

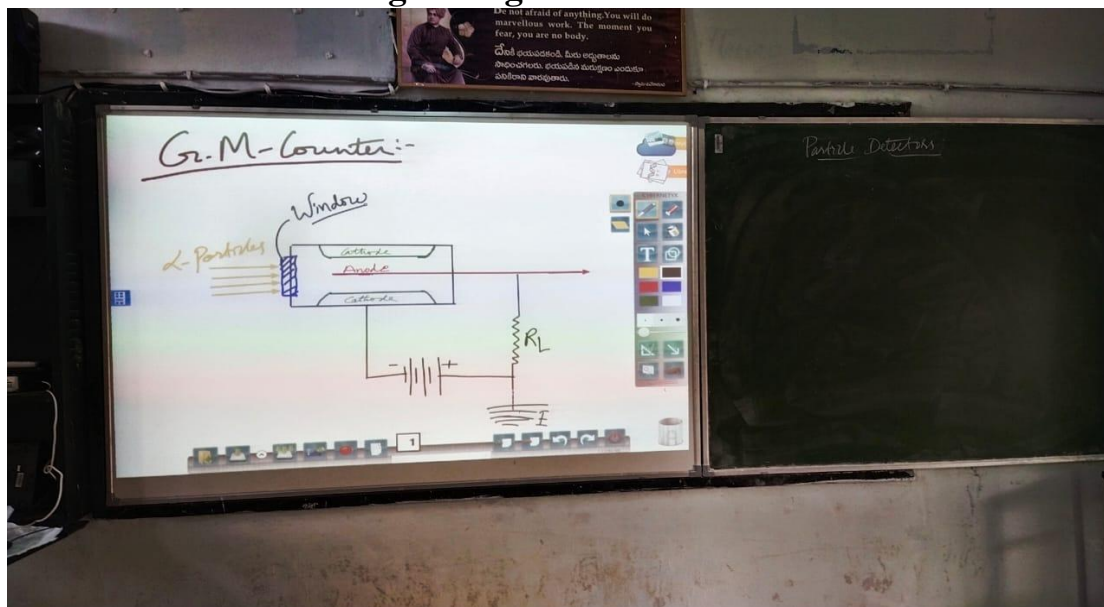
**Blended teaching learning**

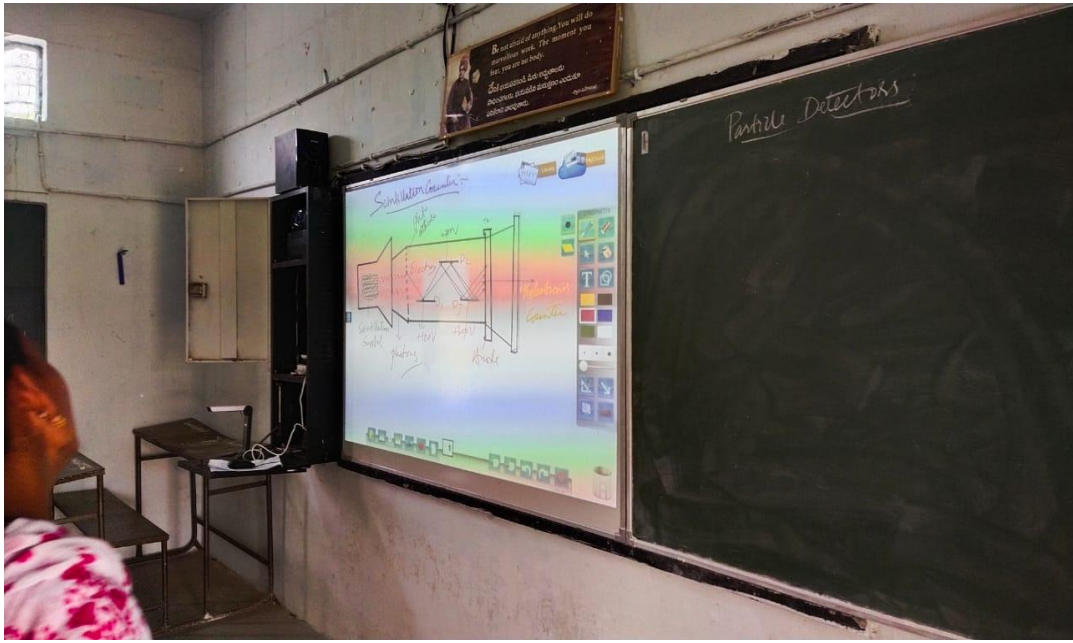
This institution is practicing blended learning which is a combination of both traditional teaching in the class room and ICT supported learning including both offline and online learning. The faculty is engaged in using virtual classroom, ICT tools such as LCD projectors for Power Point presentations and You Tube channel for video classes etc.

**Using LCD projectors**



**Teaching through Virtual Class room**





# Eco friendly & Green Initiatives

## QR coding



## INTERNAL GREEN AUDIT





ECO CLUB ACTIVITIES – PLANTATION



# ISO Certification



## Certificate

**HYM International Certifications Pvt. Ltd.**

Certified that the Quality Management System of

**GOVERNMENT DEGREE COLLEGE**

**Bellampally, Telangana State, India**

has been assessed and found to be in accordance with the requirements of the quality standards

**ISO 9001 : 2015**

for the following scope of certification

**PROVIDING EDUCATIONAL SERVICES**

Further information about the scope of this certificate and applicability of ISO 9001 : 2015 requirements may be obtained by consulting the organization.

Issue Date : 04/02/2020

1st Surveillance : 03/02/2021



Renewal Date : 03/02/2023

2nd Surveillance : 03/02/2022



Authorized Signature

Certificate No : **Q91864141490**

HYM International Certifications Pvt. Ltd

**NOTE:** Subject to Recertification at the end of every one year from the date of issue of this certificate

This is an accredited certificate authorized for issue by Accreditation Service for Certifying Bodies (Europe) Limited who have assessed HYM International Certifications Pvt. Ltd. against defined criteria and in cognizance of ISO 19011:2015 "Conformity Assessment - Requirements for bodies providing Audit and Certification of management Systems" [www.hymcertifications.com](http://www.hymcertifications.com) or for checking the validation of the Certification

Regd. Office : Plot No. 265/C, Addagutta Society, Opp. JNTU, Kukatpally, Hyderabad - 500 072, Telangana State, India.  
E-mail: [siva@hymcertifications.com](mailto:siva@hymcertifications.com), Website: [www.hymcertifications.com](http://www.hymcertifications.com)

**GOVERNMENT DEGREE COLLEGE, BELLAMPALLY, Dist: MANCHERIAL.**

**DEPARTMENT OF PHYSICS**

**Course Outcomes: PHYSICS**

**At the completion of B.Sc. in Physics. Students are able to:**

1. Demonstrate a rigorous understanding of the core theories and principles of physics, which includes mechanics, electromagnetism, thermodynamics, quantum mechanics introduced at degree level in order to understand nature at atomic levels.
2. Provide knowledge about material properties and its application for developing technology to ease the problems related to the society.
3. Understand the set of physical laws, describing the motion of bodies, under the influence of system of forces.
4. Understand the relationship between particles, atoms as well as their creation and decay. Relate the structure of atoms and subatomic particles understand physical properties of molecule the chemical bonds between atom as well as molecular dynamics.
5. Analyse the applications of mathematics to the problems in physics and develop suitable mathematical method for such application and for formulation of physical theories.

**Course: B. Sc. Physics**  
**Programme Outcomes:**

**Core Papers:**

**DSC1: Mechanics:** The students would learn about the behaviour of physical bodies it provides the basic concepts related to the motion of all the objects around us in our daily life. The course builds a foundation of various applied field in science and technology; especially in the field of mechanical engineering. The course comprises of the study vectors, laws of motion, momentum, energy, rotational motion, gravitation, fluids, elasticity and special relativity.

**DSC1 LAB:** Students would perform basic experiments related to mechanics and also get familiar with various measuring instruments would learn the importance of accuracy of measurements.

**DSC2: Electricity and Magnetism:** It gives an opportunity for the students to learn about one of the fundamental interactions of electricity and magnetism, both as separate phenomena and as a singular electromagnetic force. The course contains vector analysis, electrostatics, magnetism, electromagnetic induction and Maxwell's equations. The course is very useful for the students in almost every branch of science and engineering.

**DSC2 LAB:** Students would gain practical knowledge about electricity and magnetism and measurements such as: Resistance, Voltage, current etc.

**DSC3: Thermal Physics and Statistical Mechanics:** The course makes the students able to understand the basic physics of heat and temperature and their relation with energy, work, radiation and matter. The students also learn how laws of thermodynamics are used in a heat engine to transform heat into work. The course contains the study of laws of thermodynamics, thermodynamic description of systems, thermodynamic potentials, kinetic theory of gases, theory of radiation and statistical mechanics.

**DSC3 LAB:** Students would gain practical knowledge about heat and radiation, thermodynamics, thermo emf, RTD etc. and perform various experiments.

**DSC4: Wave and Optics:** The course comprises of the study of superposition of harmonic oscillations, waves motion (general), oscillators, sound, wave optics, interference, diffraction, polarization. The course is important for the students to make their career in various branches of science and engineering, especially in the field of photonic engineering.

**DSC4 LAB:** The practical knowledge of wave motion doing experiments: Tuning fork, electric vibrations. They would also learn optical phenomena such as interference, diffraction and dispersion and do experiments related to optical devices: Prism, grating, spectrometers

**Discipline Specific Elective papers(any two):**

**DSE1: Elements of Modern Physics:** Students would know about the basic principles in the development of modern physics. The topics covered in the course build a basic foundation of undergraduate physics students to study the advance branches: quantum physics, nuclear physics, particle physics and high energy physics. The course contains the study of Planck's hypothesis, photoelectric effect, Compton effect, matter waves, atomic models, Schrodinger wave equations, and brief idea of nuclear physics.

**DSE1 LAB-Elements of Modern Physics:** In this course students would be able to understand Basic experiments of modern physics such as: Determination of Plank's and Boltzmann's constants, Determination of ionization potential, Wavelength of H-spectrum, Single and double slit diffraction, Photo electric effect and determination of  $e/m$

**DSE1: Solid State Physics:** Students would be able to understand various types of crystal structures and symmetries and understand the relationship between the real and reciprocal space and learn the Bragg's X-ray diffraction in crystals. Would also learn about phonons and lattice.

**DSE1 LAB- Solid State Physics:** The course Provides practical knowledge of various physical phenomena such as: magnetism, dielectrics, ferroelectrics and semiconductors. Students would gain a hands-on learning experience by performing experiments on these properties of materials.

**DSE2: Quantum Mechanics:** Quantum mechanics provides a platform for the physicists to describe the behaviour of matter and energy at atomic and subatomic level. The course plays a fundamental role in explaining how things happen beyond our normal observations. The course includes the study of Schrodinger equations, particle in one dimension potential, quantum theory of H like atoms, atoms/molecules in electric and magnetic fields.

**DSE2 LAB- Quantum Mechanics:** Various practical problems solving methods related to Quantum Mechanics would be learned by students.

**DSE2: Mathematical Physics:** Would learn mathematical methods to solve the various problems in physics. The topics include the calculus of functions, Fourier transform, special functions and special integrals, partial differential equations, complex analysis and variables.

**DSE2 LAB- Mathematical Physics:** Various practical problems related to applications of mathematical tools to solve the problems in physics would be learned by students

**Skill Enhancement Courses (any two):**

**SEC1 - Electronics –I:** The students would gain the knowledge of Basic Electronics circuits, network theorems and measuring instruments: They would know about common solid state devices: Semiconductor diodes and transistors. The topics also include the Rectifiers, Filters and their applications, number systems and logic gates which are foundation blocks of digital electronics.

**SEC2- Computational Physics:** This course would introduce students with the basic knowledge of computers their applications in solving common and scientific problems, the course include scientific programming languages, scientific word processing and graphical analysis.

**SEC3-Electronics II:** Students would learn about electronic circuits such as Amplifiers and Oscillators. Various types of Amplifier and Oscillator circuits their working and applications in in domestic, industrial and scientific devices/equipments.



**SEC4: Radiation and Safety:** The students would gain the knowledge of different types of radiation and its interactions with matter, would also know about the photons, charged particles, neutrons, about radiation detection, monitoring and safety measures, and also learn about the applications of nuclear techniques.

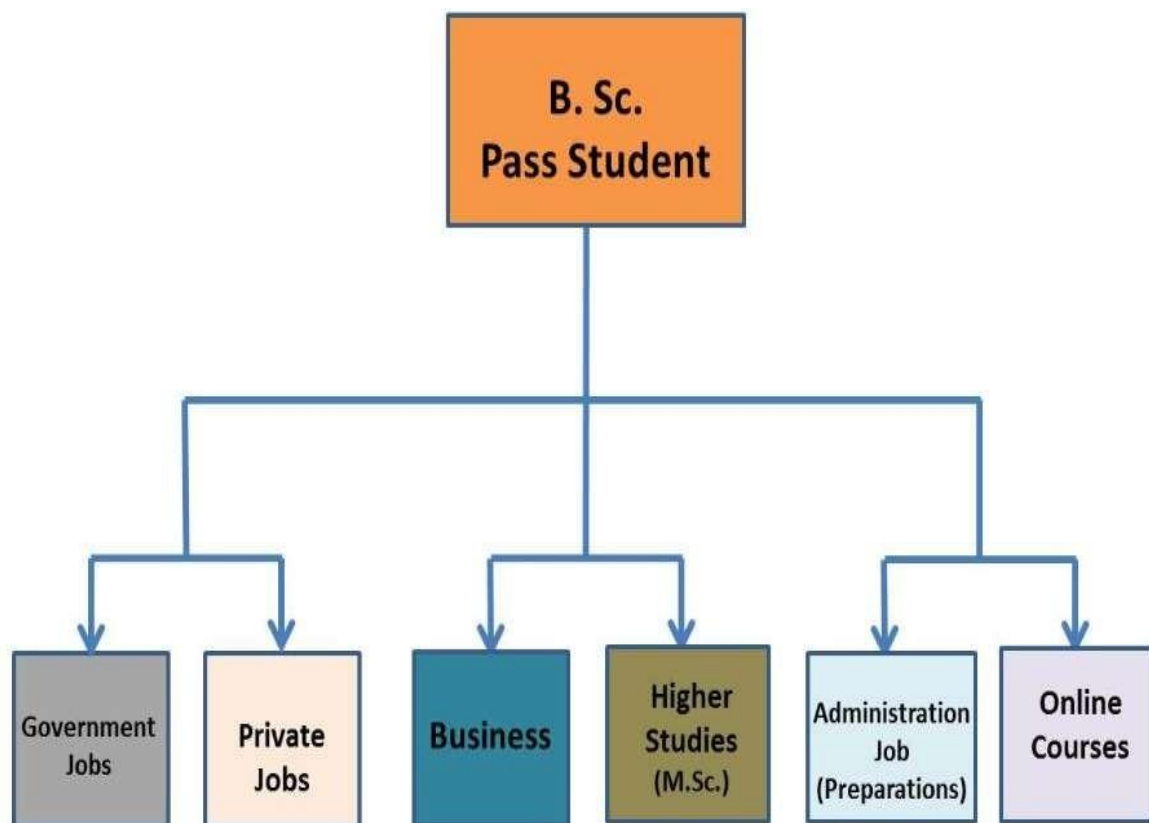
### B. Sc. PHYSICS

**PROGRAMME SPECIFIC OUTCOMES:** This undergraduate course in Physics Would provide the opportunity to the students:

- To understand the basic laws and explore the fundamental concepts of physics
- To understand the concepts and significance of the various physical phenomena.
- To carry out experiments to understand the laws and concepts of Physics.
- To apply the theories learnt and the skills acquired to solve real time problems.
- To acquire a wide range of problem solving skills, both analytical and technical and to apply them.
- To enhance the student's academic abilities, personal qualities and transferable skills this will give them an opportunity to develop as responsible citizens.
- To produce graduates who excel in the competencies and values required for leadership to serve a rapidly evolving global community.
- To motivate the students to pursue PG courses in reputed institutions.
- This course introduces students to the methods of experimental physics. Emphasis will be given on laboratory techniques specially the importance of accuracy of measurements.
- Providing a hands-on learning experience such as in measuring the basic concepts in properties of matter, heat, optics, electricity and electronics.

### ORIENTATION PROGRAM FOR FIRST YEAR STUDENTS





## Career Guide for B. Sc. Pass Student

GOVERNMENT DEGREE COLLEGE, BELLAMPALLY, Dist: MANCHERIAL.

DEPARTMENT OF PHYSICS

ORIENTATION PROGRAMME ON POs-PSOs and Course Outcomes

The Orientation programme held on Programme Outcomes, Course Outcomes and Specific Outcomes for B.Sc. Physical Sciences Students of all years in the department of physics on 31/07/2021 under the chairmanship of the Principal M.Gopal, Vice Principal Dr.T.S.Praveen Kumar and the faculty of Physical Sciences.

Resource Person : S.Srinivas, Lec.in.Physics, GDC,Bellampally.

Time: 11:00 a.m. to 01:00 p.m.

No. of Students Attended: 38


**OUTCOME:**

The Students gained substantial knowledge in various branches of physics: Mechanics and Oscillations, Thermal Physics, Electromagnetic Theory, Waves and Optics, Modern Physics, Electronics, Nuclear Physics, Solid State Physics and Many Others.

The Following Students attended the Orientation Programme:

S.No.	Name of the Student	Signature
1.	A.Bhagya	A.Bhagya
2.	B.Rajitha	Rajitha
3.	B.Sandeep	B.Sandeep
4.	B.Punnam	Punnam
5.	Ch.Swapna	Swapna
6.	N.Manasa	manasa
7.	P.Ramadevi	p. Ramadevi
8.	P.Saiteja	Saiteja
9.	R.Ravalika	R. Ravalika
10.	S.Sravan Kumar	S. Sravan Kumar
11.	S.Sravani	S.Sravani

12.	T.Sravanthi	Sravanthi
13.	S.Shireesha	shireesha
14.	V.Saiteja	Saiteja
15.	Ch.Sai Krishna	sai krishna
16.	K.Sai Nikitha	Sai Nikitha
17.	K.Bhavani	Bhavani
18.	S.Anirudh	Anirudh
19.	J.Keerthi	Keerthi
20.	P.Manasa	P. MANASA
21.	S.Sandeep	Sandeep
22.	R.Govardhan	R. Govardhan
23.	B.Adithya	Adithya
24.	D.Rajashekar	Raja. Shekar
25.	G.Dilip	Dilip
26.	J.Priyanka	priyanka
27.	K.Sowmya	Sowmya.
28.	L.Shailaja	Shailaja
29.	P.Keerthi varsha	Keerthi varsha
30.	S.Shivaprasad	Shivaprasad
31.	Ch.Ganesh	Ch Ganesh
32.	J.Bhemanrao	Bhemanrao
33.	T.Ramadevi	Ramadevi
34.	Ch.Rama	Ch. Rama.
35.	A.Sridevi	Sridevi
36.	B.Divakar	Divakar
37.	G.Ramchander	G. Ramchandras
38.	G.Shirisha	G. Shirisha

  
**PRINCIPAL**  
 Govt. Degree College  
 Bellary-504 251  
 Dist. Mancherial (T.S.)



## **B.Com (Regular)**

### **Program Outcome**

- This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements.
- After completing graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.
- Capability of the students to make decisions at personal & professional level will increase after completion of this course.
- Students can independently start up their own Business.
- Students can get thorough knowledge of finance and commerce.
- The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization.

### **Program Specific Outcome**

- The students can get the knowledge, skills and attitudes during the end of the B.com degree course.
- By goodness of the preparation they can turn into a Manager, Accountant , Management Accountant, cost Accountant, Bank Manager, Auditor,

Company Secretary, Teacher, Professor, Stock Agents, Government employments and so on.,

- Students will prove themselves in different professional exams like C.A. , C S, CMA, MPSC, UPSC. As well as other coeres.
- The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.
- Students will gain thorough systematic and subject skills within various disciplines of finance, auditing and taxation, accounting, management, communication, computer.
- Students can also get the practical skills to work as accountant, audit assistant, tax consultant, and computer operator. As well as other financial supporting services.
- Students will learn relevant Advanced accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.
- Students will be able to do their higher education and can make research in the field of finance and commerce.

### **Course Outcomes**

#### **Financial Accounting:**

- To enable the students to learn principles and concepts of Accountancy.
- Students are enabled with the Knowledge in the practical applications of accounting.

- To enable the students to learn the basic concepts of Partnership Accounting, and allied aspects of accounting.
- The student will get thorough knowledge on the accounting practice prevailing in partnership firms and other allied aspects.
- To find out the technical expertise in maintaining the books of accounts.
- To encourage the students about maintaining the books of accounts for further reference.

#### **Marketing and Salesmanship**

- This course enables the students, the practical knowledge and the tactics in the marketing.
- To study and critically analyze the basic concepts and trends in Marketing.
- To aware of the recent changes in the field of marketing.

#### **Computer Concepts and applications**

- To make students familiar with computer environment & operating systems
- To introduce students with accounting packages like tally.
- To develop skill and knowledge among students in applications of internet in education of commerce.

#### **Business Mathematics and Statistics**

- To use and understand useful functions in business as well as the concept of EMI.
- To understand the different concept of population and sample and to make students familiar with Calculation of various types of averages and variation.
- To learn the applications of matrices in business.



- To understand the students to solve LPP to maximize the profit and to minimize the cost.
- To use regression analysis to estimate the relationship between two variables and to use frequency distribution to make decision.
- To understand the techniques and concept of different types of index numbers.

### **Business Environment and Entrepreneurship**

- To make the students aware about the Business and Business Environment.
- To develop entrepreneurial awareness among students.
- To motivate students to make their mind set for thinking entrepreneurship as career.

### **Banking and Finance**

- To familiar the students with the fundamentals of banking and thorough knowledge of banking operations.
- To build up the capability of students for knowing banking concepts and operations.
- To make the students aware of banking business and practices.
- To make understandable to the students regarding the new concepts introduced in the banking system.

### **Compulsory English**

- To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application.
- To expose students to a variety of topics that dominates the contemporary socio-economic and cultural life.

- To develop oral and written communication skills of the students so that their employability enhances.
- To develop overall linguistic competence and communicative skills of students

### **Functional English**

- To expose students to a good blend of old and new literary extracts having various themes that are entertaining and informative so that they realize the beauty and communicative power of English
- To make students aware of the cultural values and the major problems in the world today.
- To develop literary sensibilities and communicative abilities among students.

### **Business Economics (Micro)**

- To provide students knowledge of Micro Economic concepts and inculcate an analytical approach to the subject matter.
- To arouse the students interest by showing the relevance and use of various economic theories.
- To apply economic reasoning to solve business problems.

### **Organizational skill development**

- To make familiar the students with the emerging changes in the modern office environment and to develop organizational skills.

