

Department of Physics and Electronics

Annual report 2018-19

The college reopened for the academic year 2018-19 on 4st June 2018 for staff , on 6th June for II and III year students and on 18th June for I years

Student strength:

For Physics:

YEAR	STUDENT STRENGTH
I B.Sc.	190
II B.Sc	180
III B.Sc	180

For Electronics:

YEAR	STUDENT STRENGTH
I B.Sc	46
II B.Sc	48
III B.Sc	45

Results - II,IV,VI semesters Of 2017-18

Physics:

YEAR	PASS PERCENTAGE
I B.Sc.	98.34%
II B.Sc	95.86%
III B.Sc paper VII	97.84 %
Paper VIIIA1	97%
Paper VIIIA2	91.2%
Paper VIIIA3	93%

Electronics:

YEAR	PASS PERCENTAGE
I B.Sc	98%
II B.Sc	95.35%
III B.Sc paper VII	96.3 %
Paper VIIIA1	100%
Paper VIIIA2	91%
Paper VIIIA3	100%

Results - I,III,V semesters of 2018-19

Physics:

YEAR	PASS PERCENTAGE
I B.Sc.	95.3%
II B.Sc	98.3%
III B.Sc paper V	100%
Paper VI	99.39%

Electronics:

YEAR	PASS PERCENTAGE
I B.Sc	84.8%
II B.Sc	100%
III B.Sc paper V	95.2%
Paper VI	97.6%

For this year the **Departmental duties** are as follows:

Ms.A.Sai Sandhya	-	Secretary
Mrs.B.Srivani & P.Rani	-	Treasurer
Ms. A. Rajasree	-	Library In charge
Mrs.M.Saraswathi & B.Swathi	-	Notice Board

Lab in Charge :
Mrs.P.Rani & Ms.K.Satyavathi - Electronics Lab

Physics Lab
Practical Cycle Incharge - Mrs.Sk.Razia sultana begum

Ms.G.N.S.Prasanna kumari joined the department in the month of December in the place of Ms.A.Anantha Lakshmi.

The work load was distributed equally among all the staff members. The seniors gave guidance on teaching techniques to the new staff members and prepared them for taking theory and practical classes.

Department Activities (2018 – 2019)

❖ Academics

• Seminars & Workshops Attended:

- Dr.A.Nirmala Jyothsna, Mrs.B.Srivani, SK.Razia Sultana Begum, Mrs.P.Rani participated in an International Conference on “Innovative Domains of Mathematics & Digital Technology” on 27th & 28th Nov2018 and presented papers on “Studies on Satellite and ground based measurements of SUV,UVA, and AOD over Hyderabad”&”Microwave Antennas in Defence” which are published in International Journal of Management, Technology And Engineering--ISSN NO : 2249-7455
- Dr.A.Nirmala Jyothsna participated in an International Seminar on Contemporary South Asian literature:gender & Environment on 24th and 25th January 2019 and she was the rapporteur for one of the technical sessions. She also participated in a National Seminar on empowerment of Women:Recent trends & Challenges on 8th Feb 2019.
- Dr.A.Nirmala Jyothsna published a paper on Variations of Total aerosol mass concentration & Black Carbon aerosol mass concentration over urban region of Hyderabad in STC Scholars Vision , Vol.7, Issue no. 1,Jan-Dec 2018 with ISSN 2321-6425.
- Dr.A.Nirmala Jyothsna, Mrs.B.Srivani, SK.Razia Sultana Begum, Mrs.P.Rani & Mrs.M.Saraswathi participated in a National Seminar on “ Cybercrimes and Women- Precautions and strategies” on 19th March 2019.
- Mrs.B.Srivani , Mrs.SK.Razia Sultana Begum and Ms.A.Rajasree conducted JKC classes for all the Final year degree students and analytical Skills classes for II year students .
- Mrs.K.Satyavathi conducted ICT classes for all the Second year degree students .

- Mrs.P.Rani , Mr.B.Swathi and Ms.A.Sai Sandhya taken classes on Environmental studies for I year students during I semester examination.
- Dr.Mrs.K.Sreelatha published five publications in various reputed journals.
- **Skill training in PCB Design and Manufacturing:**

Two day workshop was organized by the department of Physics and Electronics on “**PCB Designing and Manufacturing**” in which **Mr.V.Govinda Rao, Director Technical, Microlink, Vijayawada**, was the Resource person. In this technical session 115 students belonging to I B.Sc(MECS),II B.Sc(MECS),M.Sc Physics have actively participated and they were divided into 28 batches.

On **30-8-2018** in the morning session Mr.V.Govinda Rao has given basic knowledge on PCB Circuit Designing and Manufacturing. In the afternoon session the students are trained, to design the layout of the circuit on PCB board ,using PCB wizard software.

On **31-8-2016**, the students have practiced on how to print the design on PCB circuit board and after that they have done drilling on the circuit board in order to insert components on the PCB circuit board. At last the students completed the project by connecting the components on the board and soldering it.

Each student has done 3 projects namely **Regulated Power Supply , IR tester and Night lamp.**

Valedictory session was held at 3.30 PM in media centre in which the students responded that they were excited and thrilled to complete three live projects on their own and they expressed a desire to do more live projects on their own.



➤ National Workshop on “Geospatial Technology – Applications and Trends”

On 23rd February 2019 A National workshop was organized by the department of **Physics and Electronics** on “ **Geospatial Technology – Applications and Trends**” in which **Dr.P.G.Diwakar**, Director EDPO ,ISRO,Banglore , **Dr.Dr.G.Srinivas Rao**, Associate Director EDPO,ISRO,Banglore , **Dr.Harish Chandra karnatak**, Head, Geoweb Services, IT and Distance Learning Department (GIT&DL) Indian Institute Of Remote Sensing, (IIRS) Dehradun, **Shri.Arul Raj**, Head Bhuvan Web-services Division Data Processing, Products, Archival & Web Applications Area, National Remote Sensing Centre, (NRSC) Hyderabad, **Shri Sunil S Kulkarni**, Programme Manager EO Applications & DMS Programme Office ISRO Headquarters, Bangalore and **Mr.Ambarish Roy**, Bhuvan Web-services Division, Data Processing, Products, Archival & Web Applications Area, National Remote Sensing Centre, (NRSC) Hyderabad were the Resource persons. In this technical session 250 students belonging to the I,II and III B.Sc. and M.Sc Physics have actively participated.

In this there were 5 technical sessions namely Indian Space Programme & Brief Introduction to EO missions, Remote Sensing & GIS , Applications of Remote Sensing & Geospatial technologies , GIS based Modelling and Decision Support System , Bhuvan Geoportal - Interactive Session , Emerging and New Technologies . In the afternoon all the staff had an interactive session with the ISRO team. All the staff have actively participated and clarified their doubts regarding GIS. After that the department of Physics and Electronics had a special meeting regarding establishment of GIS lab and future plans to introduce Geospatial technology in curriculum.



➤ IIRS distance learning course

The dept of **Physics and Electronics** has co-ordinated 41st course on “**Hyperpectral Remote sensing and its applications**” of IIRS outreach program, Dehradun during 21st Jan 2019 to 1st Feb 2019. On the whole there were 30 participants in this program.

It was successfully completed as the participants took their online exam on 26th February 2019.



➤ PROJECTS

The following projects were taken up by the Electronics cluster students as paper- VIII A3 under the guidance of Dr.A.Nirmala Jyothsna , Mrs.P.Rani and Mrs.K.Satyavathi & Project Viva was conducted on 15th March 2019.

- Voice Based Notice Board
- Automatic Railway gates
- Traffic Density Control system
- Automatic College bell
- Garbage monitoring system
- Alcohol detection and Seatbelt checker system
- Women Security system

❖ Co – curricular

- A 10 day Internship program on “**Embedded Systems and its designing**” has commenced from 21st Jan 2019 in collaboration with Microlink Pvt Ltd , Vijayawada for III B.Sc Electronics cluster students and II M.Sc Physics students.



E-hub inauguration:

The Department of Physics and Electronics inaugurated the **Electronics club “E-hub”** on **10th August 2018** . The II B.Sc Electronics students are the members of Electronics club named as E-Hub. It was inaugurated with prayer followed by lighting of the lamp. A **Quiz Program** was conducted for all the E-hub members by the office bearers of E-hub. The students have actively participated in the Quiz Competition and winners were given prizes by Dr.A.Nirmala Jyothsna, HOD of Physics & Electronics. The Academic achievers of II & IV Semesters were recognized and awarded prizes by our Vice Principal Rev.Sr.Showrilu. The program ended with valuable messages by Rev.Sr.Showrilu. and Dr.A.Nirmala Jyothsna.



Scope club inauguration:

The Department of Physics and Electronics Physics club “SCOPE” Club on 11th August 2018 in Media centre. The II B.Sc. Physics students are the members of Physics club named as SCOPE CLUB . The students gave **four Power point presentations** on “**Different types of LASERS**” , “**LASERS and its Applications**”, “**LASERS and its impact on mankind**” and “**Holography and its applications** ”. The PPT presentations were quite interesting and informative .The Academic achievers of II and IV semesters were recognized and awarded prizes by Dr.A.Nirmala Jyothsna, HOD of Physics & Electronics . The program ended with an inspirational message by Dr.A.Nirmala Jyothsna.



Field trip for electronics students of II & III year students :

On 13th July 2018, all the II B.Sc & III B.Sc M.E.Comp , were taken on **Field trip to V-Guard stabilizer unit ,Vijayrai** by the staff of **Department of Physics & Electronics** . The students have learnt about the various electronic components in the manufacture of stabilizers and have witnessed the assembling of stabilizer unit which gave them a good technical exposure.

Knowledge Extension Programme on Submarines

- On 12th July 2018 , the **Department of Physics & Electronics** has put up an extension program on “**SUBMARINES –Defence in Ocean**” presented by the ward students of Mrs.M.Sarswathi & Mrs.B.Swathi belonging to III B.Sc MPC –II .
- In this program , the different parts of the submarine , various technologies used in it are explained in detail with the help of videos and PPT . The use of Submarine as a submersible warship and various submarines launched by India the service of Navy in defending our country was clearly shown through a video on the war submarine “Ghazi” which was deployed by Pakistan to attack our Indian submarine INS Vikrant and our Mega city Visakhapatnam. The program concluded with a motivational message by Major.Dr.P.M.Celine Rose in which she stressed the need for present youth to join in Defence and Navy to serve our country.

Knowledge Extension Programme on Robotics:

An extension program on “**Robotics the Future**” was put up on **2nd August 2018** in our college auditorium by III B.Sc- MECS, the ward students of Ms. K. Satyavathi, Lecturer in Physics & Electronics. In this program the different parts of Robotics, the technology used in it , applications of Robotics in various fields like Medicine, Defence , Service, Industry , Mining, and Domestic purposes are explained in detail with the help of interesting videos and Power Point Presentations.



Academic Competitions organised by department of Physics and Electronics:

As a part of Academic Competitions, Department of Physics and Electronics organised an Essay writing Competition on “Lasers and its impact on Mankind” and a PPT competition on “Electronic Instrumentation in different fields” on 27th July 2018 in the Physics department.

Celebration of Energy Conservation Week :

As a part of **Energy Conservation Week celebrations** the department of Physics and Electronics organised a PPT competition on 15th December 2018. The participants presented papers related to Energy Conservation and Renewable Energy Sources . Dr.A.Padmavathi & Dr.Mrs.A.Nirmala Jyothsna were the judges for the competition. 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.

An **Essay writing competition on “Energy saved is Energy produced” and Poster painting Competition** on the topic “**Alternate Energy sources for clean Environment** ” was organised by the dept of Physics & Electronics on 18th December.

Student Achievements

- K.Mohana Divya & M. Hrudaya Samukha of III B.Sc MECS bagged 3rd prize In a **Paper Presentation competition** on “**Black Holes**” on 24th Sept 2018 at J.M.J College , Tenali organised by Physics Department.



- Under the guidance of dept of **Physics and Electronics** , our students participated in different events in “**RESONANCE 2K19**” **National level Academic competitions for UG students** sponsored by **Indian Association of Physics Teachers** organised by Andhra Loyola college Physics Association , Vijayawada on 15th February 2019 .K.Mohana Divya of III B.Sc M.E.Cs bagged first prize in Essay writing Competition on “Sensors in Physics ” and Sravani of III B.Sc M.P.C got a Special prize in the same.
- The department of **Physics and Electronics** conducted **SCOPE club and E-Hub Valedictory** on 16th Feb 2019 in which a **Quiz** program on different concepts of Physics & Electronics was organized for the members of the two clubs in which the students enthusiastically participated. In this the prizes were distributed for winners of different competitions held during **Energy Conservation Week**. The prize winners are:

PPT competition :

I prize ----- K.Mohana Divya(III M.E.CS)

II prize-----M. Sudeepthi(II M.P.CS)

II prize-----M.Lavanya Sridhari(III M.B.C)

Essay Writing competition :

I prize-----V. Lakshmi vijaya durga(II M.E.CS)

II prize-----S . Saila Bhanu(II B.Z.C)

III prize-----B. Manali Jain(III M.P.CS)

Poster painting competition :

I prize-----Sd. Kushnuma(II B.Z.C)



❖ Extra – curricular

Teachers day celebration:

On **5th September 2018** the students have celebrated **Teachers day** with much reverence and love under the guidance of **Department of Physics & Electronics** .It was an important and special day as **Dr.Fathima ,Lecturer in English** completed her **25** silver years of her dedicated service .



We are grateful to God for his choicest blessings for the smooth running of this year. We are very grateful to Dr.Sr.Mercy ,our Principal who is a driving force behind all the activities of the department.

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.

Last but not the least we thank the department support staff Mr. Venkateswara Rao, Mrs. Vijaya Rani and Mrs. Hepsiba for their untiring service throughout the year.

A.Sai Sandhya
(Secretary)