

Department of Physics and Electronics

Annual Report 2020 - 2021

The college reopened for the academic year 2020-21 on 20th August 2020 for staff, on 2nd Nov 2020 for II and III year students and on 1st Dec 2021 for I years

➤ **Student strength for the academic year 2020 - 2021:**

<i>S.NO</i>	<i>Class</i>	<i>STRENGTH</i>	<i>Class</i>	<i>STRENGTH</i>
<i>01</i>	I B.Sc. Physics	<i>155</i>	I B.Sc. Electronics	<i>19</i>
<i>02</i>	II B.Sc Physics	<i>175</i>	II B.Sc Electronics	<i>28</i>
<i>03</i>	III B.Sc Physics	<i>176</i>	III B.Sc Electronics	<i>45</i>
	<i>Total</i>	<i>506</i>	<i>Total</i>	<i>92</i>

➤ **Results of II, IV, VI Semesters of 2019 - 2020:**

<i>S.No</i>	<i>Class</i>	<i>Pass Percentage</i>	<i>Class</i>	<i>Pass Percentage</i>
01	I B.Sc. Physics	94.4	I B.Sc. Electronics	91.3
02	II B.Sc Physics	98	II B.Sc Electronics	98
03	III B.Sc Physics Paper VII	88	III B.Sc Electronics Paper VII	91
04	III B.Sc Physics Paper VIII A ₁	100	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 2020 - 2021:**

S.No	Class	Pass Percentage	Class	Pass Percentage
01	I B.Sc. Physics	95.7	I B.Sc. Electronics	95
02	II B.Sc Physics	91	II B.Sc Electronics	96.5
03	III B.Sc Physics Paper V	72.5	III B.Sc Electronics Paper V	81
04	III B.Sc Physics Paper VI	98	III B.Sc Electronics Paper VI	95

➤ **Faculty Incharge of Departmental activities:**

- | | | |
|------------------------|---|--------------------|
| I. Ms. P. Anusha | - | Secretary |
| II. M. Saraswathi | - | Treasurer |
| III. Ms. G.N.S.Neelima | - | Department Library |
| IV. Ms A.Sai sandhya | - | Notice Board |
| V. Ms M.saraswathi | - | Physics Lab |
| VI. Ms K.Srilekha | - | Electronics Lab |

➤ Mr.V.V.N.Murthy joined as the Faculty of the department on 1st March 2021.

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

➤ Senior faculty guided the newly joined faculty

➤ **Staff Achievements:**

- **Dr. K. Sree Latha**, received the **Indo Asian – Marie Curie Distinguished Scientist Award in Physics** by **IMRF** in Honour of The **United Nations** Seventy Fifth Anniversary on 15th Dec 2020.

➤ **Activities of the Department:**

I. Activities of SCOPE club :

On 11th 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 Googles 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, Departement of Physics & Electronics and Dr.K.Sree latha motivated and congratulated the students. All the Faculty members of Physics and Electronics actively took part in this activity.

II. Activities of E-hub:

The title of Electronics association is E-HUB. It stands for Electronics Hub. The E-hub activity for the academic year 2020 took place on 12th September 2020 at 10:30 AM through Zoom App under the guidance of Dr.A Nirmala Jyothisna, HOD of physics & Electronics, Ms A.Sai Sandhya and Ms K. Srilekha Incharge Faculty of the E- Hub.

Ms Md Lathifa of II B.Sc M.E.CS is the President and Ms K.Jyothi S ree of II B.Sc M.E.CS is the secretary of E-hub. The students of II MECs actively participated and presented papers on “**CURRENT PANDEMIC: COVID-19**”.

- Ms Md Lathifa and K. Jyothi Sree gave a power point presentation on Info of COVID to the community, Community surveillance, Personal safety, Supportive public health services.
- Ms K. Bhagyasree gave a talk on “The importance of sanitizers and their uses” during this pandemic.
- Ms Md Bhanu and Ms P.Manohitha of II M.E.CS explained The effect of COVID-19 on education, Impact on academic integrity, Stepping to ideology of online classes.
- Ms Sravani of II MECs gave a demo on “How to use thermometer and pulse-oxymeter”.
- Ms Ch. Jyothika of II MECS gave a speech on what diet we have to take and how to improve immunity during this pandemic.
- Ms P. Anupriya of II M.E.CS shared her views on the Significance of wearing a mask.

All the faculty member of Physics & Electronics participated. Dr.A.Nirmala Jyothsna HOD, Department of Physics & Electronics and Dr.K Sree latha addressed and inspired the students with their motivational words and congratulated the Staff and Students for organising the program so systematically and meaningfully.

III. Workshop on “Role of SMPS in LED bulb Manufacturing” – 21st Dec 2020

- ✓ The Dept. of Physics & Electronics has inaugurated a Two Day Workshop on “**Role of SMPS (switching mode power supply) in LED bulb Manufacturing**” on 21st Dec 2020 in collaboration with MICROLINK InformationTechnologies, Vijayawada.
- ✓ This program is intended to train the students in designing & making LED bulbs during 21st & 22nd December 2020. In this altogether 50 M.Sc. Physics & B.Sc. Electronics students along with 8 faculty have participated. The students are given hands on experience in making LED bulbs. This program is taken up under NISP & IIC.
- ✓ This Program is organized under the able guidance of Dr.Sr. Marietta D’Mello, Principal, Dr.Sr.K.Showrilu, Vice-Principal, P.G. Directress & Dr.A.Nirmala Jyothsna, Head, Dept. of Physics & Electronics.

IV. Independence Day Celebrations:

All the members of the department participated in the Independence day celebrations on **15th August 2020** through zoom app. 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. Feast of St.Theresa:

On **1st October 2020**, UG & PG Departments of Physics & Electronics organized the feast of St.Theresa of the child Jesus – patroness of the college. **Dr A.Nirmala Jyothsna**, Head of the Department presided over the program. Physics Faculty members presented some prayer petitions to our Rose Queen for the Management, Teaching & Support staff, Students & Parents, Covid victims, Retired staff and Departed souls - specially our beloved sister Rev Sr Graciana, asking little flower of child Jesus to hear our requests and intercede with God our loving father on our behalf- for the fulfillment of their hopes, needs and dreams.

VI. Internship Program “EMBEDDED SYSTEMS & its DESIGNING Concepts”

- ✓ On 21st Jan 2021, the **Dept. of Physics & Electronics**, has inaugurated Internship Program on “**EMBEDDED SYSTEMS & IT’S DESIGNING Concepts**” in collaboration with **MICROLINK Technologies**, Vijayawada.
- ✓ **Mr. V. Govinda Rao**, Director, **MICROLINK Technologies** was the Resource Person & trainer for this program.
- ✓ III B.Sc. Electronics Cluster students have participated in this during which they have learnt theoretical concepts and practical skills by doing the projects related to Embedded Systems.
- ✓ This Program is organized under the able guidance of Dr.A.Nirmala Jyothsna, Head of Dept. of Physics & Electronics.

VII.National level webinar:

- ✓ On 18th April 2021, the Department organized a National Level Webinar on “Impact of Learning Space on Educational Ecosystem” in which around 1200 members participated.
- ✓ **Resource Person: Mr.V.S.MurthyValiveti**, Asst. Professor,Dept. of Physics & Electronics.
- ✓ Online program link.<https://youtu.be/ZrfRs8qDXKc>

VIII. Awareness program on Applications of RS & GIS

- ✓ On 30th April 2021 the department organized an awareness session on “ Applications of RS & GIS in different fields” on 30th April from 10 AM to 12 AM in which nearly 50 faculty members from different departments participated.
- ✓ The program started with a prayer by Ms.GNS Neelima & Ms.K.Srilekha
- ✓ Dr.Mrs.A.Nirmala Jyothsna gave an overview of Remote sensing & GIS and how it can be used to take up interesting projects and publish papers in journals.
- ✓ The resource person Ms.A.Sai Sandhya, lecturer in Physics explained in detail about basics of GIS,how it can be used and applied in different fields like Mathematics, Biology, Nutrition,Computer Science, Social sciences, languages, Commerce & Management with specific example in each subject. She also explained the different softwares available online and how we can use it to take up the projects. It was a very interesting & useful session to take up new innovative projects using GIS.

➤ **Staff Activities:**

I. IIRS Outreach Program

60th IIRS Course:

As our college is a Network Institute of IIRS, Dehradun, the Department of Physics & Electronics has coordinated a Live & Interactive program - **60th IIRS Outreach Programme on Application of Geo informatics in**

ecological studies” during 13/07/2020 to 24/07/2020 .Faculty of Department of Physics & Electronics have registered and attended this course.

II. 62nd IIRS Course:

As our college is a Network Institute of IIRS, Dehradun, the Department of Physics & Electronics has coordinated a Live & Interactive program – “**62nd IIRS Outreach Programme on geospatial input for enabling Master plan Formulation**” during 27/07/2020 to 30/07/2020. Faculty of Department of Physics & Electronics have registered and attended this course.

III. Guest Lecture delivered on Communication Electronics:

Ms.A.Sai Sandhya, Lecturer, Dept. of Physics & Electronics acted as the Resource person for the Faculty Exchange Program organized at Sir.C.R. Reddy Autonomous College, Eluru. On 6th Jan 2021, she gave a talk on “**Communication Electronics**”. The students of III B.Sc Electronics actively participated and gained awareness about opportunities they get in the field of Electronics.

IV. Projects:

✓ Physics Student Projects:

The following projects were taken up by the Physics students as it is mandatory

- 1.Study on Aerosols
2. Regulated Power Supply
3. Water Level Indicator Alarm
4. Night Lamp
5. IR Remote Tester
6. Diy Smoke Detector
7. Sound with light

✓ **Electronics Student Projects:**

The following projects were taken up by the Electronics cluster students as paper-VIIIA₃ under the guidance of Dr.A.Nirmala Jyothisna, Ms. A. Sai Sandhya & Ms. K. Srilekha & Project Viva was held on 1st April 2021.

1. RFID Based Attendance system using GSM modem.
2. Automated lighting control system for High ways using Arduino with Solar Panel.
3. Smart Crop Protection system for animals.
4. Accident avoiding system using drunk & drive & eye blinking (anti-Sleep)
5. Pre- Warning system for accident using Ultra-sonic distance sensor & Arduino.
6. Crop Protection against Rainfall.
7. Water Quality Monitoring System using Arduino.
8. Home Security Alarm System.
9. **Soap Dispenser.**

V. **Organised National Technology Day on 11th May 2021**

- ✓ On 11th May 2021 at 3 PM, National Technology Day-2021 was celebrated by Dept.of Physics & Electronics through online platform.
- ✓ Department conducted E-Poster Presentation Contest to the students
- ✓ Nearly 100 I-B.Sc students participated.
- ✓ Ms.GNS.Neelima and Mr.VVS.Murthy from Dept.of Physics & Electronics coordinated this event.
- ✓ The presented E-Posters and short videos are available in the following link:: shorturl.at/jszUY
- ✓ The online program can be watched using the following link:
https://youtu.be/1h_NcRGhfqw

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.

A.Sai Sandhya
(Secretary)