also their trouble shooting in our daily life. He explained the construction, demonstrated the working, operational principles of various instruments, skills of handling, Maintenance & trouble shooting of different devices like Generator, Motor, Dynamo & Transformer and how they are used in our daily life.

Some of the demonstration highlights are:

- (i) Construction of a Transformer and measurement of its output voltage
- (ii) Construction of a Motor and its working
- (iii) Construction and working of a generator and the differences between ac and dc generators
- (iv) Construction and working of Dynamo



➤ BOS Meeting

1. The first BOS meeting was held on 17th June 2022 for Physics and Electronics.
2. The second BOS meeting was held on 4th February 2023 for Physics and Electronics.

➤ **Community Service Project:**

The CS project on “Water facilities and drinking water availability-socio economic survey of the village /Habitation”.

1. CS project viva was held on 28th June 2022 for II B.Sc. students.
External- Dr. Rama, Lecturer in Chemistry
Internal- Dr.A. Nirmala Jyothsna, HOD of Physics & Electronics
2. CS project viva was held on 5th July 2022 for I B.Sc. students.
External- Mrs.Y. Rajini, Lecturer in PG Chemistry.
Internal - Dr.A. Nirmala Jyothsna, HOD of Physics & Electronics

➤ **Subject Project:**

The subject project on “Designing Concepts of Embedded Systems & its Applications”

1. Subject project viva was conducted on 30th July 2022 for III. B.Sc. Students.
External- Bh. Lavanya, HOD of Computer Science.
Internal- Dr.A. Nirmala Jyothsna, HOD of Physics & Electronics.

➤ **Internship**

For III B.Sc. students VI semester is for Internship. Physics & Electronics department provided internship on “Designing Concepts of Advanced Embedded systems & its applications”.

The following projects were taken up by the Physics students as a part of 6 months Internship program under the guidance of Dr.A.Nirmala Jyothsna.

1. IOT based Flood Monitoring System
2. Automatic Door open and Sanitization
3. Bluetooth based voice controlled robot
4. Coin based water dispenser
5. Automatic headlight system

➤ **Staff Achievements :**

1. Dr. A. Nirmala Jyothsna has undergone Innovation Ambassador (IA) training Advanced level conducted in online mode by MoE’s Innovation cell and AICTE during the IIC calendar 21-22.

2. Dr. K. Sreelatha has undergone Innovation Ambassador (IA) training Primary level conducted in online mode by MoE's Innovation cell and AICTE during the IIC calendar 21-22.
3. Dr. K.Sreelatha, faculty of Physics was appointed as Master Trainer by CCE – AP, from (2nd – 4th) Feb 2023 in Training of the Trainers (TOT) on Internship/ Apprenticeship Management and LMS at Nodal Resource Center - Tanuku
4. On 10th October 2022, Dr. A. Nirmala Jyothsna, Head of the department of Physics & Electronics has been invited as chief guest for “NASA KIT” presentation of NASA space contest in Sri Chaitanya school, Eluru. She has delivered a lecture on “Need for Research in Space Physics for development in Space technology”
5. Dr. A. Nirmala Jyothsna, was a member of **T-Tips** committee and she is a res3 day FDP and conducted a session on **STRESS MANAGEMENT** for junior faculty.

➤ Awards :

1. Dr. A. Nirmala Jyothsna, Head of the department of Physics & Electronics was awarded with the most prestigious **International award for Outstanding Educator 2022-23** instituted by the International Institute of organized research (I2OR) which is a registered MSME with the Ministry of Micro, Small and Medium Enterprises, Government of India and is advocating Academic and Research Programs for API and Career Advancement Scheme.

I2OR INTERNATIONAL AWARDS 2022-23



Dr. A. Nirmala Jyothsna

Ch. S. D. St. Theresa's College for Women (A),
Eluru, Andhra Pradesh, India



🌐 izor.com
📘 [/izorindia](https://www.facebook.com/izorindia)
🐦 [/izorindia](https://twitter.com/izorindia)

I2OR is registered MSME with Ministry of MSME, Govt. of India & Registered Trademark under The Trade Marks Act, 1999

➤ **Publications :**

S. No	Faculty Name	Department name	Publication Title	Details of publication
1	DrA.Nirmala Jyothsna	Physics & Electronics	Exhibition of Dielectric Property Based on Soil Class and Moisture Presence for Bengaluru District	Advances in Materials Science and Engineering Volume 2022 Article ID 6807204 Published 12 June 2022
2.	DrK.Sreelatha	Physics	“Bio Sensors – Trends, Technologies, Opportunities and Challenges” Pg No: a394 – a400	Journal of Emerging Technologies and Innovative Research JETIR2206044 June 2022 ISSN NO: 2349 -5162 Vol :9, Issue:6 Impact fac: 7.87
3	DrK.Sreelatha	Physics	Spectroscopic studies on Bi ₂ O ₃ based heavy metal oxide glasses doped with copper ions for far infrared window applications	GIS Science JournalUGC CARE Approved Group ‘II’ Journal JUNE 2022 Issn no: 1869 – 9391 Vol :9, Issue:6, 2022 Pg No: 1572 - 1577 Imp Fac: 6.1 Pg No: 1572 – 1577 www.gisscience.net/EDITORIAL-BOARD
4	Dr K. Sreelatha	Physics	Literature Review on Creativity in Various Contexts	Conference proceedings of Creativity and Innovation in Entrepreneurship Oct 2022 ISBN – 978-93-92257-48-3 Roshan Publications - Visakhapatnam P No: 43 - 49

1. Dr. A. Nirmala Jyothsna, Dr.K.Srilatha, M.Saraswathi, Mrs. P. Anusha, Mrs.A. Anantha Lakshmi published a paper on “Analysis Of Water Quality” **Volume 10, Issue 4 in** International Journal of Creative Research Thoughts.
2. Dr.K.Srilatha, Dr.Sr.Showrilu, K.Sree Lekha, N.Madhuri Rose, Deepti Bhargava published a paper on “Environmental Protection and Ecology” **Volume 7, Issue 5 in** International Journal of Novel Research and Development with ISSN: 2456-4184, Impact factor: 8.76.
3. Dr.K.Srilatha, Mrs.A. Anantha Lakshmi Published A Paper On Marine Pollution: Causes, Types, Effects & Prevention **Volume 12, Issue 2 In IJCSPUB**

➤ **Book Publications:**

S. No	Faculty Name	Department name	Publication Title	Details of publication
1	Dr. A.Nirmala Jyothsna	Physics & Electronics	Electronics & Nuclear Physics	2nd Author: Dr. A.Nirmala Jyothsna Publishers: RK Enterprises
2	Dr. K. Sreelatha	Physics & Electronics	“Introduction To Nano Science”	3rd Author: Dr. K.Sreelatha, Publishers: Scientific International Publishing House ISBN: 978 – 93- 5625-671-2

➤ **PATENTS:**

1. Dr. A. Nirmala Jyothsna published a patent on “A Nano material composition having magnetic properties” with the patent office journal number:06/2022 dated on 11th

February 2022 in collaboration with Mr. C. Selvaraju, department of physics, VSS government college, Pulankurichi, Tamilnadu, India.

We thank God Almighty for his abundant blessings throughout the last semester. We are grateful to Dr. Sr.Mercy P., Principal for her constant support and guidance for the smooth conduct of the events during this academic year.

We owe our gratitude to Dr.Mrs.A.Nirmala Jyothsna ,H.O.D of Physics & Electronics for her affectionate guidance, support and encouragement throughout the year.

N. Madhuri Rose

(Secretary)