

***Department of Physics and Electronics***

***Annual Report 2021- 2022***

The college reopened for the academic year 2021-22 on June 1<sup>st</sup> 2021 for II and III year students and on October 1<sup>st</sup> 2021 for I years

➤ **Student strength for the academic year 2021 - 2022:**

<b><i>S.NO</i></b>	<b><i>Class</i></b>	<b><i>STRENGTH</i></b>	<b><i>Class</i></b>	<b><i>STRENGTH</i></b>
<b><i>01</i></b>	I B.Sc. Physics	<b><i>88</i></b>	I B.Sc. Electronics	<b><i>19</i></b>
<b><i>02</i></b>	II B.Sc Physics	<b><i>145</i></b>	II B.Sc Electronics	<b><i>19</i></b>
<b><i>03</i></b>	III B.Sc Physics	<b><i>171</i></b>	III B.Sc Electronics	<b><i>28</i></b>
	<b><i>Total</i></b>	<b><i>404</i></b>	<b><i>Total</i></b>	<b><i>66</i></b>

➤ **Results of II, IV,VI Semesters of 2020 - 2021:**

<b>S.No</b>	<b>Class</b>	<b>Pass Percentage</b>	<b>Class</b>	<b>Pass Percentage</b>
01	I B.Sc. Physics	94	I B.Sc. Electronics	89
02	II B.Sc Physics	97	II B.Sc Electronics	100
03	III B.Sc Physics Paper VII	97	III B.Sc Electronics Paper VII	100
04	III B.Sc Physics Paper VIII A <sub>1</sub>	100	III B.Sc Electronics Paper VIII A <sub>1</sub>	100
05	III B.Sc Physics Paper VIII A <sub>2</sub>	100	III B.Sc Electronics Paper VIII A <sub>2</sub>	100
06	III B.Sc Physics Paper VIII A <sub>3</sub>	100	III B.Sc Electronics Paper VIII A <sub>3</sub>	100

➤ **Results of I, III ,V Semesters of 2021 - 2022:**

S.No	Class	Pass Percentage	Class	Pass Percentage
01	I B.Sc. Physics	95.2	I B.Sc. Electronics	94.7
02	II B.Sc Physics	90.64	II B.Sc Electronics	96.3
03	III B.Sc Physics Paper V	72.35	III B.Sc Electronics Paper V	80.95
04	III B.Sc Physics Paper VI	97.67	III B.Sc Electronics Paper VI	95.24

➤ **Faculty Incharge of Departmental activities:**

- I. Mrs. P. Anusha - Secretary
- II. M. Saraswathi - Treasurer
- III. Ms. G.N.S.Neelima - Department Library
- IV. Mrs. M.saraswathi - Physics Lab incharge
- V. Ms K.Srilekha - Electronics Lab incharge

- Mrs. A. Anantha Lakshmi and Ms. N.Madhuri Rose joined as the Faculty of the department during February 2022
- The work load was distributed equally among all the staff members.
- Senior faculty guided the newly joined faculty.

➤ **Activities of the Department:**

**I. Awareness programme on Green Energy Startups**

The Dept. of Physics & Electronics, Ch. S. D. St. Theresa's College for Women (A), Eluru organized Awareness programme on Green Energy Startups in association with Institution's Innovation Council dated on 28.06.2021.

The following link will be useful to watch this session.

**<https://youtu.be/tdQi3kDrwls>**

The information elaborated about the opportunities for students/early stage entrepreneurs in the utilization of Green energy like Solar Energy. This programme organized on basis of

the theme of startup accelerators by providing mentorship/advice and to discuss the resources to start a startup based on solar energy.

## **II. Activities of SCOPE club :**

On 11<sup>th</sup> September 2020 the “SCOPE CLUB” activity was conducted online using Zoom App. Ms P.Vasavi of II B.Sc M.P.CS is the president and Ms Sk.Abida of II B.Sc M.P.C-I section is secretary of SCOPE club. Nearly 100 students of II B.Sc M.P.C-1, M.P.C - II and M.P.CS sections participated very actively and presented papers on “Recent Inventions in Physics during Covid- 19 pandemic”.

- Sk Abida of II B.Sc M.P.C -1 section presented a paper on latest inventions in Physics like Google for the blind, Beesaver Bot, World's smallest satellite, Energy-efficient car, Skin patch to detect silent heart attacks, 3D-printed sanitary napkin Dispenser
- Pravallika of II B.SC M.P.C –II section presented a paper on The future economy based on renewable and sustainable energy
- Ms P.Vasavi of II B.SC MPCs Presented a paper on Printing press, Light bulb, Automobiles

Dr.A.NirmalaJyothisna HOD, Department of Physics & Electronics and Dr.K.Sreelatha motivated and congratulated the students. All the Faculty members of Physics and Electronics actively took part in this activity.

## **III. Activities of E-hub:**

The title of Electronics association is **E-Hub**. It stands for Electronics hub. The E-hub was inaugurated for the academic year 2021-22 under the guidance of Dr.A. Nirmala Jyothisna, Head of the department of Physics & Electronics and all the lecturers in the department of Physics & Electronics.

The main objective is to promote students to acquire knowledge and to be aware of current topics. The students presented power point presentations by THE ROLE OF ELECTRONICS IN FACING COVID-19 pandemic situation.

**Digital thermometer** by Ch. Mounika and Ch. Sowmya.

**Sensor sanitizer** by P. Saranya and K. Rekha Vaishnavi.

**Pulse oximeter** by P. Mounika Sai and Chandrika

**Humunoid Robotics in handling COVID** by Renuka Devi and Mani Kumari.

**UV light Sanitizer box** by Manjula and Sai mounika.

**Use of Drones in COVID-19 pandemic** by Hari chandana and seraphin. During this pandemic situation electronics is playing a major role in order to save the lives of people in this pandemic.

#### **IV. Independence Day Celebrations:**

All the members of the department participated in the Independence day celebrations on **15th August 2021** through Google meet platform. Faculty members organized some competitions to the students like Singing, Quiz, Elocution etc. Dr.A.Nirmala Jyothsna,HOD Dept of Physics and Electronics Participated in the celebrations and delivered Independence day message and wished the staff and students. She also congratulated the staff & students for their active participation. All the remaining members of the department also actively Participated in the celebrations and share their joy &happiness by wishing one another.

#### **V. Republic Day Celebrations**

All the students of III B.Sc. (electronics) participated in the Independence Day Celebrations on 26/01/2022, through Google meet (10:00am -11:00am). Faculty members organized some competitions to the students like Singing, Quiz, Elocution etc. Dr.A.Nirmala Jyothsna, HOD Dept of Physics and Electronics Participated in the celebrations and delivered Republic day message and wished the staff and students. She also congratulated the staff & students for their active participation. All the remaining members of the department also actively Participated in the celebrations and share their joy &happiness by wishing one another.

#### **VI. Online International Webinar on “Insights on Material and Space Science”**

The department of Physics & Electronics of Ch.S.D.St.Theresas College for Women(A),Eluru organized an International webinar on "Insights on Material and Space Science" on 25th February 2022 on Google Meet platform and it was also live streamed on Youtube as part of National Science Day celebrations.

The resource persons were Dr. S.A. Martin Britto Dhas from Tamilnadu and Dr. Shubhadip Chakraborty from France gave analytical insights into the concepts and motivated the participants towards research and exploring new things. Dr. S.A. Martin Britto Dhas Assistant professor, Department of Physics, Abdul Kalam Research Centre, Sacred Heart

College, Tirupattur, Tamilnadu, India enlightened the participants on “Dynamic Shock wave induced amorphous to crystalline switchable phase transition” and Dr. Shubhadip Chakraborty, Researcher, Institute of Physics of Rennes, Astro Physics Laboratory, University of Rennes, Rennes Cedex, France explained about “Astrochemistry a ship for voyaging through the Molecular universe”.

Dr.Sr.Marietta D’Mello Principal and the Chairperson of the session said that the sessions were stimulating and thought-provoking, and inculcated a spirit of research attitude in the present generation, which is of vital importance today. Dr, Sr.Showrilu Vice principal & PG director and the coordinator of the Webinar said that St.Theresa’s always take every possible privilege in tuning the students towards Research and innovation as the future lies on them. Dr.A.Nirmala Jyothsna Head, Department Physics & Electronics and the Convener of this International Webinar said that students got to know about current innovative trends in material science as well as SPACE science so that they can become future scientists and partners in making America stand out in science and technology.

Nearly 500 students and faculty from different colleges and organizations were attended for webinar. It was a huge success.

### **VII. Vice Chancellor visit**

On 5<sup>th</sup> March 2022, Prof. Jagannadha Rao, the Vice Chancellor of Aadikavi Nannayya university visited our college and program was held in auditorium. B.Sc and M.Sc Students exhibited different projects. A two day exhibition was held in the auditorium and students from different colleges and schools visited the exhibition.

### **Projects:**

#### **Physics Student Projects:**

The following projects were taken up by the Physics students as it is mandatory of Physics Projects during 2021-2022

1. Wireless Electric Power Transmission Model
2. Touchless Door Bell
3. Flashing LED
4. Strobe Light
5. Music Rhythm Operated Dancing Lights

### **Electronics Student Projects:**

The following projects were taken up by the Electronics cluster students as paper-VIIIA<sub>3</sub> under the guidance of Dr.A.Nirmala Jyothsna, Ms. K. Srilekha.

1. 12 Volts Battery Charging System
2. Electronic Voting Machine
3. Mini audio Amplifier
4. Short circuit indicator
5. Automatic Fish Food Feeder using Arduino

### **VIII Workshop on PCB designing and manufacturing:**

Department of Physics & Electronics, has organized a Workshop on “Printed Circuit Board designing & Manufacturing” from 11<sup>th</sup> to 13<sup>th</sup> April 2022 in collaboration with MICROLINK Technologies, Vijayawada. Altogether 108 students of II B.Sc. MPC, II B.Sc. Electronics and M.Sc. Physics have participated in this work shop. The resource person Sri. V. Govinda Rao, the Director of Microlink Information Technologies, Vijayawada enlightened the students in skill development and have hands-on experience thereby to facilitate the students for perfect exposure.

We thank God Almighty for His abundant blessings throughout the last semester. We are grateful to Dr. Sr.Marietta D’Mello, Principal & Dr.Sr.Showrilu, Vice-principal for their constant support and guidance for the smooth conduct of the events during this semester.

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.

Mrs. P. Anusha

(Secretary)

